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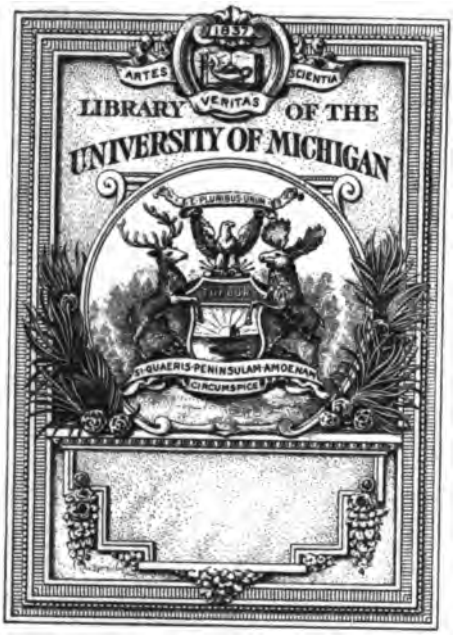

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ORIGINAL LECTURES.

LUMLEIAN LECTURES
ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

Lecture I.

When I received your commission, Mr. President, to undertake the delivery of this course of lectures, my thought might have been well expressed in the words "*Non quo, sed quomodo.*" So long is the story of our art, so manifold the topics which Medical lore embraces, that my anxiety could not but be rather how I might acquit myself of my task, than what subject I should select to bring before you. It seemed to me, however, that I might best hope to succeed if I invited your attention to some particulars having reference to diseases of the nervous system, feeling, as we must all do, how the great predominance of this part of our frame is that which especially distinguishes the earthly tabernacle of man from the body of the brute, and how peculiarly in this our day the same system of organs is apt to languish, suffer, and give way under the burdens that are laid upon it. I was the more inclined to take for consideration the especial subjects on which I am about to address you for three reasons—one that disease which has not produced actual destruction of tissue is so much more hopeful a matter of treatment than that which has expressed itself in more strongly written characters; a second that the investigations which have of late years been made in neuro-pathology have rendered this department of knowledge full of the greatest interest to every one who desires to comprehend intelligently, and treat satisfactorily the morbid phenomena he is daily called to witness; and thirdly, that my own attention has been for a good while specially directed to this class of disorders. The grounds on which the views of disease which I shall offer to you have been founded are chiefly the efficient causes, and the attendant circumstances in each case, and especially the influence of remedial agents on the morbid state,—in fact, on an appreciation of the various vital actions. The quality of these I hold to be all important, and to determine often much more than textural change the favourable or unfavourable issue of the disease.

I propose in this first lecture to attempt some examination of the question whether we can admit the existence of a form of paralysis which may be designated *primary functional*. It will scarcely be contended, I think, by any that such paralysis is a generally acknowledged or admitted fact, although passages might easily be cited from various authors of reputation which show that they fully contemplated its possible, if they did not recognise its actual, occurrence. Paralysis is certainly spoken of as epileptic, choreic, or hysteric, but without any clear idea of the real nature of the morbid condition in these instances. On the other hand, if I mistake not, many of our most recent and worthily distinguished inquirers are much disposed to reject any such view, and to adopt other explanations for phenomena which may appear to be of this nature. The inquiry which I propose can hardly be without fruit, either as leading us to reject an unsound and delusive notion, or as tending to establish a view which, if correct, must beyond doubt occupy no mean position among the doctrines of neuropathology.

Before I proceed, however, I must say a word respecting the exact signification I wish to attach to the term "functional." I am quite aware of the objections which have been made to the existence of any purely functional disorder, and I am quite ready to concede that keeping to exact accuracy of language and of fact, all disorder is probably connected with some amount of organic lesion. But, taking a clinical standpoint, it seems to me also quite undeniable that a broad and most practical distinction does subsist between those morbid conditions which are dependent on actual dilapidation and breaking down of normal structure, and those where the organic change, if it exist, is not only such as escapes the naked eye, but is capable of being completely removed, and that too by means which act mostly in the way of increasing the vital energies of the part affected.

When, therefore, I use the term "functional paralysis," I only wish to convey the idea that this defect is not dependent on any exudation, extravasation, arterial obstruction, or any other kind of evident organic alteration. By the term "primary" I mean to imply that the affected part, a nervous centre for instance, is that which is first acted on by the morbific cause, whether that be a miasm in the blood or some imponderable influence, or whether it act in a negative way, inducing simple exhaustion. Paresis from material toxic agents, such as opium, lead, retained urinary excreta, I do not intend to refer to; for though in these instances there may be no visible organic lesion, yet a demonstrable substance may be inferred to have acted on and altered the nerve cells and fibres. These, then, are not such pure examples of the condition I contemplate as those where the exciting cause is an imponderable. Even in these cases, however, I would observe that there is clear proof how much failure of dynamic energy has to do with the morbid phenomena. Two persons have their blood poisoned alike by urinary excreta, by syphilis, or fever miasm. In one the nervous centres are overborne by the toxic agent and succumb, expressing their distress by delirium, convulsions, or paralysis. In the other they do not suffer at all; the stronger organ endures what the weaker cannot. It may serve, perhaps, to make the occurrence of such paralysis as I am now speaking of less improbable if we consider how completely the functional power of the brain, and perhaps of the cord, fails under conditions of great fatigue. There are often times, especially after much open-air exercise, when, independently of any narcotic influence, the hemispheres refuse to minister to the mental actions, when the eyelids inevitably droop, and the whole nervous system, with the exception of the medulla oblongata and a few secondary centres, ceases to manifest any capacity for action. Sleep, the image of death, is certainly a natural state; but the very frequency, nay necessity, of its occurrence seems to me very suggestive of the view that conditions somewhat resembling it, but essentially morbid and depending on profounder derangement, may sometimes exist. If the prolonged exercise of its function so impairs the vital power of an organ that it temporarily falls into a state of incapacity for action, may we not well conceive that various morbid influences may induce a similar but more lasting state? It seems to me to strengthen this conclusion if we reflect that there are some nervous centres which are exempt from this necessity of repose—which, long as life may last, *never sleep*. Their nerve cells must be endued with a different, with a stronger and more persistent life than those of the great sensori-volitional centres. The final cause why this is so is obvious: the vital machinery would cease to play if the respiratory centres could lapse into sleep like the hemispheres, and this sleep would *be* death. There will be, therefore, a greater liability evidently in the one case to functional paralysis than in the other, just as there is a greater tendency to exhaustion. These remarks may serve to present to the mind some probable conception of the state of the nervous centres in primary paralysis, and thus to answer an objection which I have heard made—viz., that it is impossible to conceive, so long as the tissue is healthy and supplied with blood, how paralysis of it can take place. The resemblance between the failure of functional power which fatigue induces and functional paralysis is materially enhanced by the circumstance that all the chief causes of the latter are of a highly debilitating nature. This will presently appear very manifestly when we proceed, as I now propose to do, to examine the various conditions in which there seems reason to believe that the existing paralysis is functional and primary. Before doing this, I would remark that in the cases I shall notice there is no ground for the objection that mere muscular weakness has been mistaken for actual paralysis. The loss of power unquestionably was not such as is observed in patients whose general strength is greatly reduced, but was evidently connected with failure of nervous function. The examples I shall adduce will not be merely those of simple loss of nerve power, but of other allied states, since these by their very variety while preserving the family resemblance seem to be even more illustrative of the subject than a mere accumulation of perfectly similar testimonies would be.

I will first refer to certain instances of paralysis occurring in young children, though I do not intend my remarks to apply to all the cases comprehended under the term infantile paralysis, as no doubt they are often of different kinds. In those I allude to the disorder may come on immediately after a fit, or after a slight feverish attack, or suddenly, or gradually, or during the night, and in the three latter cases without any apparent cause, or it may seem to be the result of the local

action of cold. It generally affects the lower limbs, according to my own experience, but is sometimes also unilateral, or it may be confined to one arm or leg. The essential point to observe with regard to these paralyses is that they are attended with no sign of central organic disease. There is no pain of head, or of the spine; no radiating pains in the paralysed limbs, no tonic contracture, no impairment of intellect. There is, however, generally more or less debility, and the treatment which in most cases is successful, or at least beneficial, is decidedly tonic. Citrate of iron and quinine and ol. morrh have given in my hands unmistakable proofs of efficacy. It is, however, highly important, as Dr. West has well insisted, that treatment should be commenced early, for if not the difficulty of restoring the lost power is greatly increased, and may indeed be insuperable. Now, it may surely be concluded that such a paralysis as is above described, and which yields to tonic treatment, cannot be dependent on evident organic change. We have but too frequent opportunities of proving the insufficiency of remedies in cases where actual textural lesion has occurred to leave any doubt in our minds that such cannot be the case here. Of course it is not denied that recovery may take place from paralysis resulting from cerebral hæmorrhage, etc., but this is a gradual process, and the share which remedies have in accomplishing it is more than doubtful. The evanescent character of the paralysis in some instances is a circumstance that deserves notice. In one case under my care where paraplegia continued for many weeks as the prominent symptom, the arms were at first affected to a less extent, and for a few hours there was paralysis of one side of the face. Dr. West notices the rapid disappearance of the disorder in some cases with very little treatment. This temporary duration is an argument of some weight in favour of its purely functional nature. In fact, to my mind, the only question is how far the paralysis can be referred to the occurrence of anæmiating arterial spasm. To this point I shall subsequently return when I come to consider the diagnosis of this kind of paralysis from others. I will only state at present that the action of remedies seems to go far to negative such a view. That the paralysis in these instances is a central, and not a mere peripheral affection can scarcely be questioned. It much more often presents the form of paraplegia or hemiplegia than it is confined to a single limb. Sensation is not usually impaired, which is apt to be the case when the nerve trunks or their peripheral expansions are affected. The circumstance that the paralysis sometimes immediately succeeds a fit points also to the same conclusion. Bierbaum and Eulenberg both take the same view. There does not appear to me to be anything peculiar in this form of paralysis affecting young children. I believe that I have seen just the same kind of disorder in older children and in adults, though in them the causal condition is generally more apparent. The greater liability of younger children to be affected in this way may be referred to the marked tendency in them to suffer from derangement of the motor rather than of the sensory apparatus.

The next class of cases to which I would direct attention are those where the paralysis has been evidently induced by exhaustion. Here the nature of the cause is highly significant as to that of the morbid state. Dr. Gull's well-known case of paraplegia from excessive coitus, proving fatal by cystitis and peritonitis in sixteen days from the first appearance of the paralysis, proves that in such states there may be an absence of all recognisable organic lesion, even when the search is made by a skilful microscopist. Dr. Russell has recently recorded some instances of the same kind. The two first may be instructively compared with each other, as showing the various ways in which exhaustion may express itself. One patient, a child, aged 5½ years, who practised masturbation continually day and night, had become weak, irritable, and emaciated, was restless the whole night long, moaned, and sweated profusely; by day he was languid, exhausted by the slightest exertion, without appetite, and sickly. After the bad habit was broken off, he recovered perfectly. The other patient, a male, aged 25, of phlegmatic temperature and good health, had well-marked, but incomplete, palsy of the lower limbs, and of these only. All his other functions were normal. His mind was clear; his spirits excellent; his sleep perfect; his appetite unimpaired. He had, however, occasional attacks of semi-syncope induced by any nervous effort, muscular or mental. He had committed sexual excess, but not, as it seems, to any great amount. Now, the state of general exhaustion of the whole nervous system, which was so marked in the child, was replaced in the man by functional paresis of the lumbar enlargement of the cord, which was removed by a well-managed tonic treatment. Can there be any doubt that the morbid condition in these two persons was essentially similar? and as the general symptoms in the one cannot be thought to depend on organic lesion, must we not believe the same to be true of the other? A third case of much interest is related by Dr. Russell, which makes it highly probable that vital exhaustion and functional incapacity may, if extreme, pass into actual decay of structure, into a state of irreparable organic lesion. A man, aged 32, was admitted with complete paralysis of sensation and motion in both lower extremities. There was no impairment of nervous power elsewhere; his intellect was clear. He had been for the last twelve or fourteen years much addicted to self-abuse. He gradually and steadily declined and died in four months. At the post-mortem, the cord about an inch and a-half above the lumbar enlargement was rather narrowed, and was more pulpy and yielding than elsewhere; the nerve tubules were in an imperfect atrophic state, and large collections of oil drops existed in the walls of the minute vessels. Abundance of large granule cells, with free oil globules, were present in all parts of the cord. In this instance it seems that the power of the nerve-tissue had become so exhausted by the continual demands made upon it, that its elementary parts ceased to be able to nourish themselves properly, and passed into a state of atrophy and decay, while exuding liquor sanguinis, which should have ministered to healthy nutrition, corpusculated and then underwent fatty degeneration. The presence of granule cells is no proof of inflammation having existed; I have seen them in the air-cells of the healthy lungs of young animals. In such a case as the foregoing I should regard them simply as indications of defective nutrition. Their presence in parts of the cord where there was no impairment of function gives us, I think, a hint that we should not be too ready to regard all textural changes that we may discover as necessarily connected with deteriorated capacity for action. Some textural changes are quite unimportant, and some are not causes, but results, of pre-existing morbid action. Thus, Mr. J. Hogg(a) writes,—"It is also remarkable that perfection of vision does not always accord with the apparent condition of the retina, as seen with the ophthalmoscope, for at times, when it appears somewhat opaque and cloudy, the vision is in a perfectly normal state." Mr. Haynes Walton's experience is strongly corroborative of this. He tells me that a variety of morbid alterations are discovered by the ophthalmoscope in cases where there is no impairment of visual power. The investigations recently made by Demme, Rokitansky, and Lockhart Clarke, as to the condition of the spinal cord in fatal cases of tetanus, disclose the occurrence of minute textural changes, it is true, chiefly consisting of congestion of the vessels and granular or fibroid exudations; but these cannot surely be regarded as giving rise to the disturbance of the nerve-action, but simply as its effects. There is one point in connexion with this subject which, I think, deserves notice—viz., the great tendency of exercise of the generative function in more than a very moderate amount to induce general nervous exhaustion. This sets forth, I think, very clearly the intimate union in which our nervous centres are linked together by commissural connexions. The exhaustion in the case referred to is not for the most part limited, as we might have expected, to the lumbar enlargement where the sensory nerves of the generative organs are implanted, but involves, as the preceding excitement does, the largest and most remote nervous-centres and those of most elevated function. Dr. Russell mentions in one of his cases a marked liability to syncope on any slight exertion, and I have observed the same myself in one instance. From such examples it seems to me justly inferable that the *vis nervosa* is in some way transferable from one part to another, and that such transference does actually take place, so that when the whole stock of nervous energy in the body is much reduced a small expenditure at one part induces a corresponding diminution in the supply of other associated parts, in consequence of which they fall into a condition of paresis. The instances we are considering afford, I think, good illustrations how much more excessive exercise of the sensory function tends to exhaust and impair nervous energy than the same exertion of the motor does. The latter may, indeed, be followed by great temporary fatigue, but its repetition undoubtedly, for the most part, developes and increases nerve-force; the former, on the contrary, is almost purely exhaustive and enfeebling.

It is, however, not quite certain whether excessive fatigue

(a) Ophthalm. Surgery, p. 114.

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may not in some instances induce, or at least greatly promote, the occurrence of paralysis. The case has been related to me of a young lady who, while in a rather ailing condition, was taken out by her father for a long walk, and accomplished seven miles out and as many in returning home. From that day she was never able to walk above 100 yards, and died some time after paraplegic. It was found, however, subsequently that she was addicted to masturbation. The following case, which occurred in my own experience, may have been of the same kind, though the inquiries which I made decidedly tended to negative the existence of this baneful practice:—Miss ——, aged 20, had been ill when I saw her about seven months. During the preceding autumn she has been staying at the seaside, and bathed and took very long walks. She was attacked, while bathing, with faintness, and was unable after that to walk as before. The last six weeks she had got much worse, though she had been staying in a healthy country situation. Her symptoms were breathlessness on any slight exertion, even talking, frontal headache, anorexia, slight cough, and mucous expectoration, some amount of menorrhagia, occasional faintness, and profuse perspirations. Pulse 68 when lying down, not very weak; urine tolerably normal, of rather high specific gravity, depositing lithates or lithic acid; no marked anæmia; tenderness of spine; complains of great weakness of the legs, most of the left; sensation not impaired. When she tries to walk she does so in a most halting, tottering way, as if she was semi-choreic. The muscles of the legs were by no means wasted; they were by no means readily affected by Faradisation, but the skin appeared to be very sensitive to the current. She was hysterical and excitable, but appeared honest and unexaggerating. In less than two months she was nearly quite restored; could walk quite well. Her treatment consisted in the administration of strychnia, iron, and quinine, and of local Faradisation. In both these instances there can be little doubt but that the excessive muscular exertion acted at least as a powerful determining cause of the paralysis, which might have had its predisposing in another source of exhaustion. That in my case hysteria had nothing to do with the paralysis I am satisfied, if by hysteria be meant a want of will and real desire to get well. The faintness, breathlessness, and profuse perspiration, along with the menorrhagia, prove the existence of general debility, and the success of a tonic treatment adds further to the probability that the local paralysis was a part, though an intensified part, of the same general state.

Another cause of paralytic exhaustion is, I think, occasionally met with in the abuse of alcoholic stimuli. In the case of a male, aged 39, under my care, there was a considerable amount of both motor and sensory paralysis of all the four limbs, but no evident impairment of the cerebral functions. He stated that his illness came on gradually, apparently from excess in drinking. The urine was not albuminous. He quite recovered under the use of quinine and iron, and has remained well. Why the alcohol should in some cases act more on the cord than on the brain cannot at present be explained; we can only regard it as the result of what we call idiosyncrasy. I may, however, mention that at St. Nazaire, a small town at the mouth of the Loire, in Brittany, the workmen are in the habit of drinking a white "vin ordinaire," which, when taken in excess, affects the steadiness of the drinker's legs considerably, but does not much interfere with his mental faculties.

In one very interesting and well marked instance which I have recorded in my work, a man, aged 20, while under the influence, to all appearance, of epidemic catarrh, became completely paralysed in all his limbs, sensation being affected, but to a less degree than motion. Under a persistent tonic treatment, aided by Faradisation, he recovered completely. The connection of the paralysis with the catarrhal affection was well shown by a relapse occurring, after he had begun to improve, simultaneously with an increase of catarrh. The paralysis in this instance was probably a spinal affection, as there was no disorder of the cerebral functions; but I regard it as quite analogous to the more usual effects of influenza, which manifest themselves in the brain, and to which I shall presently advert.

Dr. P. Lévi relates(b) a case of fatal paralysis, commencing in the lower and extending to the upper limbs, attended with diplopia, dysphagia, and constipation, with ammoniacal urine, and terminating fatally by asphyxia on the twelfth day of the disease, the diaphragm having become involved in the paralysis. A very careful autopsy discovered no organic lesion in any part; the cord was quite healthy, and was rather anæmiated than congested. Microscopic examination showed that the tissue of the cord was perfectly sound, and that the nerve-roots, the intervertebral ganglia, and those of the sympathetic, as well as the pneumogastric nerves, were exempt from all morbid alteration. It is worth remarking that the pia mater of the hemispheres was found in a very marked state of venous congestion, and the grey matter of a deep red, but, as the author remarks, the absence of all intellectual disturbance during life, and the mode of death, by asphyxia, makes it certain that this hyperæmia was not the cause of the symptoms. The patient was a healthy man, aged 22, free from syphilitic taint, and not addicted to alcoholic or sexual excesses. The disorder set in, without any appreciable cause, with weariness and heaviness of the head, and a degree of stupor most marked in the evening. He had no pain in the spine, no constrictive sensation in the trunk. The treatment adopted in the Lariboisière Hospital consisted of purgation by croton oil, twenty c.c. to the spine, and calomel in alterative doses. It is clear that this was not suggested by the conception of a primary paresis being the essence of the malady, or else a medication more like that employed in my own case, and, perhaps, more successful, would have been preferred.

The same writer quotes from the *Gaz. Med. de Paris*, 1832, an account of the fatal illness and autopsy of the great Cuvier, from which it appears highly probable that the malady was of the same nature as in the case just cited. It is, however, noteworthy that extreme dysphagia was the first symptom, and that the upper extremities were paralysed before the lower. The brain was unaffected. Death occurred in less than a week from the commencement of the disease. All the organs were found perfectly normal. The treatment consisted in leeches to the arms, v.s., emetics, and blisters.

Diphtherial paralysis affords, I believe, one of the best instances of a true primary paresis. Its whole history seems to me to demonstrate that it is not dependent on any organic lesion, but on some depressing influence. It might, indeed, be explained in some cases in accordance with the view of reflex paralysis, the local disease being regarded as the source of an irritation communicated to the nervous centres. The paralysis, however, often supervenes during convalescence, and occurs not unfrequently when the primary affection has been slight. Nay, it seems that a paresis may sometimes be the only manifestation of the tonic action. Dr. Turner (c) records the case of a boy, aged 8, who was affected with partial paralysis of both extremities, amaurosis, and dysphagia. Progression was very difficult, and he required to be supported when attempting it. He could grasp but feebly with either hand, could read but imperfectly large print, and a portion of the fluids he took was frequently ejected through the nostrils. The voice was snuffling. The soft palate drooped abnormally, especially on the left side, but there was no trace of inflammation, or any membranous deposit anywhere. By the internal use of iron and nux vomica, with wine and a generous diet, he was completely restored to health. About a fortnight before he was first seen he had returned home from visiting a family at a distance, two of the members of which had been attacked with diphtheria, then prevalent in that neighbourhood, during his stay. The boy had made some complaint at the same time of soreness of the throat, but nothing amiss was discovered except a little redness too trifling to require treatment. A similar case occurred in a girl, aged 10, who resided in a house where two or three of the inmates had suffered from diphtheria, but in her the throat was never at all affected. It is not, perhaps, absolutely settled whether the palsy is a peripheral or central disorder, whether it has its seat in the nerves or in the centres. The probability to my mind is very great that the latter is the case. For (1) when the nervous system is so extensively affected that almost all the muscles are more or less paralysed, it is difficult to believe that the nervous centres are not involved at least as much as the nerves; (2) the paralysis is sometimes more or less hemiplegic, which would indicate its seat to be in the centres above the decussation; (3) it is always attended with loss or morbid alterations of sensibility—these, if they existed alone, and were confined to certain districts, might very well be peripheral, but as they co-exist with motor paralysis, and extend over large surfaces even of whole limbs, they are probably central disorders; (4) strychnia, which has proved very useful in the treatment, exerts almost certainly its chief action on the centres, rather than on the nerves; (5) the occurrence of syncope and vomiting would

(b) *Arch. Génér. de Médecine*, Feb., 1865.

(c) *Medical Times and Gazette* Dec. 21, 1864.

scarcely take place unless the nervous centres were rather extensively involved. The mode of extension which is said to characterise peripheral paralysis—viz., its extending gradually upwards from the tips of the fingers and toes toward the trunk, of course only implies that the morbid state spreads from one set of nerve fibres to another, leaving it an entirely open question whether the transfer of morbid action occurs at the periphery or at the centre. The late supervention of the paralysis in most cases is a noteworthy circumstance, and seems to be of the same nature as the incubation of other poisons, and notably of the malarious, which may remain weeks or months in the body before it produces its effect. The earlier action of the poison seems to be on the mucous membrane or the blood, its later on the cerebro-spinal nervous system. In this respect there is considerable resemblance between diphtherial paralysis and those which succeed attacks of continued fever. As in the case of diphtheria, the primary affection may not have been at all severe. Leudet says that paralysis often ensues on apparently mild forms of fever. One of his cases is as follows:—A healthy servant girl had passed through a slight attack of typhus, and was on the point of leaving the Hospital, when she was attacked by weakness of the lower limbs, coming on with the sensation as if they were asleep. The paralysis rapidly extended over the whole body; swallowing became difficult; the abdomen distended; dyspnœa increased; and she died asphyxiated on the seventh day of the paralysis. Consciousness remained quite perfect to within a short time of death. At the autopsy nothing abnormal was discovered in the brain and cord; in the intestine, spleen, and mesenteric glands there were unmistakable evidences of typhoid. The very diffuse and complete character of the paralysis in this case, as well as the absence of the usual signs of myelitis or meningitis, makes it, I think, very improbable that it depended on any inflammatory condition. It is remarkable that even where the paralysis seems to be referable to some strain or over exertion, such as one would expect to produce an immediate effect, the symptoms do not, at least always, come on until some time has elapsed. Thus in Dr. Gull's twenty-third case, a man engaged in his usual occupation, after lifting some deals felt a sudden pain in the back. He walked, however, to his home—a mile and a-half off—and the following day was apparently quite well. The next morning, on waking, the legs were paralysed. He died at the end of six weeks, and the cord was found highly softened opposite the fifth and sixth dorsal vertebræ, its tissue was disintegrated, but there was no trace of inflammatory exudation in it or in its membranes. Dr. Gull remarks that the case shows that the substance of the cord may receive an injury through violent muscular exertion, while the surrounding textures escape. He considers that the immediate effect of the injury was upon the capillary circulation, leading to effusion of blood and consequent atrophy. It seems to me difficult to acquiesce in this view, for it is tolerably certain that the only way in which a straining effort can affect the cord through the circulation is by causing congestion of its veins through temporary arrest of the breathing. How far this could produce extravasation in the substance of the cord seems to me very doubtful. But if it had done so, the symptoms should have come on immediately, as is invariably the case after hæmorrhage. I should be more disposed to regard the case as one in which the muscular effort had first weakened the power of the cord, and the subsequent exertion caused still further deterioration, so that functional paralysis first ensued, and finally, as nutrition failed, passed into atrophic degeneration of the tissue. The case much resembles the fatal one recorded by Dr. Russell, in which the palsy first appeared in a decided manner the night after a fatiguing walk. Mr. Hilton mentions in his lectures the case of a man of most energetic temperament, who fell upon his back at Epsom from the giving way of some scaffolding. When he fell he experienced the sensation of pins and needles in his legs. Immediately after he set off and ran six miles with the view "of running off" the effects of the accident. The consequence, however, was that within a very short time he began to have symptoms referable to the spinal cord, which resulted in complete and irremediable paraplegia. Mr. Hilton truly observes that if he had pursued a contrary course, and kept himself perfectly quiet for a considerable period, he would have quite recovered. Similar occurrences are not unfrequent in the case of railway accidents. Mr. Hilton inclines to the view that in such instances there is some structural injury inflicted at the time of the accident, though he shortly after speaks of the state as one of exhaustion of the cord; but it seems to me almost a matter of certainty that the primary derangement must be essentially functional, consisting probably in a lowering and weakening of the nutritional power of the tissue, which, on the one hand, may be restored by complete abstinence from further expenditure of nerve force, or may be aggravated into actual decay and death by wasteful prodigality. If actual organic lesion were produced by the concussion, it is scarcely possible that paralysis should not ensue immediately. In two cases of gunshot wound with concussion of the spine recorded in a paper(d) by Dr. Lidell, the paralysis came on immediately after the injury. In the first case recovery was tolerably complete at the end of two months, and in the second at the end of four. He quotes a case from Dr. Macleod's work in which paraplegia ensued immediately after a severe concussion and injury in the lumbar and glutœal regions. Death occurred on the twenty-first day, and on examination no fracture of the vertebræ was discovered, nor were any appearances found in the spinal column sufficient to account for the persistent paraplegia. The ilium, however, was greatly shattered. Dr. Lidell notices the analogy of concussion of the brain to concussion of the spinal cord, and says that in both alike a more or less complete arrest of special function is produced without any visible injury to the nerve tissue. The one condition is marked by unconsciousness, the other by paralysis. As in the one the immediate effects of the shock are the most striking and serious unless they are followed by inflammatory mischief, so is it, I think, also with the other.

Mr. Lawson gives a report(e) of four cases of temporary paralysis of the ciliary muscle of the eye which ensued as the result of various debilitating disorders. The patients were able to read with convex glasses, and recovered the power of the muscle under the use of iron, purgatives, cold sponging, and complete rest for the organ. A well-marked instance of the same affection occurred under my own observation in the case of a young lady suffering under peritoneal tubercle. One day the right pupil was very much dilated, and the vision misty; she could not read a medium sized type without the aid of a convex lens. The following day the eye had returned to its natural condition. Here we have an example of a paresis limited to a very few fibres of a nerve.

I may here notice a case of facial palsy, the left portio dura being affected, which is recorded by Mr. S. Chartres(f). The patient was a soldier in India, not in strong health, who was just convalescent from a constitutional bubo when he was attacked with the paralysis suddenly. With tonics, stimulants, and generous diet he recovered perfectly.

Sir E. Home relates the case of a man who, after a fatiguing day's shooting, saw suddenly everything double; rest relieved the disorder, and dinner, with wine, but it was made worse by living low, mercury, leeches, and blistering. The double vision depended undoubtedly on paralytic strabismus; the two eyes did not look directly to an object. (McKenzie on the Eye.) Both these seem to be pure instances of primary paresis from exhaustion.

(To be continued.)

MEMORIAL TO DR. JENNER.—The memorial to Dr. Jenner is now being placed in the south-west window of the Cathedral, and it is expected that the fixing of the glass will be completed this (Saturday) evening. The general subject refers to the acts of healing by our Lord in the course of his ministry. In the glass fixed the subjects depicted are:—Healing, the man in the tombs, raising the widow's son, healing the issue of blood, the cure of the lepers, the raising of Lazarus, and the cure of the deaf. Three subjects are painted in each light. In the tracery are figures of angels, with crowns, and scrolls with "Alleluia." Much of the window is now obscured by the scaffolding, but, as far as we can judge, the glass appears to be fine and the drawing good. The stonework is of the latter part of the thirteenth century, and the new glass is as nearly in the style of that period as Messrs. Clayton and Bell can produce it. The glass appears to be remarkable for the variety of its tints and the richness of its whites, and promises to be among the best in the Cathedral. The Dean and Chapter have contributed £100 towards the cost; the remainder is provided by subscription chiefly by the Gloucestershire Medical Society, and Dr. Evans is a most liberal contributor.—*Gloucestershire Chronicle.*

(d) *American Journal of Medical Science*, October, 1864.
(e) *Lancet*, May 11, 1861.
(f) *Indian Annals of Med. Sci.*, vol. ii., p. 669.

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ORIGINAL COMMUNICATIONS.

PRACTICAL OBSERVATIONS ON ACUPRESSURE—ILLUSTRATED BY CASES.

By WILLIAM PIRRIE, M.C., M.D., F.R.S.E.,
Professor of Surgery in the University of Aberdeen; Surgeon to the Royal Infirmary of Aberdeen.

A NEW method of arresting hæmorrhage from cut arteries, founded on the principle of temporary metallic compression, called the method by acupressure, was suggested by Professor Simpson, and first described by him to the Royal Society of Edinburgh in December, 1859. It is useful to read the original descriptions of important discoveries, and I have perused with much interest the abstract of the above original communication on acupressure, contained in the *Proceedings* of the Royal Society (vol. iv., p. 249), and the somewhat fuller account given in the *Edinburgh Medical Journal* of January, 1860; also Professor Simpson's communication to the London *Medical Times* of February 11, 1860, giving the histories of the earliest amputations in which acupressure was used for arresting hæmorrhage. To those who wish to be thoroughly acquainted with the history, progress, advantages, and the three principal methods of this new proceeding in practical Surgery, the perusal of the above-mentioned papers, of four original lectures on acupressure, by Professor Simpson, contained in the numbers of the *Medical Times* for January, 1864, and of his instructive work on the same subject, published in Edinburgh in the end of last year, will afford all the information that can be desired. Both in the lectures and in the work the principal methods of acupressure are so clearly described and so distinctly illustrated that any Surgeon wishing to practise them can have no difficulty in knowing how to do so. The whole subject has been treated so fully that further argument in its favour seems unnecessary; but although such has been the case,—although acupressure has been practised by some Surgeons in these islands, on the Continent, in Asia, Africa, Australia, and by so many in America that the American demand for the passive iron wire used in the proceeding, and for sutures, has stimulated its manufacture in England to a remarkable degree, and although the progress of acupressure in the time that has elapsed since it was proposed by Professor Simpson as a means of arresting Surgical hæmorrhage has been greater than that of the ligature in the same length of time, after its application by Ambrose Paré to arrest hæmorrhage in amputations, still it has not as yet met with general adoption. The period seems now to have arrived when it is desirable that those who have tried this hæmostatic agent should put their cases on record; and however inconclusive the observations of a single Surgeon may be, the accumulated experience of many will furnish perfectly reliable statistics, and a just appreciation will be arrived at regarding acupressure.

My Hospital experience of acupressure as a hæmostatic agent, in important cases of which records have been kept, comprehends its use in five amputations in the middle-third of the thigh, one amputation of the leg below the knee, two cases of removal of the mamma, and one of excision of the elbow-joint. I have employed this method of arresting hæmorrhage in several major operations in private practice, as well as in many minor ones, which I did not deem sufficiently important to be put on record. Of cases in private practice, I shall in the present communication only mention four—namely, one of amputation above the middle of the thigh, the sixth case in all in which I have used acupressure in amputation in that region; one of excision of the testicle, one of removal of the mamma, and a case of considerable interest in which there was great hæmorrhage from a wound in the back part of the upper half of the forearm, caused by the point of a scythe passing forward between the bones, and injuring an artery in the front of the forearm. In every case, both in Hospital and private practice, in which I have employed acupressure, its use has been most satisfactory.

VARIOUS MODES OF ACUPRESSURE.

Before giving a brief record of my experience of this hæmostatic agent, it may be advisable to describe very shortly the principal methods of acupressure hitherto employed. They are seven in number.

The first method, to use the words of Professor Simpson, who has kindly favoured me with the use of the two accompanying illustrations, "consists in passing a needle through the flaps or sides of the wound, so as to cross over and compress

FIG. 1.

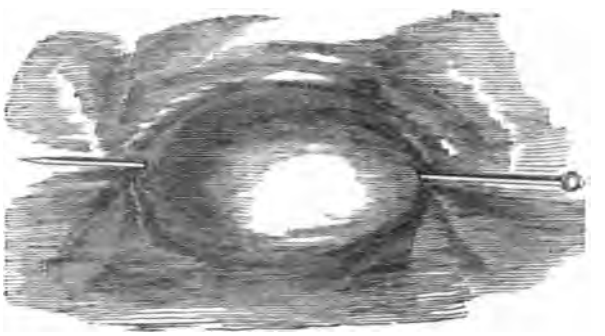

FIG. 1.—Cutaneous surface of a flap, in which an artery is secured by an acupressure needle, according to the first method.

the mouth of the bleeding artery or its tube, just in the same way as in fastening a flower in the lapelle of our coat, we cross over and compress the stalk of it with the pin which

FIG. 2.

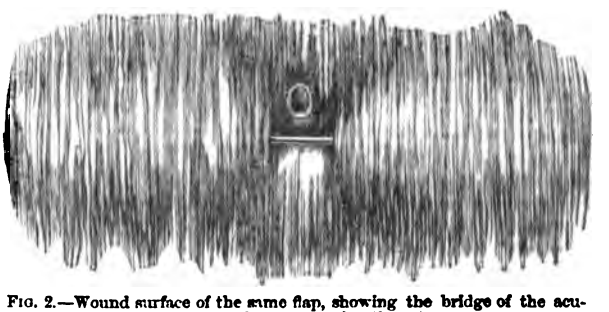

FIG. 2.—Wound surface of the same flap, showing the bridge of the acupressure needle compressing the artery.

fixes it, and with this view push the pin twice through the lapelle. The only portion of the needle which is left exposed internally on the fresh surface of the wound is the middle portion of it, which bridges over and compresses the arterial tube at its bleeding mouth, or a line or two or more on the cardiac side of it. And if it were a matter of any moment, this part need not always be left bare, for the needle could be often passed a few lines higher up, between the vessel and the cut surface, and without emerging on that surface. More or less of both extremities of the needle—viz., its head and point, are exposed externally on the cutaneous surface of the side or flap of the wound. When passing the needle in this method, the Surgeon usually places the point of his left forefinger or of his thumb upon the mouth of the bleeding vessel, and with his right hand introduces the needle from the cutaneous surface, and passes it right through the whole thickness of the flap till its point projects for a couple of lines or so from the surface of the wound, a little to the right side of the tube of the vessel. Then, by forcibly inclining the head of the needle towards his right, he brings the projecting portion of its point firmly down upon the site of the vessel, and after seeing that it thus quite shuts the artery, he makes it re-enter the flap as near as possible to the left side of the vessel, and pushes on the needle till its point comes out again at the cutaneous surface. In this mode we use the cutaneous walls and component substance of the flap as a resisting medium, against which we compress and close the arterial tube. But in some wounds a neighbouring bone or other firm unyielding texture forms the best and readiest point of resistance against which to pin and compress the artery by the acupressure needle."

The second method consists in inserting the needle in the fresh surface at a little distance from the vessel, pushing it on, causing its point to rise up as near to the artery as possible, bridging over and compressing it, dipping the point of the needle into the raw surface of the wound on the other side of the vessel, forcing it on, and causing the needle to emerge a second time on the wound. The needle is threaded with a passive iron wire, by which it can be easily withdrawn.

The third method consists in entering the needle on one side of the artery, pushing it behind, causing its point t

emerge on the opposite side of the vessel, passing a loop of inelastic iron wire over its point, bringing the wire over the track of the artery and behind the stem of the eye-end of the needle, drawing it sufficiently to close the vessel, and fixing it by a twist or half a twist around the needle. The wire

FIG. 3.

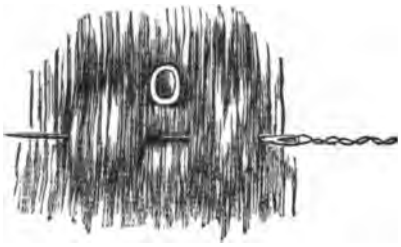

FIG. 3.—The second method, by means of a common sewing needle.

FIG. 4.

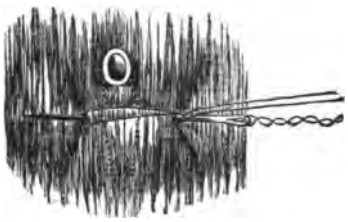

FIG. 4.—The third method, by means of a common sewing needle threaded with iron wire, and a loop of inelastic iron wire.

with which the needle is threaded should be twisted that it may be readily distinguished. By means of this twisted wire the needle can be pulled out, after which the loop of wire is liberated, and can be easily withdrawn.

The fourth method, or that by a long pin and a loop of passive iron wire, is a modification of the third, and differs from it only in a long pin, with a glass head, for facilitating its insertion, being substituted for the common sewing needle threaded with iron wire. Perhaps of all methods the third

FIG. 5.

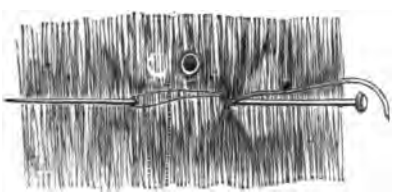

FIG. 5.—The fourth method of acupressure by means of a long pin and a loop of iron wire.

and fourth are the most secure. The principle in each is the same, but I like the modification of using long pins when convenient from the form of the wound, as they can be so quickly introduced, so readily withdrawn, and all wriggling and entanglement of different kinds of wires with each other avoided.

The fifth method, or that by the twist, may be varied according to the extent of rotation of the needle, whether to a-half or quarter rotation. The operator has, on the cessation of bleeding, a reliable proof that a sufficient degree of rotation has been given to the needle. This method may be practised with a long pin or with a threaded sewing needle, and with either it can be very quickly done, but of all methods of acupressure that by the twist with a long pin is the quickest.

In acupressure by the twist to the extent of a half rotation of the needle, the three first movements given to the needle are precisely the same as in the third method above described, namely, it is entered on one side, pushed behind the artery, and its point is made to emerge on the opposite side, so that the parts at this stage present the appearance delineated in Fig. 6. The needle is then twisted over the artery and fixed on the parts beyond, as shown in Fig. 7. In this method the artery is, to a certain degree, both twisted and compressed. The first time I tried the method by the twist, a half rotation was given to the needle; but as so little pressure, when direct,

FIG. 6.

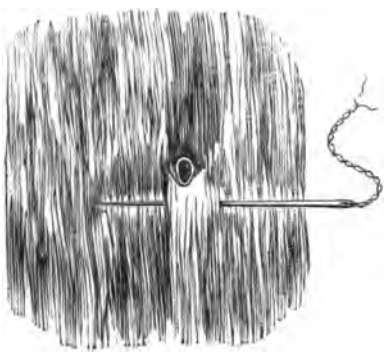

FIG. 7.

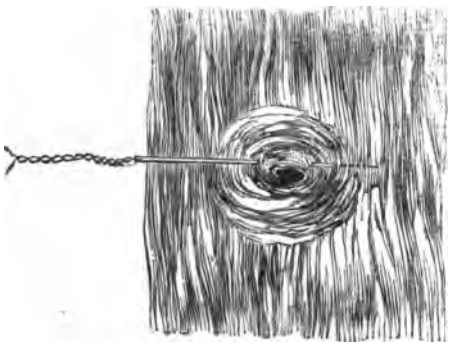

FIG. 8.

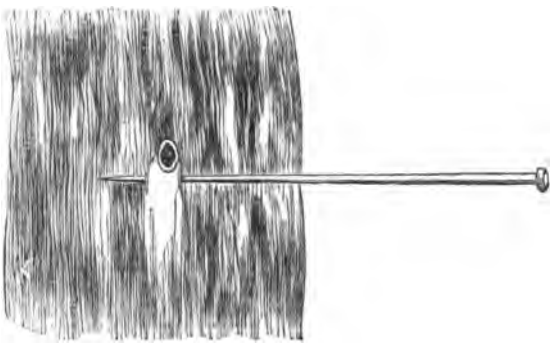

FIG. 8.—Half rotation with a long pin. The pin behind the artery.

FIG. 9.

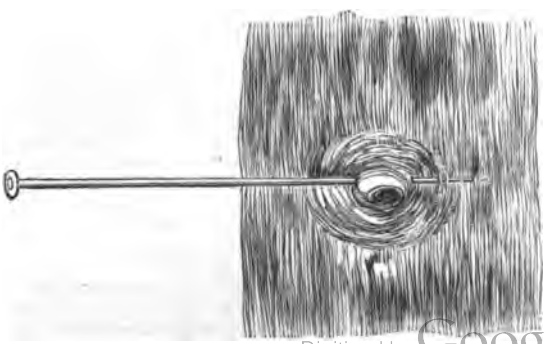

FIG. 9.—Half rotation with a long pin. The pin in front of the artery after rotation.

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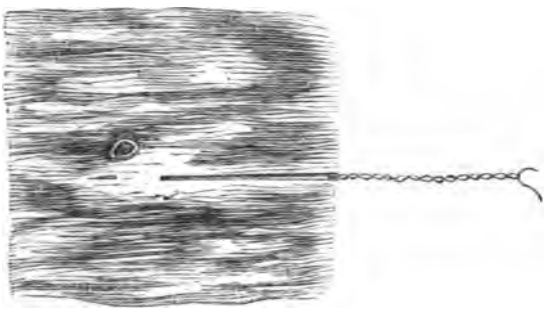
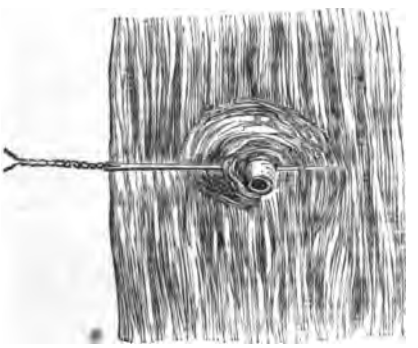
is sufficient to arrest hæmorrhage, in other cases a quarter rotation was only made by it. The needle was sent by the side of the artery, as represented in Fig. 10, a quarter rotation was

FIG. 10.



given to it, and then secured by sending its point into the soft parts as shown in Fig. 11. This is the simplest, quickest, and

FIG. 11.



easiest of all the methods by the twist, more especially when done with a long pin, as shown in the accompanying illustrations,

FIG. 12.

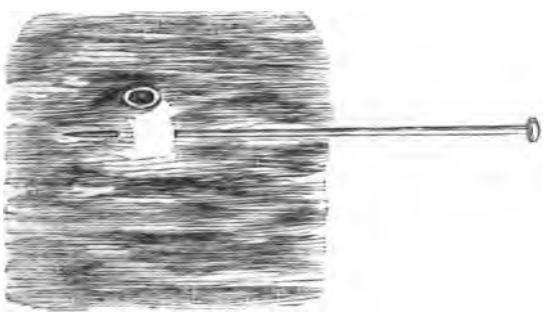


FIG. 12.—Method by the twist with a long pin. A quarter rotation. Pin inserted by the side of the artery.

FIG. 13.

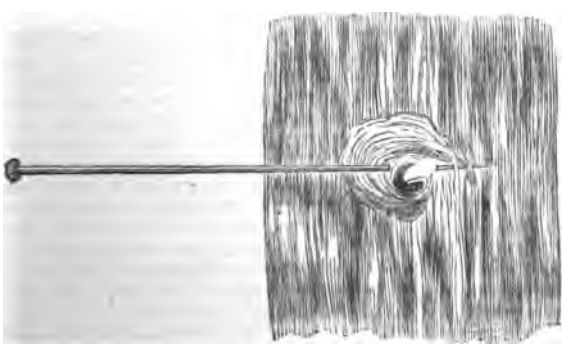


FIG. 13.—A quarter rotation by a long pin. The pin in front of the artery.

and as far as experience in the Aberdeen Hospital warrants an opinion, perfectly efficient. The gentlemen who were present in the theatre of the Hospital at the first operation where I tried acupressure by the twist were particularly struck with the great simplicity of this method as well as the facility with which it could be employed; but as the manœuvre with the small needle could not be distinctly seen from a distance, they were curious to see, after the removal of the patient, a demonstration I gave of this mode, in which I used a large needle and the mouth of the femoral artery in the amputated limb.

Professor Simpson used this method early in the history of acupressure in cases operated on by Dr. Handyside and Mr. Edwards, but he had published no account of it when the same method occurred as a perfectly original idea to the mind of Dr. Knowles, formerly House-Surgeon of the Aberdeen Hospital, who suggested this method without the knowledge that it had been devised by Professor Simpson, and I felt anxious to give it a trial. I did so in the Aberdeen Hospital on June 29, 1864, in an amputation of the thigh. This was the first instance in which the femoral artery was secured in this way, and the first time this method had ever been tried. It is no part of the fifth, or Aberdeen, method by the twist to transfix the artery; on the contrary, great care is taken to avoid doing so. It is important to be aware of this circumstance, that there may be no confusion between this method and the sixth, in which the artery is transfixed. In practising the Aberdeen method by the twist, the first movement of the needle may be made to consist of its insertion by the side or underneath the artery, as may be most convenient for having its head towards the edge of the wound when the quarter rotation has been made.

(To be continued.)

PATHOLOGICAL CONSERVATIVE SURGERY.

By FRED. JAMES GANT, F.R.C.S.,
Surgeon and Pathological Anatomist to the Royal Free Hospital.

THE leading purpose of my introductory lecture on "The Pathological Practice of Surgery" in October last was to advocate and establish this position: that the treatment of diseases and injuries should be guided, regulated, and determined by (foreknowledge of) their *natural* courses and tendencies, favourable and unfavourable, to recovery; and as we thus discover the *earliest occasion* for interference with the order of Nature, the *kind* and *least* amount of assistance—medical, operative, or both—required from time to time, these indications together constitute the threefold principle of all Therapeutics.

While, however, this therapeutic principle derived from that department of pathology is applied through prognosis, the etiological consideration of injuries and diseases with regard to their operation as internal causes, and of any external cause in operation, is of analogous therapeutic import; and the structural condition, etc., of the lesions themselves, as identified by diagnosis, is undoubtedly subservient: yet these departments of pathology bear less directly on the rational treatment of disease. In short, the operation and the *continued* operation—the course and tendency of disease or injury, pure pathology, as distinguished from pathological anatomy, is of superior therapeutic importance.

The guidance of this latter science during life—"Clinical Pathological Anatomy"—leads, indeed, as I have shown in my "Principles of Surgery," to the earliest and most exact diagnosis and detection of internal causes; but, as I have also there shown, pure Pathology is essentially supplemental to a similar knowledge of their operation and determines our prognosis respecting their continued operation, thus *directly* ruling therapeutic treatment.

Furthermore, I dwelt on this most important principle—that in so far as the careers of diseases and injuries are naturally to, or towards recovery, such favourable course and tendency indicate the operation and resources of a *self-restorative* power, inborn and inherent in the human body, reparative in relation to injuries; but that this power is manifested more conspicuously and efficaciously at the commencement of diseases and injuries than at any subsequent period of their career. Hence the three-fold therapeutic principle I have advanced necessarily turns upon the earliest and most exact foreknowledge of the degree of operation, and the self-sufficiency or otherwise of the resources, of this power.

But mark how this subjection and adaptation of all thera-

peutics, in time, kind, and degree only, to the requirements of the self-restorative organism, confer a *truly* "conservative" character on the practice alike of Medicine and Surgery; and by ever referring the Practitioner, of whatever denomination, to clinical observation of the vital history of disease and injury, rule our art from the sure and commanding ground of Pathology.

Such, then, is my view of "conservatism" in Medicine and Surgery—a pathological and general principle of practice.

Applied to Surgery, this combination may be named "Pathological Conservative Surgery:" an appropriate name, as indicating the source of our guidance, Pathology; and, that actually by virtue of the diseased or injured organism spontaneously undergoing various processes of self-restoration, Surgery, if responsive thereto, acquires a truly conservative character; for our practice then represents the least amount, as well as the kind, of co-operative assistance—medical, operative, or both—that may be necessary, and the earliest occasion for interference, in this self-preservation of limb and life.

Now, this view of Conservative Surgery is, I contend, by virtue of its distinctive and comprehensive character, far superior to that which has hitherto prevailed.

Mr. Fergusson, I believe, originated the expression "Conservative Surgery" in the year 1852; and last summer, in his Lectures(a) before the Royal College of Surgeons, he still adhered to his original definition thereof, and to its being distinctive from ordinary Surgery:—"To treat a fracture," says he, "in the ordinary way, to cure an ulcer, to deal successfully with a chancre with or without mercury, have been alluded to as examples of this sort of practice;" but "it may be truly said that all Surgery is Conservative (in this sense), its grand object being to save limb and life." "Again," says he, "I repeat that this kind of practice cannot be considered new. Every saving act of Surgery may be so denominated (Conservative); but the phrase, in modern times, has a peculiar significance: it is meant to show that, instead of the sweeping and radical measure of total separation or amputation, a compromise may be made whereby the original constitution and frame, as from the Maker's hand, may be kept, as nearly as possible, in its normal condition."

"When a part of the body is dead, or seemingly (as he elsewhere says) incurably diseased, and must of necessity be removed, I am of opinion that Conservative Surgery may be displayed in a variety of ways. *Ex.* Excision of a seemingly incurable diseased joint rather than amputation of the limb."

By duly comparing these passages, we learn that all Surgery being Conservative, by virtue of its final object, the preservation of limb and life, there is, so far, nothing new, nothing distinctive, in "Conservative Surgery," but that its peculiarity is simply this,—starting from the point where "seemingly incurable disease" has supervened, Mr. Fergusson's practice *then* aims to preserve "the original constitution and frame as from the Maker's hand," and by such Surgical operation as may be planned and performed for the extirpation of the diseased portion only, instead of resorting to an operation which, in removing that part, sacrifices unnecessarily any portion of the sound organism.

Yet this is manifestly only the continued pursuit of the final object referred to, by a more exact adaptation of Operative Surgery. Abstract therefrom the idea of preserving limb and life, and nothing remains to be accomplished; the Surgeon's occupation's gone. There is, however, a very unfavourable difference in the amount of preservation proposed; such Conservative Surgery contemplating the preservation of a limb only when a diseased portion has become (seemingly) incurably diseased,—only when part of "the original constitution and frame" is (apparently) already lost.

"Conservative Surgery" having no distinctive character, it is not surprising that Mr. Fergusson should soon wander from and abandon the terms of his own definition.

Not restricting it to operations for the removal of the least portion of the body absolutely necessary, he includes operations whereby no part whatever is removed, designating them as distinctively conservative, simply because the object of any such operation is to preserve a limb, for example, which would otherwise be sacrificed by an alternative operation. Thus, Mr. Fergusson designates the Hunterian operation of ligaturing an artery for aneurism, beyond the seat of disease, as, distinctively, a conservative operation, simply because its object was to preserve the limb, by avoiding what?—the alternative operation, amputation. "Here," says Mr. Fergusson triumphantly—"here are Hunter's very words: 'Why not tie the artery up higher in the sound parts, where it is tied in amputation, and preserve the limb?' His object was to avoid amputation, and he then initiated a long and successful career in that direction. It was a vast idea and a vast triumph for the time."

Now the object of Hunter's operation was undoubtedly the preservation of limb and life, as is the object of all Surgery; but the comparing this operation with amputation is, I conceive, a fundamentally erroneous view of Hunter's famous proposal.

Amputation was not the alternative operation previously in general use. Reflect, for a moment, on that operation; it was by an incision throughout the whole extent of the aneurismal sac, to scoop out the coagulum, in order to expose the two orifices of the artery leading into the sac, above and below which a ligature was passed round the vessel, thus securing it in both directions. Secondary hæmorrhage, however, always perilous, frequently fatal, generally occurred when either ligature separated; and invariably the large wound made by the operation healed tediously, and often precariously, to life, by exhausting suppurative discharge.

Hunter having discovered by repeated dissection in such cases that the hæmorrhage supervening was due to a previously diseased state of either portion of the artery, thus apparently secured; "he was led to propose, that the artery should be taken up in the anterior part of the thigh, at some distance from the diseased part, in order to diminish the risk of (secondary) hæmorrhage, and admit of the artery being more readily secured, should this accident happen. The force of the circulation being thus taken off from the aneurismal sac, the progress of the disease would be stopped; and he thought it probable that if the parts were left to themselves, the sac with its contents might be absorbed, and the whole of the tumour removed, which would render any opening into the sac unnecessary. Upon this principle, Mr. Hunter performed the operation at St. George's Hospital."

Such was the account of Hunter's operation for popliteal aneurism, as originally communicated, by his own request, through Mr., afterwards Sir Everard, Home. (b) We may therefore fairly presume that it faithfully represented Hunter's views.

Undoubtedly, then, this operation was suggested by the superior advantage of ligaturing a sound portion of artery instead of that at the seat of disease,—above and below the aneurismal sac, either of which portions of the vessel participated in the diseased condition—now known to be degenerative change of structure,—and which, affecting the aneurismal portion of artery, originally predisposed to the formation of the aneurism.

Considered only as an operation, this was an illustration of the guidance of pathological anatomy during life—"Clinical Pathological Anatomy," as I have named this science, thus applied—in the design, if not also in the performance, in the present instance, of Surgical Operations. Hence, the part selected for operation.

But, considered far beyond even this point of view, the how to do whatever is necessary; the why and wherefore of this operation is an illustration of what to do, through the guidance of pure Pathology—*i.e.*, by obeying the natural course and tendency of any morbid condition, in respect to its appropriate treatment, instead of regarding the suggestion of pathological anatomy. And observe, it was by virtue of that aspect of Pathology which manifests the operation and resources of the self-restorative power, inborn and inherent in the body, whereby the careers of diseases and injuries are naturally to or towards recovery. In this case, the aneurismal dilatation being stopped by coagulation of the blood within the sac, consolidation of the tumour was followed by its absorption, as a sequel in the vital history of this disease. So nicely adapted is the resistance of the arterial walls to the wave-current of blood that the only condition necessary to the natural reparation of any breach is, not that the passage of blood through the vessel need be altogether arrested, but only its force reduced just while the process of repair is going on, coagulation and consolidation then proceeding uninterruptedly; nay, the work being even finished off by absorption of the superabundant plastic material, coagulated blood, which had previously been collected, albeit then unavailingly, within the sac for this purpose. Guided by this self-curative aspect of pathology, Hunter's operation represented the kind and least amount of assistance required

(a) On the Progress of Surgery during the Present Century.

(b) *Transactions* of a Society for the Improvement of Medical and Chirurgical Knowledge, vol. i.

—reduction only of the force of the circulation by ligaturing the artery (in a sound part, obediently to another principle, as we have seen), instead of undoing Nature's work by scooping out the plastic coagulum, the cure being then left entirely to the natural course and tendency of aneurism to recovery. The circulation of blood through any collateral branches arising from the parent trunk of artery above the ligature would not interfere with this process of repair, but at the same time suffice for nutrition; and, as the event proved, by the enlargement of these vessels, however normally inadequate they might appear to be, sufficient collateral circulation would become established to permanently maintain the limb when the parent artery had withered with the aneurism.

The grand conception of Hunter's operation, therefore, altogether transcends the narrow limits of Mr. Fergusson's view of it. "It was indeed a vast idea for the time," and for all time; but not as compared with amputation. Profoundly suggestive to my mind, I recognise in it the germ of Pathological Surgery—at least, of its *conservative* aspect, and of its *operative* character.

The guidance of pathology in the treatment of aneurism has led to other remedial measures yet more conservative. I need only allude to the treatment, without any operation, by "compression" and the ingenious adaptation of this method by genuflexion in popliteal aneurism lately brought into practice by Mr. Hart.

The curative treatment of aneurism without *any* operation also illustrates another grave objection to the term "conservative," as hitherto understood. In that acceptation, it is not only, as we have seen, superfluous, and a merely mechanical view of Operative Surgery; but conservatism does not extend to Medicine, in respect to which, however, the kind and least amount of Medical treatment required from time to time may likewise be discovered by interpreting the natural course and tendency of diseases to or towards recovery. In other words, the same cardinal therapeutic principle is still derivable from pathology. "Pathological Conservative Medicine," as this extension may be named, shows even more clearly the wide difference between the view of conservatism I am advocating and that which regards it, and, in a paltry sense, as pertaining only to Operative Surgery, while it recognises also the indivisibility of Medicine and Surgery as one continued and consistent system.

In the light of true conservatism their artificial distinction is of momentous consequence. Starting with disease in an incurable state, except by operation, conservatism, thus restricted, precludes our discovering the earliest occasion for interference in order to prevent this issue by the timely intervention of the very least amount and kind of remedial assistance—medical, mechanical appliances only, or both combined, which might primarily have been sufficient to conduct the case to recovery. True conservatism, in its highest aspect, and the prevention of incurable disease, are alike precluded. Surgery, robbed of its highest attribute, preventive power, and reduced accordingly to the treatment of incurable disease by then removing less of the body than formerly—by excision, for example, rather than amputation—is indeed poor compensation for that timely co-operation whereby the bodily organism would itself have wrought a far happier issue. The practice of Medicine and Surgery should ever be, as far as possible, the faithful reflection of natural processes of cure; the ruling principle of the Practitioner being that laid down by our national poet for dramatic representation, "ever to hold, as 'twere, the mirror up to nature."

It may serve to completely establish the argument of this communication, if, in conclusion, I bring its force to bear on the very centre of Conservative Surgery, as hitherto understood; I mean the question of operation by excision for incurably diseased conditions of joints, rather than by amputation of the limb.

This question can alone be determined by knowing and rightly interpreting the diseased condition then present; in fact, by comprehending that pathological condition which in the course and tendency of the disease has at length supervened. Undoubtedly, the results of such operation, as to the future condition of the limb and mortality, confirm or rectify our interpretation; but this itself is drawn from pathology. Accordingly, in the event of any disease of the knee-joint, for example, having become incurable by medicinal treatment, the question of excision rather than amputation at once refers us to the pathology, not simply the diagnosis, of that disease, and to analysed experience of the comparative results of these two operations, in respect to, be it observed, whether the diseased condition be *itself* favourable to the operation of excision.

In the history of this, as of every other operation, the first question to be determined was its practicability with success in the living body. Such was the question Park, of Liverpool, originally proposed and determined respecting excision of the knee-joint, and which was communicated to Pott, of St. Bartholomew's Hospital, in September, 1782. The elder Moreau was also, it would appear, from the testimony of his son, entitled to the same merit, contemporaneously, without any knowledge whatever of Park's operation; and unquestionably Moreau *primus* showed the practicability of diseased elbow-joint excision with success in the living body.

This preliminary question being solved respecting a kind of operation which, in possibly saving the limbs of thousands, was an earnest of such high promise to mankind, no philanthropist, no true Surgeon, will fail to share the "mortification" and regret the "violent opposition" of those great benefactors Park and Moreau, when, in the graphic language of Mr. Fergusson, "not a breath, not a pen, not a knife stirred in England" for the one, and "the modest effort from Bar-sur-Ornain was as little heeded as that from the banks of the Mersey;" the operation of Moreau being, in fact, actually rejected in the first instance by the French Academy of Surgery.

But the practicability of diseased knee-joint excision having been fully established, then, assuming the diseased condition to be otherwise incurable, came the great question as to the *propriety* of such an operation rather than amputation.

In justice to the memory of Park and Moreau as truly great Surgeons, it should be here stated that they both distinctly and expressly recognised the pressing importance of this question. But, as we have seen, it is an inquiry which can alone be determined by rightly interpreting the diseased condition present in each particular case.

In other words, the propriety of joint excision at once refers us to pathology—respecting the *diseased conditions* which are themselves favourable for, or I might say to, this operation, rather than amputation; and by knowing, moreover, the prior course and tendency of the disease, to or towards recovery, we are further enabled to determine whether either or *any* operation be requisite.

Mark the contrast of Mr. Fergusson's "Conservative Surgery:"—

"In respect to the propriety of excision," says he, "I cannot allow that which might be an easy answer to this question. Why perform an operation at all? Why not cure the disease, and thereby avoid amputation? That is a question of a totally different kind. . . . It is the question between excision and amputation as regards the future condition of the limb."

Thus, then, the question of Medical treatment before the apparent necessity for any operation is altogether disregarded; and that of this or that operation, not referred to Pathology, but reduced to the mere handicraft and obvious comparison between a stump and shortened limb. "Look," said he at the College of Surgeons, "on this picture, and on that; and I ask your verdict?" It is, in my opinion, that the operation of diseased joint excision *versus* amputation of the limb, as a Surgical question, is thus left just as it was when first introduced—merely a *practicable* operation on the living body.

In candidly confessing "the wonderfully greater mortality" of his knee-joint excisions—fifteen deaths out of forty, or more than one in every three cases—as compared with those of other Surgeons, Mr. Fergusson would appear to have himself felt the want of foundation to his own view of Conservative Surgery; and, in fearing that his operative zeal may have been without Surgical judgment in the selection of cases, he does seem just once, but once only, to have alluded to that grand question of propriety by the right interpretation of pathology, for which I am pleading.

Mr. Fergusson mourns over the fate of Park and Moreau; yet in their generation each independently showed the practicability of diseased-joint excision in the living body, and each independently recognised the pressing importance of thenceforth discovering what diseased conditions are favourable for such operation. Mr. Fergusson also regrets that, four-fifths of a century having passed away since Park's letter to Pott, the latest echo to this grand announcement is thus recorded in 1861 by one of the present Surgeons and Lecturers on Surgery: "The excision of joints does not find much favour at St. Bartholomew's. It has been practised only once, and that in the elbow."

It is not, however, that Surgeons are obstinately opposed to such Conservative Surgery and inhumanly unwilling to save limb and life. Fully granting this to be the obvious purpose of all Surgery, they are, nevertheless, honestly desirous of ascertaining the diseased conditions—local, in kind and extent, and constitutional, which render this or that Surgical proceeding necessary, and which will guide their judgment accordingly, instead of comparing the mechanical results of different operations.

Conservative Surgery, as hitherto understood, may, indeed, be calculated to confer a temporary reputation on the Practitioner for operative skill in paring down and trimming up the body when "seemingly incurably diseased;" but as the standard whereby to estimate our preservative progress, it is, I contend kindly but firmly, a too mechanical and contracted aspect of Surgery to be transmitted, as our legacy, to the next age.

There are two aspects of Practical Surgery which I have humbly endeavoured to set forth in this communication,—Pathological Conservative Surgery, and the guidance of clinical pathological anatomy in the design and performance of Surgical operations. For the sake of brevity, the latter may be named Pathological Operative Surgery; ever remembering, however, that this abbreviate prefix is not synonymous with Pathological, and *thence* Conservative, Surgery,—this representing *what* to do by pathology, in so far as its *self*-curative character extends; that, *how* to do whatever is required, operatively, by the guidance of pathological anatomy during life. Both are included in the "Pathological Practice of Surgery," but this comprises also what to do, as derived from the unfavourable (as well as from the favourable) vital history of diseases and injuries; and, moreover, exhibits the application of all those pathological principles—diagnostic, etiological, and prognostic—which together, with such practice, constitute "Pathological Surgery."

Its operative department will form the subject of my next communication, illustrated chiefly by four consecutively successful cases of excision of the hip-joint, and their permanent results.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. GEORGE'S HOSPITAL.

OVARIAN TUMOUR—SUCCESSFUL REMOVAL.

(Under the care of Mr. TATUM.)

For this case we are indebted to Mr. T. P. Pick, Surgical Registrar.

Charlotte S., aged 25, dressmaker, admitted February 22, under the care of Mr. Tatum. This patient came under observation first in December, 1863, with the history of an ovarian tumour, which was first noticed four months previously, and commenced with a "severe cold, feverishness, and sickness," which lasted some days before she noticed any swelling. She has no recollection of its having commenced more on one side than the other, but she now states that when it is full, the abdomen is always "tighter on the right side than on the left," and that after she is tapped she feels "heavier" on that side than the other. The increase in the size of the cyst has been very rapid; the first tapping was performed four months after the appearance of the swelling, and the period between one paracentesis and the next has since been much less, latterly only five or six weeks. The fluid was at first perfectly clear and limpid, and contained a very small quantity of albumen. She has never suffered much pain, but has had occasionally a slight tenderness in the left hypogastric region, which, however, has not been constant. Latterly her back has ached frequently. When full she is always troubled with nausea, but with this exception she enjoys pretty good health, and does not feel worn out by the disease. The urine has always been scanty, otherwise she has suffered no inconvenience from pressure on the bladder. The uterine organs have not been implicated beyond the presence of a slight discharge from the vagina for the last eight months. The catamenia are regular, they commenced at the age of 18, and have always been present, though sometimes recurring every three weeks. She has never felt any movements in the tumour, except that it subsided rapidly once. After most of the tappings she has had "pain and been feverish."

Date of tappings.	Quantity removed.
November, 1863 . . .	Some gallons
January 19, 1864. . .	4 ,,
March 11, ,, . . .	5 ,,
May 6, ,, . . .	6¼ ,,
June 20, ,, . . .	5½ ,,
August 8, ,, . . .	6¾ ,,
Sept. 26, ,, . . .	7¼ ,,
Nov. 8, ,, . . .	5½ ,,
Dec. 17, ,, . . .	5¼ ,,
January 27, 1865 . .	5¾ ,,

On Admission.—She appears in average good condition, and not emaciated. She is of a dark, swarthy complexion. The abdomen is much distended, measuring 51½ inches at umbilical level, and 27 inches from ensiform cartilage to pubes. The parietes of the abdomen are thin, and the veins dilated and well marked, but not raised. On percussing, the wave of fluctuation, which is very distinct, passes right across the abdomen from the left flank to a line drawn from the anterior superior spinous process of ilium to tip of false rib, where it is broken up, and finally lost. There is no tenderness on pressure, and perfect dulness throughout its whole extent. Both flanks are resonant. The uterus is healthy, the os is small and high up, and the vagina contracted. The urine is scanty, but quite healthy. The tongue is pale. Appetite generally good; bowels habitually costive. She enjoys good spirits, and when not distended sleeps comfortably. Pulse 96, small and feeble. Heart-sounds healthy. Lungs resonant, free breathing throughout. Urine healthy.

March 4.—The distension is so great that her breathing has become affected. She is much fuller than she has ever been before. Paracentesis abdominis was performed, and eight gallons and one pint drawn off.

9th.—She is much relieved by the tapping. On examination no hardness can be felt in any part of the abdomen. On the right side can be felt a soft moveable mass, which is lobulated, and feels like a bunch of cysts.

27th.—She is now completely distended again, but not tense. The ward having been well heated, and the air moistened with steam, chloroform was administered. An incision six inches in length was made in the linea alba from about two inches below the umbilicus towards the pubes. The various layers were divided on a broad director, and the peritoneum exposed and in like manner divided, the cyst then came into view; a single finger was introduced to free it from adhesions round the edges of the wound, and the cyst tapped with a large trocar, and the fluid drawn off. In spite of every precaution a small quantity of the fluid ran by the side of the trocar, and a little passed through the wound into the cavity of the abdomen. After all the fluid was withdrawn an attempt was made to remove the cyst by gentle traction, but there were found to be numerous adhesions; the hand, previously warmed, was therefore introduced into the cavity, and most of these adhesions, which connected the whole of the anterior surface of the cyst to the abdominal wall, broken down; those along the linea alba, however, were so strong that they could not be broken through, the cyst tearing under the force necessary to do so; they were therefore dissected off with a scalpel; the wound caused by this dissection bled freely. The adhesions appeared to be confined entirely to the anterior wall of the cyst. The tumour having been completely freed was drawn out, the pedicle was very short and funnel shaped; it was transfixed by a strong silver wire, which was then tied on each side, and the tumour separated. The pedicle was returned into the abdomen. Throughout the operation the sides of the wound were supported so that none of the abdominal viscera were exposed, except a coil of small intestine for an instant; this was of a darker colour than natural. The disease was connected with the right ovary. The wound was brought together with six silk sutures, interrupted; they were made to pierce the whole thickness of the abdominal wall, but not to transfix the peritoneum. Some simple dressing, a flannel pad, and a binder were applied. She was very faint during the latter part of the operation. At its close her pulse was 82.

Upon examining the tumour after the operation it was found to consist of one large cyst, the walls of which were very thin and easily torn, except at its anterior part where the wall was much thicker; at the right side of this large cyst were a number of smaller ones, varying in size from a

plum to a large orange, some communicating with the large cyst, others being entire. There was no solid matter. After the operation and before she had thoroughly recovered from the chloroform she vomited. She was ordered thirty drops of laudanum immediately, and a grain of opium every four hours, and ice to suck. In the course of the evening she vomited twice, the matter thrown up smelling strongly of chloroform, and consisting of undigested food. Her bowels also acted twice, once copiously. At midnight she seemed comparatively comfortable, and had had two short sleeps. She did not complain of any pain, only a sense of weight over the belly. Reaction had set in, the pulse being 108 and full, and the skin hot and moist. She was ordered three grains of calomel immediately, and to continue the opium.

28th.—The following morning she was comfortable and in no pain, only feeling a little sore about the wound; she had slept considerably during the night. She had not been sick again. Her pulse was 84, steady. Skin warm and moist. Tongue clean. She was ordered fifteen drops of liq. morphiæ every three hours, chicken broth and jelly, and brandy and soda-water occasionally. In the evening she still continued quiet and comfortable. Pulse 84, steady. Tongue clean. Skin warm. No pain. To continue the draught every two hours, and to have some champagne and ice.

29th.—She continued quiet till three this morning, when she was violently sick, throwing up about half a pint of greenish fluid. At six she was seized with violent pain in the belly, which lasted about a minute; since then the pains have recurred at intervals, and she has been violently sick. The skin was warm. Pulse 92. Tongue clean, inclined to be dry. The abdomen was tympanitic and distended, but she could bear pressure without pain. She was ordered five drops of dilute prussic acid in a teaspoonful of brandy every three hours. In the evening her pulse was fuller, but her aspect cheerful, and she had had no more sickness, though the pains continued occasionally.

30th.—The next day she was reported to have had a very restless night, and been in considerable pain. The abdomen was more distended and tympanitic, and she had been sick once or twice. The tongue was white; pulse 92. In the evening she complained of feeling faint and low, and had been sick several times. Her pulse was 102, and weaker; tongue white; the abdomen very much distended. She was ordered enema rutæ with sp. æther. sulph. ʒi. and assafœtid., ʒi., and to leave off the opium.

31st.—She had been constantly sick and in great pain all night. She was very low and faint. The abdomen was enormously distended, and painful on pressure. Countenance sunken and anxious; pulse 104; tongue white. A long tube was passed up the rectum, and a quantity of wind escaped. In the evening she was much more cheerful, and there was less distension of belly.

April 1.—The following day she was much easier, and the abdomen less distended. The bowels had acted slightly once. Pulse 114; tongue clean. The wound was looked at, and found to be very quiet; a little thin discharge.

From this date she began to mend; she retained a little on her stomach, and the distension of abdomen subsided. The only untoward symptom was the formation of a small abscess in connection with the lower part of the wound on April 7. After this date the wound healed quickly and contracted rapidly, so that when she left the Hospital it was not above two inches and a-half or three inches in length. She got up for the first time on April 17, and was discharged perfectly well on May 5

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(Continued from vol. I. 1865, page 547.)

Case 7.—Large Adherent Multilocular Cyst—Once Tapped—Ovariotomy—Recovery.

The wife of a small country shopkeeper was sent to Mr. Wells in April last by Dr. Whatmough, of Cinderford, and was admitted April 24, 1865. She was 33 years old, had been married eight years, and was the mother of five children, the youngest of whom was 3 years of age. Six months after her last confinement the patient found that her abdomen was as large as if she were six months pregnant. At first little or no inconvenience resulted, but as the tumour went on steadily increasing in size for eighteen months, it at length became so bulky that vital functions were seriously interfered with, and tapping became a necessity. Dr. Whatmough tapped and removed sixteen pints of greenish fluid, after the evacuation of which a small but more solid tumour was felt in the abdomen. Six weeks after the tapping violent abdominal pains confined the patient to bed for two months. She was treated with blisters and poulticing, and recovered a certain amount of strength. The cyst, however, refilled, and increase became rapid after some months. On admission the patient was cheerful-looking and of florid complexion. There was but little emaciation; the hands and feet were habitually cold, but there was no œdema of the legs nor varicose veins. The girth at the umbilical level was forty-one inches, the distance from the umbilicus to the ensiform cartilage was eleven inches, to the symphisis pubis thirteen inches, to the right ilium twelve inches, and to the left ilium twelve and a-half inches. The abdomen was filled with a tumour which reached up as high as the ensiform cartilage, and pushed the liver upwards till its upper margin was nearly on a level with the right nipple. The tumour appeared to consist of a large upper cyst, which was separated by a deep transverse sulcus from smaller cysts. The sulcus crossed the abdomen on a level with the umbilicus. The inferior hemisphere of the tumour appeared to consist of a tolerably large central cyst, and of a more solid portion on each side of it. That in the right iliac region was the most solid of all. The whole tumour swayed freely from side to side. It was, however, apparently adherent to the abdominal parietes at the part where tapping had been performed, in the median line and two or three inches beneath the umbilicus. The abdominal parietes were thin, there were numerous lineæ albicantes, and a few dilated veins. Crepitation was felt pretty generally over the whole tumour. It was most distinctly felt in the left iliac region, where it was soft, as if intestine were there. There was, however, no gurgle to be heard. The uterus was in its normal position, and was freely moveable. The os and cervix were normal. The tumour was not to be felt by the vagina. The catamenial discharge was habitually regular, but rather scanty; for the last three or four periods it had been accompanied with some pain. Its next appearance was expected on May 10. There was no history of sudden suppression. The urine was normal in every respect; the appetite was but poor; the bowels habitually constipated; the nervous system was in good order; the lungs and heart healthy, although the patient complained of palpitation on mounting a staircase.

Mr. Wells performed ovariotomy on May 2, 1865. The incision was at first made only four inches long, and midway between the umbilicus and the symphisis pubis. A quantity of ascitic fluid escaped, and also a number of small pediculated cysts, evidently belonging to the fringes of the left Fallopian tube. Some adhesions were separated around the sides of the opening, and one cyst was tapped. The incision was then extended upwards till it was eight inches long. More very firm adhesions were separated, and then the cyst was broken up internally, the large upper cyst being emptied of much coagulated fibrin and dark fluid. The tumour was then drawn out after a piece of omentum had been separated from it. The pedicle was closely adherent to the abdominal wall, as was that part of the cyst where the vessels of the pedicle entered it. After separating these adhesions with some difficulty, the right Fallopian tube was tied, as was also a single large vessel close to the tube, and the two ligatures were brought out at the lower angle of the wound. Besides this, one vessel in the abdominal wall and a piece of omentum were tied, the ends being cut off short. The abdomen was carefully sponged free of ascitic fluid and blood; none of the ovarian fluid had found its way into the peritoneal cavity. The uterus was found to be rather large; the left ovary was healthy. The wound was closed with six or seven deep silk sutures. The peculiarities of the operation were, that the abdomen was pendulous, that the adhesions were extremely firm, that the Fallopian tube was separated from the rest of the pedicle, and that the tube and a vessel were treated after the fashion of the earlier ovariotomists. Mr. Wells very seldom follows this practice, but he did so in this case, in order to give free exit to the fluid likely to be effused after the separation of such unusually firm adhesions.

The patient had quite recovered from the effects of chloroform an hour after the operation. An hour later the pulse was 70; thirty drops of opium were then thrown into the rectum, for the purpose of relieving pain. In another hour perspiration had broken out. Four hours after operation the

catheter was passed; there was no urine. An hour later the bladder was still closely contracted and empty. At the seventh hour the pulse was 102, and the patient was thirsty. She passed a fair night. At three in the morning of the first day, twelve hours after operation, four ounces of urine were drawn off. On the second day there was no sickness nor pain. On the third day headache and feverishness were succeeded and relieved by uterine epistaxis. On the fourth day fifteen drops of laudanum were required. On the fifth day Mr. Wells removed two stitches, and found that there was a little purulent discharge by the side of the ligature. Uterine discharge continued. On the sixth day two more stitches were removed. On the eighth day the remainder were removed. On the ninth and tenth days warm water was thrown into the bowel without effect. On the twelfth day the bowels acted for the first time, after the administration of castor-oil. The ligature on the Fallopian tube came away on the nineteenth day; the other ligature came away ten days later. The patient gradually recovered strength, and left the Hospital in good health on the 15th of June. She has been heard of since her return home as in excellent health.

(To be continued.)

KING'S COLLEGE HOSPITAL.

ANEURISM OF COMMON FEMORAL ARTERY—LIGATURE OF EXTERNAL ILIAC—RECOVERY.

(Under the care of Mr. FERGUSSON.)

W. B., aged 39, was admitted into King's College Hospital on May 5, 1865, with an aneurism of the right common femoral artery. States that on the 21st of February last, when lifting a heavy plank of wood, he felt a sudden, sharp pain in the right groin, at the same time experiencing complete loss of muscular power, and a peculiar sensation of cramp across the lower part of the belly and loins. During the following week he felt slight pricking pain in the site of the present tumour, and at the end of that time he noticed there, for the first time, a small swelling, a little larger than a pea, which throbbed. An ordinary hernia truss was applied without benefit, the tumour gradually and slowly increasing in size.

On the 12th of April he was admitted into the Woolwich Hospital, where he remained until his admission to King's College Hospital, digital pressure having been applied for the last five days, the tumour, however, suffering no permanent diminution in size on cessation of the pressure.

For a few days immediately before his admission into Woolwich Hospital the tumour increased in size rapidly, the patient noticing particularly the swelling passing beyond the fold of the groin.

On Admission there was a firm pulsating tumour, as large as a small orange (three inches across, vertically and transversely) in the right groin, its vertical axis corresponding with the position of the common femoral artery. Poupart's ligament could be felt passing under the upper part of the tumour. The tumour expanded uniformly, and communicated a thrill to the fingers with each pulsation, the successive dilatations being synchronous with the beats of the pulse at the wrist. The tumour was tolerably firm, as if its walls were thick, and could be completely emptied by pressure with the fingers.

May 8.—A slight increase in the size of the tumour since admission is observable.

10th.—Operation under chloroform. An incision was made about four inches long an inch above Poupart's ligament, nearly parallel with it, the scalpel being carried outwards from a point half an inch external to the external abdominal ring. The tissues superficial to the tendon of the external oblique being first divided, an incision was now made through the tendon of the external oblique muscle; then the fibres of the internal oblique and transversalis fascia were cautiously divided, so as to expose the transversalis fascia; this structure was scratched through with the finger nail, and the opening made dilated with the fingers. The peritoneum was now carefully stripped from the fascia iliaca and held back by a small wooden "butter pat" with a fluted surface, and the vessels being now exposed, the needle was passed from within outwards and the vessel secured by a ligature. Pulsation in the aneurismal sac ceased instantly, and the whole limb fell slightly in temperature. The wound was closed by sutures, and a pad of lint strapped firmly over it. He was removed to bed, and the limb enveloped in cotton wool.

15th.—Feverish; complains of nausea; no abdominal tenderness, and no tympanites. Pulse 112. Limb same temperature as left.

16th.—Pulse 96, full. Still feverish; dressings removed; the margins of the wound found to have healed by first intention, except at the outer part of the incision; slight discharge of bloody pus. Sutures removed; no pulsation in aneurism, the tumour being also smaller; temperature of right foot 89°, left 92°; urine scanty and high coloured; skin dry and hot; slight flush of inflammatory redness about the wound. Poultices ordered.

17th.—Vomited this morning; complains of an indescribable uneasiness about the chest and belly, though no tenderness is evinced on pressure on the abdomen, except immediately about the wound; discharge from wound healthy; temperature of right foot 100°, left 85°.

18th.—Less abdominal uneasiness; no recurrence of vomiting; skin and tongue moist; right foot 92°, left 95°; aneurismal tumour now almost incompressible, and free from pulsation.

20th.—Temperature, right side 82°, left 85°; free healthy discharge from wound.

30th.—The ligature came away (eighteen days after operation).

June 12.—Patient in excellent health; wound nearly healed.

(We are indebted to Mr. P. Bradshawe for the notes of this case.)

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF CALLOUS ULCER OF THE LEG—AMPUTATION—RECOVERY—CLINICAL REMARKS.

(Under the care of Mr. PAGET.)

A. B., a laundress, 32 years old, was received into St. Bartholomew's Hospital, under the care of Mr. Paget, on May 16, for the treatment of a chronic ulcer of the leg, depending on varicose veins. This had first formed five years ago, and had never healed, although she had been under Hospital treatment on several occasions. She had always been able to do her work, but had constantly suffered very severe pain in the limb. It was on account of this pain, and the discomfort she felt from having so large a wound always discharging, that she applied for admission. The ulcer occupied the lower part of the leg, and extended about eight inches in the long axis of the limb, and six inches transversely; the whole of the lower half of the leg was much enlarged from infiltration and brawny thickening of the soft parts, which had become firmly matted together. The floor of the ulcer was formed by the exposed muscles, whose outlines, with the depressed cellular spaces between them, gave it an undulating, uneven surface; the edges were thickened and indurated. As it was hopeless to expect to restore the limb to a useful condition, and as the patient pressed for relief, Mr. Paget performed amputation through the upper third of the leg. The wound healed rapidly, and she is now about to leave the Hospital.

In a clinical notice of this case, Mr. Paget remarked that these ulcers have their seat of election in the lower third of the leg. Their bases are level and flat, or marked with elevations and depressions corresponding to the outline of the muscles whose surface they expose; their edges are round and thickened; their margins, as it is very important to observe, are callous (hence the ulcers are termed "callous ulcers")—that is, hard, dense, brawny, firm, and not sliding, but fixed to the parts beneath. This callous condition is not limited to the immediate margin of the ulcer, but extends for some distance into the surrounding parts. It is produced by the partial organisation of lymph which is effused during the repeated congestion and inflammation which take place.

After reminding the class that the healing of an ulcer is normally the work of two processes—viz., contraction, the surrounding integuments being gradually drawn in towards the centre; and the formation of new skin or cicatrisation,—Mr. Paget pointed out that in the case of a bad callous ulcer little or no contraction can take place; so that healing must be carried on almost entirely by the formation of new skin. Hence either the ulcer cannot be closed at all, or if it be the scar does not remain sound, as the new skin is not enduring enough to bear the active use of the limb. Individual cases must receive a separate consideration; but as a general rule amputation, if involving only the average risk of life, is justifiable for these callous ulcers of the leg in the following cases:—

1. Where a poor person who has no way of living except

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by active work, is wholly disabled so that his means of gaining a livelihood are lost.

2. When his life is made so miserable and burdensome that he would rather encounter the risk of amputation than remain subject to the disease.

This is a question almost entirely for the poor: for, as these ulcers involve no risk to life, amputation need not be proposed when the patient is able to have such treatment, and so to manage himself, that he can secure a fair amount of comfort in spite of the disease. The condition of the ulcer itself justifies amputation in the working classes, and after long duration notwithstanding treatment.

1. When it is so large as to extend over the third of the surface of the leg.

2. When it broadly surrounds the whole circumference of the limb, so as to encircle it in a complete broad collar or belt.

3. When its base is fixed to the muscles, and exposes their interspaces. Here, as the subcutaneous tissue is destroyed, no contraction can take place, and sound healing cannot be secured.

It should be remembered that ulcers are very difficult to heal.

1. When they are placed over the tendo-Achillis: even if such can be healed for a time the action of the tendon is very likely to lead to their recurrence.

2. When they have extended down to the bone, so that their base is formed by a growth of new bone, covered by granulations, as is not unfrequently the case with ulcers situated over the tibia. Either of these conditions adds to the reasons for amputation.

In concluding, Mr. Paget suggested that it might be an interesting inquiry to ascertain, in the various kinds of ulcers, how much of the healing is due to contraction, and how much to cicatrisation. This is a point which has not at present been much investigated.

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Medical Times and Gazette.

SATURDAY, JULY 1.

ROBERT FERGUSON.

It is with the greatest grief that we announce to our readers that Robert Ferguson, certainly one of the greatest Physicians of our time, is no more. To do justice to his character and memory within the very few hours, and in the very few lines which are available for a contributor to a weekly journal, is impossible. Nevertheless, we must make the attempt with such scanty materials as we can gather at a hasty notice, and our own too vivid recollections of the kindness of five-and-twenty years.

Robert Ferguson was born on November 15, 1799, in India. He was son of Robert Ferguson of the Indian Civil Service, was descended from the *lairds* of Glen Islay, in Perthshire, and was grand nephew of Adam Ferguson, author of the well-known work on the Roman Republic. He was educated first at Croydon, then under the care of Dr. Crombie, author of the "Gymnasium," a standard book in Latin literature. He was at first intended for the Army, but his father met with a disastrous pecuniary loss which compelled the son to seek some calling in which he should sooner be able to earn a competent income. The circumstances were (as we are told) that he sold his old family estate to a person who obtained possession of it before he had paid for it, and then became bankrupt; so that the estate was parted with, and the price of it never received. After passing some time at Heidelberg, where he obtained a deep knowledge of German literature and habits of thought, Robert Ferguson went to Edinburgh and studied Physic, and became M.D. in 1825. Then his earliest years of Professional life were diversified by travel as Medical attendant with various families in high life. Thus, he travelled in Greece and the Ionian Islands with a son of Sir William Forbes, and resided some time in the family of Sir Francis Burdett. At this time, strikingly handsome, gifted as a linguist, able to sing well and accompany himself on almost any stringed instrument, there can be little wonder that he became very popular in society; but at the same time he seemed to be drawn into the closest intimacy with whatever there was most intellectual in the world of letters or of Physic. He enjoyed the intimacy of Sir Walter Scott and his family, and especially that of his son-in-law, Mr. Lockhart, with whom till his death he maintained the most constant and affectionate intercourse.(a) Washington Irving, Wordsworth the poet, and Newton the painter, were amongst his intimates. Amongst his Professional friends were reckoned Dr. Watson, the present President of the College of Physicians; Brodie, and especially Dr. Gooch, that brightest and cleverest of intellects, after whose steps, if we may so say, he endeavoured to shape his own course. With such associates, we cannot wonder at finding him employed in a good deal of literary work. He was a frequent contributor to the *Quarterly Review*, and wrote a "History of Insects" for the Family Library. He often spoke of the benefit which he had derived from the task of writing this last-named work, and of the knowledge of natural history which it forced him to acquire. He it was who set on foot our own journal, in its original shape as the *London Medical Gazette*. Medical politics were carried on in those days with a degree of acrimony and personality now little known, and it was considered by the Hospital Surgeons, and what may be called the Conservative party, that it was expedient to have a second weekly journal to represent their views. But whilst these were the diversions of his leisure hours, he was steadily working his way into practice. The nucleus, so to say, of his patients consisted partly of the families to whom he was introduced by Dr. Gooch, and these were amongst rich bankers and noblemen, and partly of that highly-gifted set of whom Sir Walter Scott and his son-in-law Lockhart were the chief; at any rate, by the year 1830, when he was 30 years of age, he had attained to an income of £1000 per annum. About this time King's College was opened for the express purpose of combating the too liberal, and, as it was thought, perhaps irreligious or revolutionary tendencies of the London University. The chair of Midwifery was accepted by Ferguson, who had for his colleagues Herbert Mayo, Joseph Henry Green, J. F. Daniell, Bissett Hawkins, Francis Hawkins, and Partridge. He had been previously elected Physician to the General Lying-in Hospital in the York-road, whence he gathered the materials for his work on "Puerperal Fevers," which was published by Murray in 1839.

As a lecturer he was admirable. There was nothing in his discourses which reminded the students of the last handbook or compendium. He was graphic and pungent in his descriptions; his language picturesque and refined; he never condescended to raise a laugh by vulgarity of jokes, as was the custom in some Medical schools at that day; and the student found a singular charm in listening to his fresh, off-hand, vigorous discourses.

He was now fully occupied in the busiest and most lucrative practice, and found it expedient to resign his

(a) "Dr. Robert Ferguson, one of the family with which Sir Walter had lived all his days in such brother-like affection, saw him constantly while he remained in the Regent's-park."—*Lockhart's Life of Scott.*

Professorship, in which he was succeeded by Dr. Arthur Farre. Soon afterwards, he was appointed Physician-Accoucheur to the Queen, and in that capacity assisted at the birth of the present generation of Princes and Princesses. And now came a bold and hazardous, but well-designed and entirely successful, movement in his Professional career. Persons outside the Profession, who think of a Physician only as a Physician, can hardly be aware of the kind of inferior stamp which was put upon the Physician-Accoucheur by the magnates of the College of Physicians in days when an Oxford or Cambridge education was the *sine quâ non* for the aristocracy of Physic. This alone was sufficient impulse to Ferguson to drop the special "midwifery" department of his practice, and to announce himself as the Physician, in the largest, truest, and most honourable sense. But this was a perilous step; because early success in practice is generally attained only by those who have a "speciality," as it is called—who make themselves noted for special research in some one particular department, and because the whole of a man's occupation amongst his patients and Professional alliances generally depends on this very point. Still, to be a Physician in the sense in which Halford, and Chambers, and Bright, and Watson are called Physicians, is to any "speciality" as a peerage of the United Kingdom to an Irish barony; and Ferguson, whose very soul could brook nothing that smacked of inferiority, determined to make the change; and made it. Society accepted him as one of the great Medical authorities; he was made Physician-Extraordinary to the Queen, and thenceforward the amount of his occupation was only limited by his power of undertaking it. The extent and, so to say, gravity of his practice were perhaps not known so popularly as those of some other Physicians—partly because his position was so well established amongst the better circles of society that there was no need of his being lifted into repute by being passed, as it were, from mouth to mouth of his Professional brethren, and partly because he studiously suppressed all those newspaper notices of sudden calls to duchesses by which lesser men are eager to set themselves before the world. Yet he was more consulted, perhaps, than any other living man in all the weightiest cases in the world. No Physician was so well known, not merely to all the great families of this empire of whatever side in politics, bishops, lords, and dignitaries of every grade, but to the crowned heads of Europe. And, as happens so often in our Profession, success was fatal to him. In trying to save others he lost his own life. About four years ago he was summoned to the bedside of a great northern prelate, a member of a family with whom he had always been on more than a usual footing of familiarity. Four rapid journeys to Durham, with the fatigue, loss of sleep, and anxiety in which Professional and personal regard for his patient were mingled, and the harrass of his ordinary work as well, were too much for him. His heart gave way. One day, as the writer has often heard him say, he found himself recovering from a fainting fit, with a pulse at 40. He had, in fact, that most fatal malady of the heart which betrays itself by no valvular disease, but by failure of power. It was like an old watch, able to *go* if regularly wound, and oiled, and kept at rest, but liable to stop if rudely shaken, or if the least particle of dust interfered with the smoothness of the machinery. That dust, if we may continue the metaphor, was found in ill-developed gout. The stomach, too, became feeble. Under these circumstances, he knew perfectly well what his end would be. He lightened his work, removed to a smaller house, spent much time out of town, and was for a while better. But the enemy came at last. He was walking in the garden of his country seat, Ascot Cottage, Winkfield, near Windsor, about one o'clock on Sunday last, June 25, when he was seized with his last attack. He lay almost lifeless for some hours, and life ebbed so slowly that those about him hardly knew the minute of his decease.

Amongst matters of personal history, we may record that he married first, in 1830, a daughter of the ancient and noble French family of Labalmondière—a union which lasted twelve years; and, secondly, in 1846, Miss Macleod, of Dunvegan, who survives him, with five children.

We have said that Ferguson was one of the greatest Physicians of the day. We may, for the sake of our younger readers, say a few words on the secret of his success. He was a remarkably handsome man; fine eyes, good complexion, dark hair, athletic figure, witty, musical, and accomplished. He had received as original gifts from Nature all that makes a man likely to succeed. He was a lucky man, and he knew it and confessed it. Many persons who only saw the outside thought he was nothing more. But never was anything farther from the truth. He truly cultivated the talents committed to him. Of all men with whom we ever met, we never knew one who had been more laborious, even at the humblest details of Professional work. He gained his experience by careful case-taking amongst the women and children of Dispensary and Hospital practice. He fagged at the dispensing of medicines and the elements of pharmacy. Many is the Practitioner who has seen him in later years carelessly dash off a prescription, whose purport might be obscure or unintelligible, and who might think it done by guess-work, or (if it did good) that it was a *lucky hit* of Ferguson's! But they who might think thus did not know that he was truly the greatest *empiric* of our day?—if we use that word in its true sense, as denoting one who seeks and treasures up practical matter-of-fact results, and is careful to get his facts before he begins his explanations. He often described to the writer the benefit he got from working under Dr. Hooper, at the Marylebone Infirmary, at what many young Medical dandies would call the degrading drudgery of weighing and compounding and mixing in a pestle and mortar. Not only so, but he carefully treasured up all good prescriptions, come they whence they might. He was always glad up to his dying day to hear of a *form* of giving such or such a drug with benefit. He particularly respected old tried prescriptions, often advised the writer to hoard them up, and be not too anxious to *improve* them. For example, one night, many years ago, the writer called on him in some distress to beg a hint or two, from having been summoned into the country to see a relative ill with distressing vomiting. After talking the case over, Ferguson took out a book of prescriptions, and made the writer copy down Hooper's well-known draught of sulphate and carbonate of magnesia, with spearmint water, which he said, and truly, did more good in the like cases than anything else he wot of. And it did in the case in question. Trivial as this may seem, it is fact; and it may explain the *oddity* of Ferguson's prescriptions, which so many a Practitioner has talked of. The oddity was that he knew more than most men of odd remedies applicable to odd diseases.

But with him, science, so far as available, was ever accepted as the light by which to judge of the fruits of experiment, and to strike out new combinations for new and intractable forms of disease. He was early and deeply steeped in German literature, and loved their most speculative physiology, and was eager for new discoveries of all kinds. Diagnosis was a branch of Medical art which he took particular pains to master, and within the last year he printed, in a page or two, a summary of the physical signs of diseases of the heart and lungs. He valued good abstracts and compendiums of all sorts, and read indefatigably everything that could give him an insight into the obscurer parts of pathology. He could see in any given group of symptoms possible origins, hidden to those less conversant than himself with speculative physiology; and hence the man who in one case would copy an old woman's dose, in the next would prescribe some unheard-of drug, or one whose influence on the disease seemed inexplicable. Let us add to this a thorough knowledge of human

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character, and that kind of intuitive perception by which genius leaps to conclusions without consciously fagging through all the steps of argument, and further conceive him animated by the most intense desire to relieve the patient not only as a means of exhibiting his own skill, but likewise of benefiting a distressed fellow-creature, and it will be conceded that *luck*, or rather say the personal and mental gifts originally granted by Providence, may have been at the bottom of his success, but that there was conjoined with it a degree of care and conscientious drudgery which meaner men would do well to imitate before they curse their own want of "luck."

Of his publications, most are anonymous and published in the *Quarterly*, and we have not time to attempt an account of them; but there are three which are well worth noting here, as showing his mental character most completely.

One is his well-known "Essay on Puerperal Fever," to which is added his introductory lecture at the opening of the session at King's College in 1836. No one who sees the most minute care with which every fact is adduced, the vast number of opinions and authorities collated, the almost cramped and constrained style, as if from a nervous anxiety to state the arguments fairly, could think Ferguson the idle, haphazard, mere fashionable Doctor which, as he said, some of his contemporaries were pleased to call him, till this book showed him in his true light. It marked the era when "*blood poisoning*," and other phrases of the humoral pathology were once more accepted by us, in place of the *action of blood-vessel* theory.

A second is his edition of Gooch's works, for the New Sydenham Society, with a preface, which every Practitioner should read again and again, for the sake of its *nutshell* judgments on some of the most important relations of Medicine to the moral and physical welfare of our species, no less than of its affectionate tribute to his early friend Gooch. Alas that the greatest Physicians should seem to make so little mark in the world!

The third is his last article in the *Quarterly Review*, in which he analyses the whole philosophy of our time in its relation to morals and physics. It is almost too full to be read without an interpreter, and the consecution of the various parts of the argument is not always obvious; yet, whoever has to decide between God and no God,—between a Foreseeing Deity to whom weary men can pray on the one hand, and on the other blind Law without ever a Lawmaker—or who would gird himself for mastering the questions of the influence of a merely material philosophy on our social state—including marriage, property, civil government, and the like—must read Dr. Ferguson's article.

Now we can say no more. We can only add ours to the tribute of grief which is following this truly great and good man from all ranks in society to his quiet grave at Winkfield. He was often said to be haughty, imperious, at times careless, self-asserting, contemptuous of fools and bores! We know this well enough; but we had the privilege from very early life of knowing him to be most just, tender, and affectionate, one who thought for and looked after the welfare of pupils, one who never shut his purse from the needy, who would go out charged with gifts for the poor on Christmas-day, and who, when immersed in the most laborious work and with a position in society that might be called princely for a Physician, would enter into the smallest family troubles of old friends. He will not be forgotten in a day.

NAVAL MEDICAL OFFICERS AND LORD CLARENCE PAGET.

It is a matter of common observation that the art of throwing dust in the eyes of the House of Commons is one which it does not require any striking abilities to carry to perfection. In matters Medical, however, the subordinates of the Treasury Bench have, during the past Session, shown an aptness and adroitness in this delicate proceeding which command our unfeigned admiration. A very moderate respect for truth, a large amount of effrontery, and a certain astuteness nearly allied to cunning, together with a strong spice of contempt for a Profession which has never asserted itself as a political power, are the qualifications that have rendered Her Majesty's Under-Secretaries and Junior Lords such adepts in this species of State craft. Take, for instance, the answer made by Lord Clarence Paget to Sir John Pakington's question in reference to the appointment of Surgeons in the navy to do Assistant-Surgeons' work, which will be found in our Parliamentary Report. He certainly must have felt thoroughly convinced of the ignorance of his hearers, and of their utter indifference to all matters relating to the Medical Profession, or he would never have ventured on such an attempt to hoodwink them. Sir John Pakington, who is one of the few members of the House who are alive to the state of things in the Medical departments of the public services, asked whether it were true that naval Surgeons had been appointed to do Assistant-Surgeons' work, whether this were owing to a scarcity of the latter officers, and, if so, whether the Admiralty had taken any means to remedy so great an evil. Lord Clarence Paget, with apparently charming frankness, answered "that several young Surgeons had been lately appointed *on promotion, particularly on foreign stations, in order to retain their services on board ship*, and with the view of keeping young Surgeons well employed, as there was always more or less difficulty in keeping the places of Assistant-Surgeons filled, there being so much employment for them elsewhere." Really we hope that the Surgeons of her Majesty's navy are duly impressed with the paternal care which the Admiralty evinces that they should not suffer from the bad consequences of idleness. Lord Clarence Paget's speech reads like an official commentary on Dr. Watts's moral distich, that

> "Satan finds some mischief still
> For idle hands to do."

To guard them against this danger, the Admiralty kindly and affectionately steps in and shields them from the seductions of private practice, colonial appointments, and everything else which could blind them to the attractions of serving their grateful country. But on examining the noble Lord's answer more closely, we find that, if he has not allowed himself to state what is absolutely false, he has, at least, committed a grave *suppressio veri*. These are the facts. Recently there have been fourteen Surgeons appointed to do duty as Assistant-Surgeons in the navy. We append a table culled from recent *Gazettes* containing the names of these gentlemen and the particulars of their appointments. From this it will be seen that ten of the fourteen were not appointed, as the noble Lord led his hearers to believe, on promotion, but were taken from the half-pay list. The remaining four represent the "several young Surgeons who have been appointed on promotion." Not a single one has been appointed on a foreign station in order to retain his services on board ship. The only gentlemen on foreign stations are Mr. Humphreys, at Ascension, and Mr. Brice, at Bermuda, and both these officers were appointed to do duty at the Hospitals of those stations. When a Minister of the Crown can condescend to such, we will not say false, but at least such palpably incorrect statements in order apparently to hide the difficulty which the naval authorities have brought on themselves by a long series of indignities offered to the Naval Medical Department, we fear that the state of official morality is somewhat rotten, and begin to ask whether even the Lord Chancellor may not be the victim of bad example. Lord Clarence Paget cannot deny that the Navy is in want of Assistant-Surgeons, so he qualifies the inevitable truth by saying that there is not *a great* want. We happen to know that there is a great want of them, and we devoutly hope that the want may continue until the Government have learned to value them justly. We see,

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however, no chance of this at present. Lord Clarence Paget declares that the Admiralty will give no additional facilities for Assistant-Surgeons entering the service; in other words, that they do not intend to remove any of the just causes of dissatisfaction under which the Department labours. We can afford, however, to wait. The Navy must have Medical officers; and the moment the true state of the case becomes known to Parliament and the public, we are well assured that the remedy will come. In the meanwhile, we thank Sir John Pakington for his well-timed inquiry, and we commend Lord Clarence Paget to his Medical constituents of Deal and Sandwich. We see that in his election address he expresses a desire to be judged by his speeches and votes in the House of Commons. We hope that the Profession will not forget his speeches on the Greenwich Hospital Bill, and on the employment of Surgeons in the performance of Assistant-Surgeons' duties.

A List of Naval Surgeons who have been Recently Appointed to do Duty as Assistant-Surgeons.

No.	Name.	Seniority.	Ship.	Station.	Remarks.
1	W. Anderson	1865	*Asia*	Portsmouth	Ap. from hlf.-pay.
	J. C. Eastcott	,,	*Excellent*	,,	,, ,,
	G. Bellamy	,,	*Cumberland*	Sheerness	,, ,,
	C. B. Godfrey	1863	*Victory*	Portsmouth	,, ,,
5	A. L. Archer	1860	*Indus*	Devonport	,, ,,
	B. W. Beaumont	1857	*Fisgard*	Woolwich	,, ,,
	R. Borrows	1862	*Cambridge*	Devonport	,, ,,
	J. B. Anderson	1863	*Fisgard*	Woolwich	,, ,,
	*R. Humphreys	1865	*Alexander*	Ascension	Resp. on promotn.
10	P. M. Roe	,,	*Black Prince*	Channel Squad.	,, ,,
	J. W. Dobbin	,,	*Victory*	Portsmouth	,, ,,
	B. Browning	,,	*Canopus*	Devonport	,, ,,
	*F. A. Bryce	,,	*Terror*	Bermuda	Ap. from hlf.-pay.
	Alex. Collins	1864	*Edgar*	Channel Squad.	,, — ,,
15	—	—	—	—	

* Appointed for service at Ascension and Bermuda Hospitals respectively.

N.B.—No appointments to ships on foreign service, as stated by Lord C. Paget.

"TEKEL!"—THE SANITARY SHORTCOMINGS OF THE METROPOLITAN VESTRIES.

Lord Llanover's Act, in so far as it relates to the paving, lighting, and cleansing of the metropolis, has been weighed in the balance and is found wanting. We were beginning to think that the Government of the country was afflicted with judicial blindness, or had become so enamoured with democratic principles as to have seen in the petty squabbles of the still more petty Vestries which now manage these affairs, nothing less noble than the grand self-assertion of free and intelligent Englishmen. For ten years all the worst evils of divided authority have been rampant in this great city. We need not follow Sir William Fraser through all the items of his indictment. The Home Secretary in his place in Parliament has freely admitted that the Vestries have proved a failure, and that the time has arrived when some steps must be taken to consolidate under one responsible Board the powers which the Metropolis Local Management Act had vested in over forty representative Vestries and Boards of Works. "How not to do it" seems to have been the chief discovery at which these assemblies have all these years been aiming. The qualification clause of the Act has been openly and grossly evaded. The more educated and independent of the ratepayers have shrunk instinctively from a candidature which would lay them open inevitably to the abusive personalities of their opponents and to the wasting of their valuable time, while some miserable parochial Demosthenes was airing his eloquence on some trivial subject which any man of common sense could settle in five minutes. Speculating builders, publicans, owners of compound house property, attorneys' clerks, and pot-house orators have thus had it pretty much their own way, to the intense disgust of all right-minded people, the detriment of the body politic, and, let us add, to the detriment also of the his[illegible]ic health. For it is on this point, which neither Sir William life ebbec[illegible]or the Home Secretary alluded to directly, that we minute of h[illegible]ing a few remarks.

We are not amongst those who place an undue value upon the indications of the "death-rate;" but we cannot shut our eyes to the fact that for the last few years the death-rate of the metropolis has been, and is still, increasing. It is sufficient for us that there is no evidence in the mortality returns of London that the sanitary powers vested in the local Boards have been productive of any good results. Partly this may be due to counterbalancing circumstances, such as an increase of overcrowding inseparable from the demolition of the dwellings of the poor for railway or other improvements, the increased and increasing price of butchers' meat, and the narrow limits within which any sanitary authority can operate in the present state of our sanitary legislation. But such as are behind the scenes know very well that the powers of the local Boards, had they been exercised as they might have been, would by this time have effected improvements which could not have failed of recognition, and that one main reason of the failure has been the universal lukewarmness, not to say dislike, with which all sanitary questions have been entertained, and the obstacles intentionally thrown in the way of sanitary administration. The local Vestries are the authorities on whom is imposed the duty of carrying into effect a variety of sanitary statutes, having for their object the amendment of the conditions under which the people, and especially the poor, reside in their habitations, the abatement of overcrowding, the suppression of trade nuisances, the suppression of the sale of unwholesome and adulterated food, the regulation of bakehouses, and so on. If any one would satisfy himself as to the extent to which these ends have been attained, let him look into nearly any court he pleases in Bethnal-green, or St. George's, Southwark, or Clerkenwell, etc., and we will promise him that he will see enough in half an hour to disgust him for the rest of his days with parochial sanitary management. By the 132nd Section of the Act each Vestry was required to appoint a Medical Officer of Health to be their adviser upon all matters relating to the public health, and ample powers were given by which they might appoint as many assistants as that officer might require; and it is by no means the fault of the sanitary officers thus appointed that so little has been done. In none of the parishes is the remuneration such as would warrant the Health Officer in devoting to his official duties more than a limited portion of his time, in none is it expected that he shall devote all his time to their performance; and yet, with the best possible staff of assistants, nothing less would suffice to stem the tide of preventible disease which flows with scarcely an interruption through this great metropolis. Indeed, in some instances we believe, the Health Officer appointed with a stipend of something like £100 a year is afforded no assistance at all, and although his reports must by Act of Parliament be received and made public, they are as little heeded as if he had never taken the pains of writing them. Both are voted a bore—the Health Officer is systematically snubbed, and his presentments regarded as so much waste paper. Yet it is popularly supposed that the Medical Officer of Health is omnipotent in his district. Far from that. He cannot move one step to the remedy of a sanitary evil; in some districts he is not permitted even to investigate one until the propriety of interference has been discussed and determined upon by the Vestry under which he acts. Considering the work to be accomplished, what progress, we would ask, is likely to be made under such a system as this? The wonder is that anything has been done at all. And nothing would have been done had it not been for the independent spirit and undaunted zeal of the metropolitan Health Officers, who, taking all the risks of unpopularity, have led some by their personal influence, and shamed others by their activity and perseverance into an unwilling co-operation in sanitary reforms.

It is to be hoped that in any amended Bill that the Government may introduce in a future session of Par-

liament a more independent position will be accorded to the Medical Officers of Health. We have said that these gentlemen are popularly regarded as responsible for the sanitary condition of their several districts. Let them be made so actually—let them not be dependant upon the local Boards for the assistance which they require, and let them be remunerated in accordance with the responsibilities and labour that they undertake and the size and population of the districts committed to their charge. Let them be made so far independent of the locality as to be irremoveable from their office except on the grounds of inefficiency or misconduct, and be empowered to initiate summary proceedings before a magistrate, with the concurrence of some legal adviser appointed by the authority under which they may act. It would also be a great point gained if the overworked police-courts could be relieved of the prosecutions instituted under the various sanitary statutes. Much time is wasted, and numerous delays incurred, under the present practice. The most contradictory decisions have been given by the stipendiary magistrates sitting at the several police-courts. We are informed on legal authority that even now the county justices in petty sessions are empowered to decide such cases, and should some such arrangement as we have sketched out be adopted, and the whole sanitary management of the metropolis be entrusted to one central Board, we see no good reason why two of the county justices in rotation should not sit on days fixed, at short intervals, for this purpose alone.

We have no doubt whatever that a grand outcry will be raised, and strenuous opposition made, to any Government scheme involving a curtailment of the powers of parochial Boards. Nothing is so difficult to kill as a corrupt democracy; but, happily, in this country Parliament is omnipotent; and we trust confidently in the good sense of the Legislature to find a fitting remedy for the existing evils. In point of fact, Lord Llanover's Act was regarded at the time of its being passed rather as an experiment than as a measure that was destined to be final. The universal assent with which the observations of Sir William Fraser were received by the House encourages us to believe that, as a body, it will be prepared to repeal it or modify it in such a manner as the necessities of the time demand.

ROUGH NOTES ON SYPHILIS.—No. II.

A FEW words on the subject of *inoculation*. In its most extended significance very different processes and effects are comprehended by this term. In ordinary language, it implies the production of disease in healthy parts by the insertion or contact of matters obtained from diseased ones; and the effects may be either simple or specific in character. The lachrymation attending an attack of strumous ophthalmia often induces an eruption on the face—the result of the moisture, saline matters in the tears, and the frequent wiping of the part; eczema may be occasionally induced in healthy parts by the contact of fluids from the neighbouring eruption; a trifling wound of an extremity may "poison"—inoculate—the lymphatics, produce an abscess over the nearest gland and numerous pustules on the parts of the skin corresponding to the lymphatic ramifications; the contact of the pus of a gonorrhœa may induce inflammation and pustules about the glans and prepuce; conjunctivitis may be produced by the inoculation of various kinds of pus; and we may occasionally succeed in the production of a pustule by the inoculation of other than specific pus. There is, however, a great difference between these examples and those truly specific results obtained by the inoculation of small-pox, vaccination, glanders, etc. Now, it is a curious fact that the purulent secretions from a chancre possess a potency or activity which does not belong to the ordinary gummy, sero-epithelial secretions from an indurated sore. The purulent, soft, non-infecting sore is inoculable to an almost indefinite extent; the plastic, infecting one only when suppuration exists. There are, however, forms of chancre which commence and continue as soft ulcers for some time, and then acquire induration. These are capable of anto-inoculation. The sores upon the skin of the dorsum of the penis are commonly inoculable and infecting. We are not aware, however, that any one has ever succeeded in propagating from the pus of an indurated chancre another, much less a series of indurated chancres, by inoculation of the same individual.

We will give a few instances of inoculation extracted from from our own practice, which will illustrate the foregoing.

M. K. Three or four days after sexual intercourse three superficial soft sores on glans, which healed by local treatment. An induration appeared on prepuce eighteen days after intercourse, from which he was inoculated unsuccessfully. Secondaries.

G. S., suffering from two soft sores, suppurating freely, on the fossa glandis. Inoculation successful through two generations. Fourteen days afterwards chancres were indurated. Secondaries followed.

J. B., inoculated successfully from an inflamed pustule seated on the prepuce. The original and artificial pustules destroyed by caustic. Induration appeared at the base of the first-named, and "secondaries" ensued.

C. P. Indurated, indolent chancre, with a gummy-looking secretion on its surface. Inoculation unsuccessful. Secondaries.

J. D. Two ulcers, surrounded by a diffused and doubtful hardness. Inoculation successful. No secondaries.

J. B. In February, 1862, a large soft sore on prepuce; inoculated successfully. No secondaries. In September, 1863, he suffered from a large indurated sore, which became phagedenic, and severe "secondaries" followed.

W. C. Doubtful sore; inoculated successfully; no secondaries.

S. C. Two soft sores; successful inoculation; no secondaries.

R. W. Two circular sores on right aspect of glans; inoculation unsuccessful; severe secondaries.

B. M. K. Inoculated unsuccessfully; secondaries.

W. R. Successful inoculation; no secondaries.

E. McM. Sore on prepuce, with peripheral hardness simulating specific induration; inoculation successful; no secondaries.

It would only prove useless, as well as tedious, to enumerate further instances in proof of the position that the soft local venereal ulcer is invariably auto-inoculable, and that the indurated chancre, when it yields pus, can also be inoculated. As to how far you can continue to propagate a lineal series from the first inoculation of the pus of the hard sore, we cannot speak. The experience obtained in "Syphilisation" proves that you can do so.

Abortive Treatment.—It will have been observed that we expressed ourselves with much hesitation on this matter, and, while we reserved to ourselves the expression of a final and decided judgment, that we nevertheless declared it to be very improbable that the course of the disease could be *averted* by excision or destruction of the primary syphilitic lesion, even if performed at the earliest dates. Like most Surgeons, we have very commonly applied strong caustics to venereal sores in an early stage. The caustics have ranged in strength through nitrate of silver, nitric acid, potassa fusa, and chloride of zinc. These have been employed, sometimes before the appearance of any induration in the sore, sometimes before there was any evidence of inguinal adenitis. In very many cases, where the nature of the lesion was uncertain, no "secondaries" followed; but, in others, induration appeared before the healing of the artificial ulcer, in its cicatrix, or, sometimes, only in the glands, and "secondaries" have followed. Now, as a primary lesion affords no indication of its nature at very early dates, the *positive* evidence will be more trustworthy than that afforded by negative results.

The fact is, that a Surgeon may occasionally observe, and patients will tell him, that there was a very minute crack, which healed up almost immediately, and that they should never have recollected anything about its existence but for the subsequent discovery of a little hardness there, or of the presence of some enlarged glands in the groin. Again, th

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chancre may appear as a pimple or papule, which, in fact, is an induration in miniature.

Thus far for the cases in which there is reason to believe that the virus has entered through some solution of continuity, or by friction, through a mucous membrane more or less denuded of epithelium, as upon the glans and inner aspect of the prepuce; but there are other situations in which it is possible that the virus gains an entrance through the skin by absorption or imbibition. Take the chancres on the dorsum—the sheath—of the penis. These chancres and the attending bubo are often very much modified in appearance and character—the absence, the small amount or slight degree of induration in them, its appearance in the cicatrix only, the induration of the lymphatics of the penis instead of the multiple bubo in the groin, the lymphatic feeling like a piece of knotted whipcord, and the peculiar pigmental staining which is left in the cicatrix of the chancre. These are the common objective signs of the infecting chancre on this part, and we think there is another thing which may occasionally be traced—viz., the long interval between the date of contagion and manifestation of the sore. Now, it seems very probable that the virus being long retained in contact with the integument, from the absence of general ablutions, and becoming mixed with the other secretions, the follicles are penetrated as by an ointment, and absorption ensues. The experiments by Mr. Ceely with the vaccine virus renders this a perfectly tenable hypothesis.

It will be seen, therefore, how *excessively difficult* the very early detection of the initial lesion of the syphilis would be, even if we could abort the disease then. We have not, however, yet been enabled to test Dr. Humphry's practice of excision to warrant any expression of our opinion. It thoroughly deserves to be carefully tested. If the primary lesion be a continuing source of infection, and if the blood draws and renews its supply of the virus from the diseased products in the solids acting as so many separate foci for the reproduction of the virus, then we may reasonably hope to modify and diminish the course and severity of the disease by excising or destroying the chancre before the glands are implicated.

As we have already said, if there were invariably a long interval between the application of the syphilitic virus and the manifestation of its effects, then, the chancre could scarcely be other than an expression of a constitutional as well as a local effect. The induration of the sore, when present, affords the earliest *reliable* index, perhaps, of the constitution being involved.

The literature upon the subject is very confused. While Sigmund's great experience tells so strongly in favour of the early destruction of all sores, Dr. Bumstead's treatise contains numerous facts teaching an opposite conclusion. In the admirable tract upon "Venereal," issued to the Federal armies by the American Medical Commission, it is emphatically laid down that you *cannot avert* the subsequent progress of the disease by destroying the sore at the earliest date. Of this we are quite sure from experience:—that whoever strongly *promises* safety to his patients by this process will now and then have cause to lament that he gave any such guarantee. If the soft sore be thoroughly destroyed *at an early date*, the occurrence of suppurating bubo is prevented, and the cure of the venereal ulcer accelerated. The local sore, in our experience, is commonly an ulcer from the first, whose base is honeycombed, and not continuous with, but abruptly terminated at, the vertical edge of the sore.

THE WEEK.

PARLIAMENTARY.—THE LUNATIC ASYLUM ACT AMENDMENT BILL—NAVAL SURGEONS.

In the House of Lords on Thursday, June 22,

The Lunatic Asylum Act (1853) Amendment Bill, as amended, passed through committee, and the report was received.

In the House of Commons, on Friday, June 23,

Sir J. Pakington (for Colonel Dunne) asked the Secretary to the Admiralty the reason why Surgeons in the Royal Navy had been recently appointed to do Assistant-Surgeons' duty, and if it be owing to a scarcity of the latter officers, or that there are no candidates on the list for admission into the Medical service of the navy; and if the Admiralty had taken any steps to remove so great an evil.

Lord C. Paget said several young Surgeons had been lately appointed on promotion, particularly on foreign stations, in order to retain their services on board ship, and with the view of keeping young Surgeons well employed, as there was always more or less difficulty in keeping the places of Assistant-Surgeons filled, there being so much employment for them elsewhere. The Admiralty were certainly not in a great want of Assistant-Surgeons, but the young Surgeons were employed to do Surgeons' duty with the view of keeping them from going into private practice. The Admiralty did not think it necessary to take any steps for giving additional facilities for Assistant-Surgeons entering the service.

In the House of Commons on Tuesday the Lords' Amendments to the Union Chargeability Bill and the Lunatic Asylum Act (1853) were considered and agreed to.

FROM ABROAD.—RAW MEAT IN PHTHISIS—CONTAGION OF ERYSIPELAS—THE NEW PARIS CODEX.

M. Fuster's mode of treatment of phthisis, which we alluded to in our last, is, it seems, as far as he is concerned, of rather recent introduction to form a subject for an Academical communication. He only introduced it into his clinical ward at Montpellier last April, and reports already its success, in order to induce others to give it a trial—not so much, indeed, as a cure of phthisis, as a means of restoring the strength in exhausting diseases, such as phthisis, purulent infection, and the like. The treatment consists in the employment of raw meat in conjunction with small doses of very diluted alcohol. Raw mutton or beef reduced to a pulp in a mortar and separated from the tendinous portions by means of a sieve, is given in boluses rolled in sugar, or in the state of sugared pulp by teaspoonfuls at a time; so that from 25 to 75 drachms are taken daily. A drink is made by diluting a portion in cold sweetened water for allaying the thirst. The alcoholic potion is composed of 25 drachms of alcohol at 20° Baumé diluted in 75 drachms of sweetened vehicle, and given in tablespoonful doses every hour. The proportion of alcohol and the intervals at which it is given must, however, vary with the susceptibility of the individual. The combination of the two agents is, in M. Fuster's opinion, indispensable for the production of a beneficial effect, "the one seeming to exercise a reconstituent action, and the other a more direct action on the organs of hœmatosis." He declares that, under the influence of such combination, several patients suffering from advanced phthisis and purulent infection have become completely cured—though, seeing the short time that has elapsed, temporarily alleviated would be probably the more correct expression.

M. Gosselin, in a report upon a memoir presented to the Académie de Médécine by M. Blin, maintains the doctrine of the contagiousness of erysipelas, first advocated by English authors at the commencement of the century, and since admitted by some French writers. M. Blin's paper relates to twelve cases of erysipelas, which successively originated in a patient arriving from a Paris Hospital, where he had been in contact with a student suffering from the disease. M. Gosselin also quoted some cases which had occurred in his own practice. A priest contracted erysipelas while confessing a wounded patient suffering from the disease, the erysipelas commencing around a pimple which he had on his forehead. The father of this priest coming to see his son also contracted his erysipelas, which spread around a carbuncle he had on the neck. A woman nursing her child for erysipelas of the abdomen had erysipelas of the leg following a scratch. Numerous other cases were also cited from Trousseau, Graves, Labeé, etc.; but while maintaining that erysipelas is contagious, it must, he observes, be admitted that individual conditions are necessary for the exercise of this contagious property. In practice, at all events,

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we should always act as if the disease were contagious, incessantly renewing the air of the wards, keeping cases of erysipelas out of the operation wards, and insisting upon persons who nurse patients with erysipelas frequently leaving the room and changing the air. M. Gibert stated that he himself was an example that erysipelas may, under special conditions, become contagious; for having suffered first from angina, and then erysipelas, his wife, who had nursed him, contracted erysipelas, while his son also had first an angina, and then a slight attack of erysipelas. M. Guérin observed that this was a question of mere words. There is no contagion of erysipelas, but there may be erysipelas which is contagious,—the result of a general, contagious and epidemic disease. M. Velpeau had not seen anything which made him positively believe in this contagion. He remains in doubt.

A new edition of the French Codex is on the eve of publication; and it will certainly be a fortunate circumstance for pharmaceutical science that the new editions of the English, French, Prussian, and American Pharmacopœias will thus be nearly of the same date. In 1862 a special committee of the professors of the Ecoles de Médécine et Pharmacie was formed for the revision of the French Codex, or Pharmacopœia, and prepare a new edition. This being now ready, the Medical publishers were invited to make offers for its publication, on condition that the successful competitor should, on the day of delivery of the manuscript, pay into the Treasury 25,000 francs to cover the expenses of editing the work and correcting the proofs. It was determined to adjudge the right of publication to whoever would offer to publish the work at the lowest price per sheet. Five publishers competed, and the award was made to the house of Baillière and Sons, publishers to the Academy of Medicine. The first edition of the Codex was ordered to be published by an *arrêt* of the Parliament of Paris in 1748, and this was successively replaced by the Codex of 1818 and 1837. Nearly thirty years in arrears of the present state of science, the Codex of 1837 stood in ample need of revision.

THE ELECTION AT THE ROYAL COLLEGE OF SURGEONS.

(*From a Correspondent.*)

Among the nine candidates for the three vacant seats in the Council, the Fellows will doubtless have much difficulty in choosing. The claims of some are based on the ground of services already rendered in the Council; of others, on the ground of high Professional and scientific standing; and of a third set mainly upon successful practice and local reputation. It is not to be wondered at, with such varied qualifications among the candidates, that room has been found for warm personal feeling in the advocacy of their several claims. I understand that the section of Fellows who pique themselves upon being the special reformers of the College are making great efforts to displace the retiring members, on the plea that no Councillor should be re-elected when his turn comes to retire. The principle of not re-electing always and as a matter of course is of the soundest; but the principle of rejecting, as a matter of course, every Councillor—it may be the most valuable of their number—only because he has already got experience and done service, appears to me monstrously unsound. The self-styled "reformers" seem, however, to be proceeding on this latter rule. But say that Paget is now elected, as I hope he will be elected by all means, and that through five years he connects his name with whatever is good in the administration of the College, is it any reason that he should then be excluded from the Council because we have learnt what a valuable member of it he has been? Just now it is to Mr. Quain that the blundering principle of the revolutionary party is being applied,—a man who, out of all his colleagues, has been distinguished for his advocacy of liberal measures, especially of the one that is at this moment most needed,—a new charter to organise the Fellows of the College, to reconstitute the Court of Examiners, and to obtain expression for the opinion of distant Fellows, as well as of those who live in London. I should advise Mr. Quain's friends to let the Fellows be under no mistake as to what they would do by rejecting a candidate of these indubitable deserts; and, in view of what is in effect an attack on Mr. Quain's seat in the Council, his friends must not be content with giving him a passive support. We must not see the best reformer of the Council quietly reformed off it.

THE HARVEIAN ORATION,

DELIVERED AT THE

ROYAL COLLEGE OF PHYSICIANS, PALL-MALL EAST,

On Tuesday, June 27.

By H. W. ACLAND, M.D., F.R.S.,

Regius Professor of Medicine in the University of Oxford.

After a few introductory remarks containing a tribute to the memory of those whom the College has recently lost—of Kirkes, Turner, Southey, and of Ferguson, not yet in his grave—and expressing the wish that on this the first occasion on which Harvey is discussed in his native tongue before the College he loved so well, the Cicero of our English Medicine, as our President has been justly called, had inaugurated this new series of discourses, Dr. Acland continued: Called upon this day to perform with unequal power the task which I wish had fallen into worthier hands, I propose to treat of one general topic—viz., how far some points in Harvey's methods of discovery are in accordance with the ideas which the experience of advancing science has taught. If it can be shown that after the lapse of two centuries not only his discoveries were valuable, but his methods were correct, we may with renewed confidence begin a fresh series of annual scientific essays which the College has wisely decided to ask from its working and zealous Fellows.

Harvey is popularly known by only one of his works—that, no doubt, which has been most fruitful, but not that, probably, which caused him most labour. The studies which led to the discovery of the circulation of the blood could not have cost him more research than he expended on investigating, with the princely aid of his Royal master's park at Windsor, the generation of animals. But he is also familiarly known because historians quote him as a notable instance of a philosopher who studied Nature under the conviction that every arrangement in the Natural World is the result of *design*—that every effect *is intended and has a purpose.* It is this persuasion, says Whewell, "which directed the researches and led to the discoveries of Harvey." Harvey is on this account more often referred to by theologians than any other biological observer. Success does not always explain or justify the means; and therefore it is at the present day a matter of extreme interest to know whether he did so make his discovery; and if he was in a great measure guided in his researches by the idea of final causes, whether he followed a safe and proper scientific method.

For the discussion of this point, Comte's position, that astronomy ruins with irresistible evidence the hypothesis of final causes and of all providential government, and his criticism on the crystalline lens—as being useless, and by its liability to disease exposing the eye to needless damage—were taken up. In reference to the first statement, Dr. Acland observed: There is one fundamental error, as it seems to me, in Comte's statement of the case. The idea of final causes, that is, the idea that *we are able to state the object* for which things exist, may be ruined; but it does not follow that the belief in a providential government of the universe may not remain. The two things are quite different, and they are not necessarily related. We may be satisfied, on the whole, that there is behind all the efficient causes which we can see a first cause, which we believe, on whatever ground, to be a supreme will and intelligence, and yet we may be quite unable to trace the intermediate steps by which that will operates, or even to prove its operation; and if we cannot trace the intermediate steps or their mutual connexion, we cannot safely apply the idea of final cause as a certain means of scientific investiga-

tion, especially as there may be several final causes for the same condition. We may therefore discard the *use* of final causes in science, and yet not necessarily infer, as Comte did, the absence of providential government. This is the case, for instance, with one of Harvey's greatest admirers, the famous René Descartes.

In weighing arguments such as that urged against the use of the lens, we must not be slow to admit, first, that our faculties are so far limited that we are not able to discover with certainty all the conditions necessary for producing a structure so complicated as the eye; and secondly, that such structure, when made, is still within the range of action of the more general laws which regulate matter on the earth.

For first of the cause of the origin of any given structure, as the eye, no more is known than of that of any other organic structure. The whole process is not within the range of the human mind to comprehend; we can only predicate of it, with Comte, the phenomena which we are able to investigate. An eye considered philosophically is the connecting machinery between light and a recipient consciousness.

As an instrument, it fails in its purpose if it be not adapted to the laws of light on the one hand, and to the psychological capacities of the animal on the other.

When objection is taken to it, it has to be shown:— Either that it does not transmit light in a suitable manner; or, that while it transmits light correctly, the mode of transmitting the impression to the consciousness is faulty; or, that being constructed reasonably in these particulars, it is liable to derangement beyond that which belongs proportionably to it as a delicate organic structure in a world where existence implies change; or, that being delicate and reasonably maintained in existence, it is liable to an extraordinary amount of risk from accidents which might have been guarded against.

Now, it may be answered categorically to each and all of these,— That the eye does transmit light with marvellous precision, so as to produce of necessity a certain result; constructed as it is, it can produce no other unless disarranged in some part; that as a fact it does through impression on the retina convey knowledge adapted to the capacities of animals generally, and man in particular, of the most amazing kind; that it is, all things considered, liable to exceptionally few derangements, those incident, as one may say, to a structure which is part of the whole organic system of things in this planet; that, being delicate in an extreme degree, there are an unusual number of complex arrangements which do preserve it whether they were designed to preserve it or no.

But, in fact, the question of the exact use of the lens in man has been settled in an unanswerable manner. The lens, by alteration in form, adjusts the eye to distinct vision at varying distances. The fact suspected by Dr. Young has been proved by Cramer and Helmholtz. The proof depends on an observation of a very delicate nature—viz., on the position of images reflected from the cornea, and from the anterior and posterior surfaces of the lens. The images, except that on the cornea, are seen with difficulty, but, by aid of Helmholtz's ophthalmometer or Donders' phacoeidoscope or other instruments, with precision. On accommodating the eye to near objects, the second approximates to the first, and the third is nearly stationary. Therefore, the front of the lens has approached the cornea; the back of the lens has remained at the same distance as before, therefore the antero-posterior axis of the lens has lengthened, and the lens has become more convex.

That some adjustment is physically necessary, has been admitted ever since the eye has been philosophically studied. The only mode of adjustment certainly known in the animal series is by the lens. It follows that Comte's attack is at best relative, and not absolute. Adjustment for distances is necessary. It is executed by the lens, which obeys the intention of the mind without effort on the part of those who use it. And here it is not unworthy of note that the state of rest in the lens is adapted to distant objects. Two questions remain—1st, Whether the admitted want would have been better supplied, as is suggested by M. Comte, by human contrivance. It is unnecessary to enter on this speculation till a better method is actually before us for examination; and meanwhile the following grave judgment, recently expressed by Darwin as the result of his most matured reflection, is of as great weight as any other opinion that could be adduced, and all the more because his knowledge of fact in natural history, quite apart from interpretation, must be allowed far to exceed that of M. Comte:—"The more I study Nature, the more I become impressed with ever-increasing force with the conclusion that the contrivances and beautiful adaptations . . transcend in an incomparable degree those which the most fertile imagination of the most imaginative man could suggest with unlimited time at his disposal."

Dismissing Comte, Dr. Acland returned to weigh in a direct manner the influence of the notion of final cause on the minds of those who, like Harvey and Boyle, neither abuse it on the one hand, nor reject it on the other, as without doubt there is an ignorant superstition as well as cultivated and rational belief, so the question remains to be answered—Did Harvey ignorantly and blindly hold dogmas in this matter which modern science repudiates? There is no sign of it.

There are in science three phases markedly distinct:—

1. Mathematical and arithmetical truths, which are called *necessary—i.e.*, which could not so far as we know be, or have been, otherwise (as two straight lines cannot enclose a space).

2. Physical truths or uniform laws of nature which, so far as we know, never vary, but which, so far as we know, might have been otherwise (as organic types and their modifications).

3. Hypothetical laws, which seem indeed to bind phenomena together, but which are not yet proved to be the true account of the matter, or may not be true (as doctrines of special creations or of natural selection).

Not one of the bundles of real or supposed truths contained in these divisions militates against the idea of a supreme intelligence. But science as it advances has a tendency to relegate the third into the second and the second into the first.

Harvey was not guided in his discovery of the circulation of the blood by any metaphysical speculation or religious dogma whatever, and his own words demonstrated how entirely he ranked observation above reasoning, and yet how he asserted the supreme force of correct reasoning upon fact, whether ascertained by simple observation of nature or by experiment. How widely he, the first great English comparative anatomist, did observe and experiment, the list of animals of which he speaks (not, however, always correctly) will testify.

To sum up the whole, Harvey, believing in God, believed that there is a harmony and purpose in the material world. He acted on this faith, and, using his reason aright, he made a mighty discovery, which has influenced every biological student to this day, and will influence them to the end of time. Comte, believing that theological tendencies are mischievous, and that the idea that the course of "nature is the art of God" is mistaken and absurd, attacked one of the chiefest of those artistic works with sarcasm which, from its assumption and ignorance, recoils on him, notwithstanding his knowledge and genius. Bacon, who is sometimes put forward as a keen opponent of the belief that we can see evidence of design in nature, objects only to the misuse of the method—misuse which must occur whenever persons fancy that they are studying the means when they are but asking the purpose. As strongly as any man Bacon holds up the contemplation of ends in nature as work worthy of a philosopher in its proper time and for its proper purpose.

Of Harvey, then, we may here be satisfied that even in a purely scientific point of view his methods were right by observation, by experiment, by reason, by faith in a Supreme will whom the reason cannot comprehend, but whom the heart can approach with modesty, and in patience he pursued his task. In the closet and by the bedside, in the dissecting-room or in the outer world, may we think from time to time of that keen and gentle spirit whom the marble by our side has made so familiar; a spirit that may safely be looked up to by all students of Nature, who, whether they are ascending the hill of life, or, having reached the summit, are looking down the slope on the other side, are willing to learn, not those lessons only which rigid proof impresses with the force of necessity, but can listen to those subtler sounds which stir to belief the willing heart, rising faintly yet certainly from time to time, as a wayworn traveller hears ever and anon the deep though distant roar of ocean on an unseen shore.

DEATH OF DR. FREEMAN DANIELL, F.R.C.S.—We regret to announce the death of this distinguished African traveller, who has contributed so much to the pages of this journal, the author of a valuable work on the Medical topography of the Bight of Benin and Biafra, and of many papers on botany and Materia Medica. He died at Southampton on Monday last, having received the greatest kindness and attention from his old friend Dr. Wiblin.

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REVIEWS.

Surgical Experiences; the Substance of Clinical Lectures. By Samuel Solly, F.R.S., Senior Surgeon to St. Thomas's Hospital, etc., etc. London: Hardwicke. 1865. 8vo. Pp. 656.

Mr. Solly has long been well known to the Profession, both as a scientific man and as a practical Surgeon. The volume before us cannot fail to enhance his reputation in both these respects. It shows a thorough acquaintance with the most modern doctrines of physiology and a deep insight into the nature and causes of disease. Mr. Solly is eminently sagacious and far-seeing, while at the same time he has a fertile mind, ever ready to suggest the means of attaining a given end.

The book which we bring under the notice of our readers consists of a selection from the clinical lectures which Mr. Solly has delivered at St. Thomas's Hospital during the last twenty years. As one would expect, they embrace all the most important subjects in Surgery—aneurism, lithotomy, stricture, hernia, the diseases of the joints and of the spine, gunshot wounds, and a number of other topics too numerous for us to mention. In each lecture one or more typical cases are given which form the basis of the author's remarks. The cases are fully reported, and many of them, from their rarity or from other causes, are of great interest in a Surgical point of view. What we want at the present day more than almost anything else are good cases well reported, and many such will be found in the volume before us. There are some subjects which Mr. Solly has included in his lectures which are generally passed over lightly or altogether omitted in systematic works on Surgery. We may mention, for example, "scriveners' palsy,"—a disease which is by no means uncommon in this metropolis, where so many persons earn their bread by the use of the pen. Our author has entered fully into the symptoms and treatment of this disease, and he has put forward a theory of his own as to the seat and nature of the lesion upon which it depends.

In reading the lecture on diseases of the spine, we have been surprised to find that Mr. Solly devotes a good deal of space to what he calls "angular curvature without suppuration." But surely there is a fallacy here. Because there is no *abscess*, are we justified in saying that there has been no *suppuration?* Is it not more probable that in these cases there is, at any rate, something analogous to suppuration, softening, and liquefaction of the bone with cell growth, but that the *pus* (or what stands for it) is absorbed as fast as it is formed. and that in this way the formation of an abscess is prevented? We know that pus, even when it has accumulated to a considerable amount, is capable of absorption, provided that it is *laudable* and that the patient's general health is good. May we not, therefore, suppose that something of the same kind takes place in these cases of "angular curvature without suppuration" (abscess)?

Mr. Solly is an advocate of what is called at the present day "Conservative Surgery." He has performed excision of the knee frequently, and he tells us that he has only amputated twice for disease of the knee-joint during the whole time he was one of the Surgeons of St. Thomas's Hospital.

We have selected a few passages from Mr. Solly's lectures which will enable our readers to judge for themselves of the easy and flowing style in which they are written, and of the sound instruction which they convey. Here is the account of an interesting case of lithotomy:—

"I once operated in private practice on a lad thirteen years of age, who had suffered with symptoms of stone for ten years. He was one of the most miserable objects I ever beheld—pale, emaciated, with a countenance betraying the effect of long-continued pain, haggard, and careworn. The urine was loaded with the earthy phosphates; it was constantly dribbling away. He screamed with pain on the introduction of the sound, though I passed it with the greatest care. It was very clear that a few months must terminate his sufferings, if they were not relieved, and I believed that it was my duty to operate; but I determined to share the responsibility of it with some higher authority. As my friend and colleague, Mr. Green, was not quite well at the time, I had a consultation with Sir B. Brodie, who regarded it as a most unfavourable case, but still one in which there was no alternative. I operated on the 19th of March, 1845, in my usual manner, with a beaked knife. He recovered, and, though slowly, without a bad symptom; I gave him, after about a week, the dilute nitro-muriatic acid; the urine got clear, and he is now a fine healthy young man."—P. 544.

The following observations upon the treatment of stricture of the urethra by gradual dilatation are full of valuable instruction:—

"The first time that the urethra receives a bougie, whether there is stricture or not, it will invariably resent it. It will contract upon the instrument, the sensation of a stricture being communicated to the operator, and if the instrument is forced onwards, the mucous membrane will be lacerated, inflammation set up, and a permanent stricture formed, where none existed before. But if, on the other hand, the operator, on finding his sound or bougie clasped by the canal, waits a little while—rests on his oar,—and then gently coaxes the instrument onward, the apparent stricture vanishes, and it slips into the bladder with perfect ease. When there is much spasm of the urethra, a metal instrument is better than a wax bougie. I will now tell you what I did in Honor's case, as it will convey to you practically my views regarding the treatment of all such cases. After inquiring what had been done, and finding that he had lost a good deal of blood in the attempts made to pass a bougie,—that no instrument had been passed, and that there was a false passage,—I took a moderate-sized sound, and, passing it gently down the urethra, found that there was some spasm, but not a great deal. Waiting a little, I moved onward again, till I found it absolutely stopped. After removing it, I took a small catgut bougie, and, passing it gently down, soon found it quitting the natural channel and entering a false passage. Having now ascertained the direction in which this passage ran, I then withdrew the bougie, gave the point a slight bend, and, passing it in again, feeling round the urethra for the pervious spot, but avoiding the false passage, I managed to hit it off; so the instrument slipped into the bladder without using the least pressure or force. This is the great secret in the use of the thread-sized catgut bougie; it must be handled most delicately, turned in the urethra, something like a corkscrew, till the hole through which the urine escapes from the bladder is pitched upon; and this is immediately felt by the instrument passing forward without any sensation of obstruction. The catgut bougie must never be used with the idea of breaking down a stricture or pushing through it, but, if I may so express it, coaxing it into the bladder. Whenever you find the bougie spring back, you must stop and give it a little twirl between your forefinger and thumb; you may often have to work for half an hour or more in this way, without being able to hit off the opening; but patience and delicate handling will do a great deal. I assure you it is worth taking some trouble to relieve a fellow-creature effectually of such a serious malady without the use of the knife. Having passed the stricture and entered the bladder, I desired that the bougie should be retained there for an hour. I attach great importance to the retention of the bougie; and with the catgut bougie there is this additional advantage, that the bougie swells to twice its original size."—P. 508.

The earliest age at which an operation has been performed for the relief of strangulated hernia is an interesting question, and one of some practical importance, and yet it does not appear to have received the attention that it deserves. On this subject our author says:—

"It is difficult to ascertain how early this operation has been performed. Neither Sir A. Cooper, Mr. Lawrence, nor Mr. Teale, in their works on hernia, mention the earliest period of life at which the operation for hernia has been performed. Mr. Lawrence has, however, informed me that he has successfully operated on a child under two months, and that he performed the operation easily, without opening the sac. Mr. Curling, in 1853, operated successfully at nine weeks, on a male infant, for strangulated inguinal hernia, and divided the stricture external to the sac. The case went on favourably, and at the end of a week the child was taken out of the Hospital with the wound nearly healed, though Mr. Curling writes me word that shortly after its discharge the child was attacked with erysipelas, and died. The fatal termination only shows how important it is in these cases to keep them under your care, if the obstinacy of the parents does not interfere until the cure is quite complete."—P. 460.

Then follows the account of a case in which Mr. Solly operated successfully on a child aged fifteen months.

Mr. Solly has dedicated this volume to his former dressers—a list of whose names is appended to the preface. These

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gentlemen will, we feel sure, be glad of the opportunity which is here afforded them of reviving the memory of the cases they have seen, and of the instruction they have received in the now demolished wards of old St. Thomas's Hospital.

GENERAL CORRESPONDENCE.

LOCAL SUBCUTANEOUS INJECTIONS AND THE HYPODERMIC METHOD.

LETTER FROM MR. CHARLES HUNTER.

[To the Editor of the Medical Times and Gazette.]

SIR,—I observe a note in your number for this week from Dr. Alexander Wood, under the head of "Subcutaneous Injection," which certainly necessitates a reply from me on several points. I regret time will not permit me to answer them in full before your next impression.

The letter of Dr. Wood surprises me, in that it contains statements as erroneous as are the sentiments in it ungenerous towards me.

Dr. Wood writes as if I denied his claim as introducer of the practice of local injection of narcotics.

Dr. Wood need hardly plead for that, which I, more perhaps than any other Englishman, have on all occasions so freely allowed him; for which I, more perhaps than any other author on this subject, have always given him full credit. Dr. Wood ought rather to thank me for having been one of the first to regularly append the name of Wood to the treatment by narcotic injection, for having called it "the method of Wood," "the plan of Wood," "the local injection of Wood," etc., etc.

In my first paper on the "Hypodermic Treatment of Diseases," in 1859 (*Medical Times and Gazette*, March 5), I wrote as follows:—

"Dr. Alexander Wood, of Edinburgh, has long employed the introduction of medicines into and under the skin in the various forms of neuralgia. To him is due the discovery of injecting narcotics into the tender spots of the neuralgic part or tissue, whichever it happens to be. The belief of Dr. Wood being that the localisation of the remedy in the neuralgic part is the cause of the success which attends his practice."

What more can Dr. Wood desire? To the theory of localisation, which he appears still to hold, according to his letter of this week, and which he allows may be wrong, I have opposed an opposite theory.

In accordance with my theory, I have not practised localisation. My theory may be right or wrong, but the result has constantly been as successful as Dr. Wood could desire from localisation.

Does Dr. Wood desire to claim double priority, as to his own theory and practice, and as to the one which he admits is a modification, and which is both theoretically and practically different to his plan? One would think so, for he says they differ only in name.

I proposed the injection of the cellular tissue with the view of producing *general* medicinal effects. I proposed it upon a theory directly opposed to that of Dr. Wood and for a different class of affections; among others, for diseases without pain. His was a local treatment for local pain; mine, for diseases which could not be treated locally, such as delirium tremens, mania, tetanus, chorea, etc, all of which, and many others, I first treated upon my theory, and the value of the treatment for these diseases has now become fully admitted by the highest authorities.

For fifteen years was the syringe used by Dr. Wood upon the local principle before I ever used the instrument. That syringe, be it observed, was in use for the local subcutaneous treatment of nœvi *before* Dr. Wood discovered its use for the local subcutaneous treatment of neuralgia with sedative solutions. However correct or incorrect my theory may be, I practically inject into the cellular tissue, if it is loose, of any part of the body, and with a general curative object in view.

I have as much discovered the general use of the syringe as Dr. Wood has the local use of it. I believe localisation unnecessary.

My proposal of the injection for general purposes which I made in the journals six years ago can lay no claim as regards priority with a method originated twenty-three years ago by Dr. Wood. He stood still at a certain point—from that point I started by a different road. My modification, although so slight in the eyes of Dr. Wood, is one which has spread to Europe, to India, and America—it is one which is not local, nor exclusive, but general, and is daily becoming more widely applicable.

Surely Dr. Wood cannot desire, as his letter seems to seek, the credit of the investigations of others. He has always had full honour from me; let him remember that which is due to others. I am, &c. CHARLES HUNTER.

Wilton-place, Belgrave-square, June 20.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MAY 16.

Dr. PEACOCK, President.

A REPORT by Dr. Partridge, Dr. Dickenson, Dr. Ogle, and Mr. Callender was read on a specimen exhibited by Dr. Ogle. The question submitted was,

WHETHER THE CANCEROUS MASS EXHIBITED BY DR. OGLE ON APRIL 18 WAS A SUPRA-RENAL CAPSULE?

We believe the tumour to be cancerous degeneration of the left supra-renal capsule for the following reasons:—1st. Because, though a supra-renal capsule existed on the right side, none could be found on the left, though diligently sought for; and because the absence of a supra-renal capsule is very rare, and when it does occur it is found to be associated with a deficiency of other organs. 2nd. Cases have been reported of cancerous degeneration of the supra-renal capsule. 3rd. That the anatomical relations of the tumour to the left kidney are similar to those of the renal capsule. 4th. That a vein apparently emerging from the cancerous mass opens into the upper part of the left emulgent vein, and that we know of no vein communicating from above with the emulgent vein, except the supra-renal, though occasionally a vein from the adipose capsule of the kidney opens into it, and there is sometimes a communication between the left renal vein and the superior mesenteric veins. 5th. That the tumour is too much circumscribed to be a mass of cancerous absorbent glands, and that the absorbent glands in the neighbourhood were in a healthy condition.

Dr. JOHN W. OGLE showed

A SPECIMEN OF AN INVERTED UTERUS WHICH DURING LIFE HAD BEEN SUCCESSFULLY REMOVED BY LIGATURE.

The specimen was obviously such as it was described to be, showing a cavity, a rough shaggy exterior, and presenting the Fallopian tubes, as might be expected, in its cup-like cavity. The specimen was presented to St. George's Hospital by the late Mr. Stone, and had been originally removed by the late Sir C. Clarke. The case is given by Dr. Gooch in his work on "The Diseases of Women" (Sydenham Edition, p. 131). Dr. Ogle brought this specimen before the notice of the Society in order that, by examination of it, the members might be assisted in coming to a conclusion regarding a specimen which had been forwarded for exhibition to the Society by Dr. Slayter, of Halifax, in Nova Scotia, and placed in Dr. Ogle's hands by Dr. G. Milroy. This case was described as

"A CASE OF INVERTED UTERUS SUCCESSFULLY REMOVED BY ÉCRASEUR."

The specimen consisted of a large, firm, dark-coloured, solid mass, which Dr. Ogle had divided, having no cavity in its interior and showing no Fallopian tubes in connection, but having at its upper part a slight cup-like depression lined by a smooth membrane, around which could be seen the roughened surface occasioned by the use of the écraseur. The whole mass was of the size of a largish cocoa-nut, and had been removed by Dr. Slayter from a woman aged 33 years, in whom the mass had projected from the vagina after bearing-down pains which had come on in consequence of making a long jump. The mass became gangrenous, and was removed without material loss of blood. Dr. Ogle, upon his examination, was led to think it a fibrous tumour, and to suppose that the smooth cup-like surface on the summit was, in fact, a portion of the serous surface of the uterus which had been drawn downwards, and included within the écraseur. He asked the President for other opinions on this specimen, and

Dr. Marion Sims and Dr. G. Hewitt were appointed, with Dr. Ogle, a sub-committee, to consider the specimen.

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Dr. Ogle also showed, as being interesting in connection with the recent death of the Czarewitch, of whose fatal disease the earliest symptoms were those of supposed rheumatism, etc.,

A CASE OF CARIES OF THE LUMBAR VERTEBRÆ, WITH EFFUSION WITHIN THE SPINAL CANAL, AND SLIGHT SOFTENING OF THE SPINAL CORD.

In this case the earliest symptoms were those of sciatica, for which he had been treated for a period of several months. Afterwards symptoms of paraplegia set in and increased, loss of power in the legs becoming absolute, the sensibility of the skin remaining entire, and the sense of pain in the legs very acute. At no time was there pain or tenderness over any part of the spine. Dr. Ogle had to thank Mr. Ewens, of Milton Abbass, in Dorsetshire, for the details of this case. He observed that he had seen several cases of disease of the spinal column and cord in which the symptoms set up had been referred to rheumatism, sciatica, lumbago, etc., and especially alluded to one case of progressive muscular atrophy in which the patient had been sent to Australia for the purpose of getting rid of severe (supposed rheumatic) pain by hard travelling and severe sports.

Dr. Ogle also showed

A SPECIMEN OF COLLECTION OF PURULENT FLUID IN THE RECTUS FEMORIS MUSCLE, IN WHICH THE ONLY SYMPTOM, UNTIL THE DAY BEFORE DEATH, HAD BEEN THOSE OF SO-CALLED RHEUMATISM.

The patient was a man, aged 46, in whom stiffness of one leg came on, and lasted two or three days; after this he had what was called sciatica, for which he was duly treated for a week. He then came into St. George's Hospital, and was under care for five days with the same symptoms. Suddenly confusion of mind, heat of surface, quickness of pulse, and profuse perspiration came on, and on the day following he died. Indications of slight pleurisy and secondary lobular pneumonia were found after death, in addition to a collection of dark, brownish-red viscid puriform fluid enclosed in a cavity in the muscle of the leg, having shreddy walls.

Dr. Ogle also showed

A LARGE CYST WITH TRANSPARENT WALLS, OCCUPYING ABOUT ONE-THIRD OF A SUPRA-RENAL CAPSULE.

The specimen was found accidentally in the body of a man who died of disease of the spinal cord. No peculiarity of the skin had been observed during life, and no symptom leading to the supposition that the supra-renal capsule was diseased.

Dr. Semple exhibited a portion of

DIPHTHERITIC MEMBRANE FROM THE TRACHEA OF A CHILD.

The subject was three years old, and was brought as an out-patient to the St. Pancras Dispensary, suffering from a croupy cough, with some difficulty of breathing, and febrile symptoms. A mixture was ordered containing small doses of tartarised antimony. The next day the child was better, and the improvement continued till the evening of the fourth day since the prescription was given, but urgent symptoms of dyspnœa, accompanied with cough, then manifested themselves, and terminated in death. The post-mortem examination was made next day, and on removing the larynx and a great portion of the trachea, a complete tube of false membrane was found lining the latter, and a thin layer of the same membrane also covered the mucous membrane of the larynx. Dr. Semple was induced to exhibit this specimen, which presented the usual appearances of a diphtheritic membrane, because, on looking over the *Transactions* of the Society for the last seven years, he found that the number of such cases described was by no means very great, considering the extensive prevalence of diphtheria during that period. The case also suggested to him the probability of the identity of diphtheria with croup, the latter being, in fact, a subdivision of the former, and distinguished only by the locality which it attacked. This identity of the two diseases was maintained by the most eminent French writers on the subjects—as Guersant, Bouchut, and Trousseau—and was consistent with our present pathological knowledge.

Dr. Greenhow showed specimens of

GRINDER'S AND COLLIER'S LUNG.

Both were consolidated, though not uniformly so, and intersected by firm white bands, apparently produced by thickening of the inter-lobular tissue. The grinder's lung was of a dark bluish-grey colour, and under the microscope this colour was seen to be given by numerous small black deposits which were ascertained by means of strong hydrochloric acid not to contain any oxidised iron. A few small, apparently crystalline, bodies were also seen embedded in the tissue. By incinerating a small portion of the lung in a porcelain crucible, and boiling the ash in hydrochloric acid, a residue was obtained, consisting partly of an amorphous deposit and partly of small angular masses which reflected light powerfully and polarised light transmitted through them. This residue on being exposed to the fumes of hydro-fluoric acid was entirely dissipated, proving it to be silica. The collier's lung was much darker in colour, and had been quite black when fresh, at which time a black juice could be readily expressed from its substance. In this case incineration and boiling in hydrochloric acid left a greyish-white amorphous residue, which did not polarise light, but which evidently also consisted of silica, as it was entirely dissipated by the fumes of hydrofluoric acid. A comparative experiment tried with a portion of ordinary lung left an ash which was altogether soluble in boiling hydrochloric acid. Dr. Greenhow said that the disease from which both patients had suffered appeared to have been chronic, or, as Rokitansky terms it, interstitial pneumonia, and its exciting cause had been obviously the inhalation in the first case of grindstone grit, and in the second of finely pulverised coal. He added that the presence in the lungs of these irritating foreign bodies, which must have gradually accumulated in the course of the patients' occupations, accords perfectly with the history of the symptoms from which such operatives are found to suffer. The earlier symptoms are those of mere bronchial irritation, so slight as frequently to be overlooked until aggravated by an attack of catarrh. In many cases, especially in those in which a lighter kind of dust is inhaled, the disease remains chronic and bronchial throughout; but in others, and especially in those caused by the inhalation of a heavy dust or grit, chronic pneumonia supervenes after a time and proves fatal, either in consequence of an intercurrent attack of acute pneumonia, or by a long course of symptoms resembling those of very chronic phthisis. Dyspnœa is always a very marked feature of such cases, in which the physical signs are almost out of all proportion to the general disturbance of health. The disease, even when far advanced, is often checked by discontinuance of exposure to its exciting cause.

Mr. Curling exhibited a

PHOTOGRAPH OF A CANCEROUS RECTUM,

removed from a man upon whom he had performed the operation for artificial anus in the left loin in July last, not on account of obstruction, but to alleviate the misery of the disease and to retard its progress. The patient, a man, aged 29, recovered favourably, and returned to his home at Doncaster. His health improved and he gained a stone in weight, and for six months enjoyed a state of comparative comfort. He then began to suffer a good deal from the disease, and had frequent hæmorrhage from the rectum and also from the bladder. He died exhausted on April 29, nine months after the operation. The body was examined by Dr. Guy, who found a cancerous stricture two inches from the anus, with small ulcers in the bowel above. The bladder was small and rugose, and its posterior wall thickened, hard, and united to the rectum. These changes were well represented in the photograph.

DISEASED SKULL BONES OF THE QUADRUMANA.

Dr. Crisp exhibited the skull of a young pig-faced baboon and of a young dog-faced baboon, animals that had been in confinement in this country. The facial and cranial bones were much thickened, and were of a spongy character. Similar specimens were referred to in the Hunterian Museum in a young lion and in a monkey. In the same museum were three specimens of adult human skull bones much thickened, but their history was incomplete, and Dr. Crisp believed that they had been buried for some time in the earth. He believed that such a condition of bone as that seen in the specimens exhibited had not been met with in a child. Comparisons were made between the state of the teeth as regards decay in the quadrumana and in the coloured and white varieties of mankind.

Dr. Crisp also exhibited

DISEASED RENAL BODIES IN A CAMEL.

These were taken from a camel, the morbid appearances of the lungs of which animal were described at the Society on a former occasion. The animal was killed in consequence of great debility and emaciation. One renal body weighed about an ounce, and the other was of the natural size. The former body was composed chiefly of hard nodules, similar to those

in the lungs, and no part of it was in a normal condition; the other gland was infiltrated with tuberculous deposit in an incipient state. Dr. Crisp said that he wished to correct an important error respecting the effect of extirpation of the renal bodies in the lower animals. In 1858 a rat was exhibited that had had both renal bodies removed. It was stated by Dr. Hartley that the animal (not three years old) was blind and losing flesh from old age, so that it was killed. Dr. Crisp said that the rat lived to the age of ten or twelve years, and he believed that no animal would attain its natural term of existence after extirpation of the renal bodies.

Dr. DICKINSON exhibited specimens of

URINE CONTAINING A COLOURING MATTER, RESEMBLING INDIGO, IN LARGE QUANTITY,

passed in April by a young woman who was at point of death from circumscribed peritonitis depending on a perforating ulcer of stomach. The urine was of a pale yellow colour and slightly turbid. His attention had been drawn to it by Mr. Haywood Smith, who found that the addition of hydrochloric acid turned it to a deep blue. About six ounces were obtained for examination. About six ounces of hydrochloric acid were added, and the mixture left at rest for two or three days. A blue-bronze pellicle had then formed upon the surface, which, when skimmed off, gave many of the chemical reactions of indigo. Also, a fine indigo-coloured precipitate had fallen to the bottom, which was collected and treated with repeated washings of alcohol. An insoluble blue powder remained at last suspended in alcohol, which it rendered, when shaken up, nearly opaque (No. 1). The first washings which came away had, when the urinary salts had been precipitated with acetate of lead, a bright pink colour. The last washings, which were left without any admixture of the acetate of lead, had a purple or violet colour. It will be seen that the removal of a red colouring matter by alcohol quite corresponds with the result given by other tests, and confirms the view that the colouring matter is closely allied to indigo. Dr. Noad, who also examined these colouring matters, confirmed this conclusion. All the coloured fluids were obtained from six ounces of urine. The death of the patient prevented any further observations. Indigo has often been detected in urine, but perhaps never in the quantity here seen. The colouring matter, though closely allied to indigo, differs in one respect. Some of the powder acted on by sulphuric acid produced a deep blue solution, such as indigo would give under the same circumstances, but on adding water it was precipitated, while indigo would have remained in solution. The colour of the precipitate, as well as that of a little blue solution which drained from it, was discharged instantly by nitric acid.

Mr. LOCKHART CLARK exhibited a specimen of

DISEASE OF THE SPINAL CORD CONSEQUENT ON FEVER.

Mr. Clark said,—The preparation which I exhibit is a transverse section of the lumbar enlargement of a spinal cord, which I received from Dr. Macnamara, of Mozufferpore, in Bengal, and which belonged to a case of paraplegia. This form of paralysis is very common amongst both men and horses in that part of India, and is particularly interesting from the fact that it usually follows fever. It is limited to the lower extremities, and only the motor power is lost, sensation remaining perfect. The bladder is seldom affected. The preparation shows that the grey substance, and especially all the white columns are thickly interspersed with spots and patches of some kind of exudation, as represented by the dark spots in the figure exhibited. This exudation is generally more abundant in the posterior columns, in which in some sections it destroyed large portions of the natural tissue.

OBITUARY.

SAMUEL KING SCOTT,

(From a Correspondent.)

THE grandson of Scott the commentator, who is most familiarly known as "Bible Scott," died at Hendalls, near Uckfield, on June 9, of angina pectoris, at the age of 46 years.

Educated at St. Bartholomew's, he came to Brighton, a tranger and poor, in 1842. The little money he had was exhausted in an unsuccessful contest for the House-Surgeoncy of the Sussex County Hospital, but he succeeded in gaining the post of House-Surgeon to the Brighton Dispensary. From this laborious position he was removed in two or three years—when Mr. Philpott, the brother of the present Bishop of Worcester, recognised his sterling qualities and took him into partnership.

From that time to his death there is very little to record more than might be said of many men—namely, that he married, that his family increased, even to thirteen children, that he was diligent, that he throve, and that he died. He died of angina pectoris fifty-three days after the first attack of this nature.

The poor stranger who came to Brighton in 1842 was followed to his grave in 1865 by all his Medical brethren. Alike the grey old man and the young student bowed their heads in sorrow over the grave of this good, guileless man. What had passed between cannot be recorded on earth. Yet the daily quiet, happy, useful labour, the kindness and generosity, the quaint humour of that mind where indecency or profanity never entered, the upright, honourable, Christian tenor of his life spread an influence beyond his home. Brighton society presents a changeful soil, a shifting sand, but beneath the changing surface there is a trace that time can never remove from the hearts of those who knew and loved and honoured Samuel King Scott.

MEDICAL NEWS.

THE QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the Queen's University, held in Dublin Castle, on the 21st ult., the degree of Doctor in Medicine was conferred on the following gentlemen, viz.:—

William Alexander, Queen's College, Belfast; John Bligh, Queen's College, Galway; Henry Thomas Brown, Queen's College, Cork; William Alister Catherwood, Queen's College, Belfast; Joseph Chesnut, Queen's Colleges, Belfast, Cork, and Galway; Henry Comerford, Queen's College, Galway; Joseph Augustine Fitzpatrick, Queen's College, Galway; John Sinclair Holden, Queen's College, Belfast; Daniel O'Connell Ray, Queen's College, Galway; David Stewart Hepburn Smith, Queen's College, Belfast.

And the degree of Master in Surgery on—

John Bligh, M.D., Queen's College, Galway; Henry Comerford, M.D., Queen's College, Galway; Joseph Augustine Fitzpatrick, M.D., Queen's College, Galway; Francis Duffy, M.D., Queen's College, Belfast; Richard Malcom Graham, M.D., Queen's College, Cork; Henry Macnaughton Jones, M.D., Queen's College, Cork; William Henry Jones, M.D., Queen's College, Cork; Robert Dwyer Joyce, M.D., Queen's College, Cork; Alexander Hay Hill M'Murtry, M.D., Queen's College, Belfast; Thomas Ffrench Mullen, M.D., Queen's College, Galway; Patrick John Shannon, M.D., Queen's College, Galway.

At the examination which has just concluded, the following gentlemen passed the first University Examination in Medicine, viz.:—

Isaiah de Zouche, Queen's College, Galway; Thomas Charles Gilmore, Queen's College, Belfast; John Jefferson, Queen's College, Belfast; Samuel Killen, Queen's College, Belfast; Thomas Kingston, B.A., T.C.D. (except in modern languages), Queen's College, Cork; John Macaulay, Queen's College, Belfast; James Macarthy, Queen's College, Galway; William Henry Macnamara, Queen's College, Cork; Frederick M'Clement, Queen's College, Belfast; Hickman Morgan, Queen's College, Cork; Rosslewin Morgan, Queen's College, Cork; Edwin Field Nelson, Queen's College, Belfast; John O'Connor, Queen's College, Cork; William A. O'Connor, Queen's College, Cork; Jeremiah James O'Grady (in Experimental Physics), Queen's College, Cork; Samuel Parke, Queen's College, Belfast; Josias Wilson Patrick, Queen's College, Belfast; William J. Rankin, Queen's College, Galway; James Joseph Lewis Ratton, Queen's College, Cork; William Sharpe, Queen's Colleges, Belfast and Galway; George Wood, Queen's Colleges, Belfast, Cork, and Galway; William B. Johnston, Queen's College, Cork.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a General Meeting of the Fellows, held on Monday, June 26, 1865, the following gentlemen, having undergone the necessary Examination, were duly admitted Members of the College:—

Walter Butler Cheadle, M.D. Cantab., 8, Old Cavendish-street; Edmun Thomas Leighton, M.B. Cantab., 4, Henrietta-street, Cavendish-square.

At the same meeting, the following gentlemen, having undergone the necessary Examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Paul Belcher, Burton-on-Trent; John Burtch, M.D., Fingal, Canada West; Charles Phillips Collins, Maidstone; John Tasker Evans, M.D. Aberdeen, Hertford; Thomas Moore, Cradley-heath; Richard Plowman, Bridgewater; James Pointon, Huyton, Lancashire; Thomas William Thursfield, M.D. Aberdeen, Kidderminster.

The following gentlemen were reported by the examiners to have passed the First part of the Professional Examination for the Licence of the College:—

John Arnold, William Barnett Burn, Barnabas Walter Lamb, Henry Sedgwick, and William Square, St. Bartholomew's Hospital; Herbert Goldingham Budd, Benjamin Neale Dalton, Henry Morris, Arthur Bowes Elliott, Guy's Hospital; Frederick William Parsons, King's College; Richard Plowman, St. Thomas's Hospital; John George Randall, St. Mary's Hospital.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, June 22, 1865 :—

John March, New Wandsworth; Richard Jeffreys, 19, Portland-road-villas; Samuel Mason, Teignmouth Infirmary; James David Rowlands, Carmarthen; Herbert Lucas, Hitchin; Henry Thomas Marriott, Colston Bassett, Notts.

The following gentlemen, also on the same day, passed their first Examination :—

Joseph Priestnall Cheetham, Guy's Hospital; Frederick Walter Smith, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BURTON, JOHN, L.R.C.P.E., has been appointed Junior Surgeon in Ordinary to the Walsall Cottage Hospital.

SPURGIN, HERBERT B., M.R.C.S. Eng., has been appointed Assistant-Surgeon to the Northamptonshire and Rutland Militia.

WELLS, SOELBERG, M.R.C.S. Eng., Ophthalmic Surgeon to King's College Hospital, has been elected Professor of Ophthalmology in King's College, London.

DEATHS.

CAMERON, WILLIAM L., Surgeon-Major R.H.A. Bombay Army, in London, on June 24, aged 48.

DELMEGE, JOHN P. DE G., M.D. Q.U.I., at Dinapore, East Indies, recently, aged 25.

FERGUSON, ROBERT, M.D., F.R.C.P., of Curzon-street, May-fair, at Ascot Cottage, Winkfield, Windsor, on June 25, aged 65.

HALL, THOMAS, Surgeon, at Sacramento, California, on May 4, aged 50, late of Long Sutton, Lincolnshire.

HELLARD, GEORGE B., M.R.C.S. Eng., at St. Thomas-street, Portsmouth, on May 18.

JOHNSON, HENRY, M.R.C.S. Eng., at Walton-on-the-Hill, Liverpool, on June 19, aged 52.

SCOTT, SAMUEL K., M.R.C.S. Eng., at Gorman-place, Brighton, on June 9, aged 46.

WALLACE, JAMES M. E., Surgeon H.M.S. *Medea*, on the passage from Halifax to Bermuda, on May 18.

WILSON, WILLIAM M., L.R.C.S. Edin., at Horsforth, near Leeds, on June 19, aged 70.

THE first delivery of the Harveian Oration in English, by Dr. Acland (an abstract of whose able and eloquent discourse we publish elsewhere), attracted to the College a large and distinguished concourse of hearers, both Professional and non-Professional. H.R.H. the Prince of Wales, honoured the College and the orator by his presence. Amongst the guests we also noticed the Right Hon. the Chancellor of the Exchequer.

UNIVERSITY INTELLIGENCE.—OXFORD.—At a congregation holden on June 23, the following Degree was conferred: Doctor in Medicine, John Edward Morgan, University College.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, JUNE 26.—Officers elected for the ensuing year :—*Censors.*—Arthur Farre, M.D.; William Richard Basham, M.D.; Herbert Davies, M.D.; George Johnson, M.D. *Treasurer.*—James Alderson, M.D. *Registrar.*—Henry Alfred Pitman, M.D. *Librarian.*—William Munk, M.D. *Examiners.*—(*a.* On the subjects of General Education): Francis Hawkins, M.D.; William Munk, M.D.; Henry Thompson, M.D. (*b.* On the subjects of Professional Education): Anatomy and Physiology—Charles Handfield Jones, M.B.; William Orlando Markham, M.D. Materia Medica, Chemistry, etc.—George Owen Rees, M.D.; Alfred Swaine Taylor, M.D. Principles and Practice of Medicine—Thomas Alfred Barker, M.D.; Walter Hayle Walshe, M.D. Midwifery and the Diseases peculiar to Women—Charles West, M.D.; Robert Barnes, M.D. Principles and Practice of Surgery—Campbell G. de Morgan, Esq., F.R.C.S.; Holmes Coote, Esq., F.R.C.S. *Curators of the Museum.*—James Alderson, M.D.; George Hamilton Roe, M.D.; William Wegg, M.D.; Francis Sibson, M.D.

COLLEGIATE ELECTION.—The long list of candidates for election into the Council of the Royal College of Surgeons, on Thursday next, has been reduced by the retirement of Mr. J. A. Ransome, of Manchester, who, it is stated, is unwilling to jeopardise the position of his distinguished fellow-townsman, Mr. Turner, and therefore retires from the contest this year, and gives his support to the last-named gentleman. An active canvass is going on by the friends of one of the retiring members of the Council, to secure his re-election.

SURGEON TO THE QUEEN FOR SCOTLAND.—We understand that Mr. James Spence, F.R.S.E., F.R.C.S.E., Professor of Surgery in the University of Edinburgh, has been appointed Surgeon in Ordinary to the Queen, in room of the late Dr. David Maclagan.—*Edinburgh Courant.*

TRIAL OF DR. PRITCHARD.—The trial of Dr. E. W. Pritchard, of Glasgow, for the murder of his wife and mother-in-law, takes place at the High Court of Justiciary, Edinburgh, on Monday, July 3, and is expected to last for about a week. He is charged with having, between the 10th and 25th of February last, administered to Jane Cowan or Taylor, his mother-in-law, in tapioca, or in porter or beer, or in a medicine called Battley's Sedative Solution, tartarised antimony and aconite and opium, and with having, between the 22nd of December, 1864, and the 18th of March, 1865, administered to Mary Jane Taylor, or Pritchard, his wife, in egg-flip, and in cheese, and in porter or beer, and in wine, tartarised antimony and aconite. There is a long list of witnesses on both sides, and about 200 "productions" to be used in evidence, including numerous letters, Medical prescriptions, etc. The prisoner was removed from Glasgow prison to Calton Gaol of Edinburgh on Tuesday morning.

TESTIMONIAL TO MR. CARTER.—During the last winter a malignant fever raged in the low, unhealthy parts of the parish of St. Mary de Lode. Mr. Carter, the parish Surgeon, was unceasing in his kindness and attention to the poor people. The fever has now been subdued. For a long time collections have been made in the parish for the purpose of presenting Mr. Carter with two testimonials—one from the poor people, the other from his more affluent friends. The costlier one is a beautiful marble timepiece by Martin and Co., of Cheltenham, bearing this inscription :—"Presented to Albert Pleydell Carter, Esq., Surgeon, by a few friends, as a token of their esteem and approbation of the care and attention bestowed by him upon the poor of St. Mary de Lode during the fever epidemic in that parish throughout the winter of 1864 and 5. Gloucester, June, 1865." The other is a nice-looking electro-chased and engraved inkstand, upon which there are written these words :—"Presented to A. P. Carter, Esq., Surgeon, by the poor people of St. Mary de Lode, in acknowledgment of his kind attention to the fever cases in that district. Gloucester, June, 1865." The coppers of two hundred poor people have bought this inkstand. The testimonials were presented at St. Catherine's school-room.—*Gloucestershire Chronicle.*

KING'S COLLEGE HOSPITAL.—On Wednesday, the 21st ult., the dinner of the old students of this Hospital took place at St. James's Hall. About 100 gentlemen from all parts of London and the provinces attended to testify to the interest they take in their *alma mater*, as well as to show their respect to Professor Geo. Johnson, who had consented to take the chair. Several of the Medical professors were present, amongst whom we noticed Professors Fergusson, Partridge, Miller, Bentley, Garrod, and Beale. Amongst the "provincials" we observed Messrs. Anderson, of Coventry; Atkinson, of Leeds; Bishop, of Tunbridge; Eade, of Norwich; George, of Richmond; Harries, of Shrewsbury; Holberton, of Hampton; Lawrence, of Cambridge; Price, of Margate; Sheppard, of Colney Hatch; Spender, of Bath; Thompson, of Oxford; Walters, of Reigate; and Workman, of Reading. Of the residents in London there were Drs. Anstie, Evans, Head, Hood, Kempthorne, Lavies, Murray, Meadows, Pollock, Playfair, Symes Thompson, Stevens; Messrs. Altman, Bellamy, Frere, Heath, Lawson, H. Lee, Nunn, Parkinson, Propert, H. Smith, S. Wells, Watson, Wood, etc. After the usual toasts of loyalty had been dismissed, the Chairman, who on rising met with a most cordial reception, gave the toast of the evening "Success to King's College Hospital." He dwelt upon the importance of such meetings as this, and remarked upon the large number of illustrious names on the *rôle* of former professors, and alluded to the high positions attained by many of those who had received their education at King's College. Mr. Francis Mason then proposed, in a most appropriate speech, "The Health of the Medical Professors and Staff of the Hospital," which was received with great enthusiasm, and ably responded to by Professors Fergusson, Partridge, and Bentley. The other toasts were "The President's Health," proposed by Mr. Frere; "Absent Friends," by Mr. C. Heath; and the "Hon. Secs.," by Dr. Lavies. The whole entertainment reflected the highest credit on the hon. secs., Messrs. Buzzard and Mason, who expressed themselves as amply compensated for their trouble by the friendly way in which they had been

received, and by the unusual success that had attended the gathering. The company then separated, having enjoyed a most pleasant and harmonious evening.

THE *Western Morning News* states that Mr. Gale, electrician, of Plymouth, has discovered a process by which gunpowder can be rendered non-explosive, and its combustible properties restored when required.

DEATH OF PROFESSOR FERGUSON, OF BELFAST.—We regret to announce the death of John Creery Ferguson, Esq., A.M., M.B., T.C.D., Hon. Fellow of the King's and Queen's College of Physicians in Ireland, Professor of Medicine in Queen's College, Belfast, since 1849; Physician to the Belfast General Hospital for the last twelve years, and formerly Professor of Medicine in the School of Physic, and Physician in Ordinary to Sir Patrick Dun's and Simpson's Hospitals, Dublin. The deceased had been ill for some time, and his death took place at his residence in Howard-street on Saturday evening. Professor Ferguson occupied a very high place in his Profession, and probably no one enjoyed (and deservedly so) a higher repute in Medical circles in the north of Ireland. The learned gentleman was appointed a Professor in the Belfast Queen's College on the foundation of that institution, and the success of the establishment as a Medical school is in great part owing to his great abilities and unwearied industry. He was a great favourite amongst the students, who had in him an earnest friend in whom they could always confide, and his death will be sincerely lamented by them, as well as by his colleagues of the Professoriate, and of the Medical Profession in town. Dr. Ferguson's literary acquirements were very considerable. He was an excellent public reader, and, notwithstanding the numerous calls of a public nature upon his attention, he not unfrequently found time to give readings from Shakespeare, Dickens, etc., to the literary institutions of the town. His death, therefore, leaves a blank which will be felt for a long time amongst nearly all classes of the community.—*Northern Whig.*

ROYAL COLLEGE OF SURGEONS.—The President, Vice-Presidents, and Council of this Institution invited the attendance of the Fellows, Members, and a large number of distinguished visitors to a *conversazione* on Wednesday last, on which occasion all the rooms were thrown open. About 9 o'clock the President, Mr. Hodgson, received the guests in the Council-room, rich in fine paintings by Hans Holbein, Reynolds, Lawrence, Hogarth, Opie, Phillips, and others. Passing through the Council-room, the visitor found himself in the noble library of the College, the walls of which were crowded with works of fine art. Mrs. Gibbons contributed early works by Maclise, Mulready, and some more finished works by Leslie, Webster, and F. M. Brown. The President exhibited the original painting presented to him some years since of Harvey demonstrating to Charles I. his theory of the circulation of the blood, painted by B. Hannah, and a charming copy from Rembrandt's large picture of Nicolas Tulp lecturing to his class in 1632. Professor Fergusson contributed an early work by the late David Roberts of a view of Edinburgh from Craig Miller, and a reduced copy of Holbein's large picture of Henry VIII. granting the charter to the Barber Chirurgeons; and also a portrait of John Abernethy, stated to be by Lawrence—of this, however, there is great doubt. This distinguished Surgeon also sent three very interesting preparations made by him more than thirty-five years ago, one representing the arteries of the foot, injected, dissected, and prepared with most elaborate minuteness. Professor Busk exhibited the result of his exploration of the caves at Gibraltar in specimens of bones of rare and extinct animals, domestic utensils, stone arrow-heads. Dr. Cobbold's preparations of the entozoa, prepared expressly for the Museum of the College, will prove a valuable acquisition to the collection. Mr. E. W. Cooke, R.A., was a most liberal contributor of his choice marine subjects. Mr. C. Landseer sent also some pictures for exhibition. Mr. George Adams contributed a posthumous bust of the late Edmond Belfour, who for fifty-four years filled the office of Secretary to the College; also busts of General O'Brien and the Duke of Wellington, and a superb picture by Etty. The Royal Botannic Society most liberally supplied some rare exotics; and Mr. Rimmel, who has become a part of the institution by the use of his admirable vapourisers, used at the anatomical examinations, sent his elegantly decorated fountains, playing all the evening, and dispersing fragrant perfumes throughout the building. Among the distinguished visitors were—the Venerable Lord Brougham, now 87 years old; Lord Jocelyn Percy, Lord Frederic Paulet, Viscount Walden, Sir H. Holland, Sir R. Martin, Sir E. Landseer, Sir Rowland Hill, Professors Huxley; Rolliston, of Oxford; Humphry, of Cambridge; Drs. Wiblin, of Southampton; Singen, of Hereford; Mr. Laden, of Bath. It is stated that nearly 2000 visitors attended, who appeared highly pleased with this Collegiate gathering.

THE CASE OF MR. DEBENHAM.—Mr. Debenham, the Surgeon charged with manslaughter in killing a supposed burglar, has again appeared before Mr. Paget, the magistrate at the Thames Police-court. Mr. Debenham was defended by Mr. Lewis, Mr. J. Smith appeared for the prosecution. The following important evidence was given:—Mr. Frederick Tothill, Surgeon, of No. 8, Charles-street, St. James's-square, was called for the first time, and said from instructions he received from the Commissioners of Police he visited Ilford Cemetery on the evening of the 20th of the present month. The body of Thomas Solomon was exhumed, and he made a *post-mortem* examination. The body was much decomposed. At the junction of the left temple with the parietal bone a wound of somewhat circular form was detected. On removing the scalp a similar hole was found corresponding with that on the temple, and the occipital bones were fractured. The ball which he held in his hand was found firmly embedded in the right occipital bone at the back of the skull, two inches back from the right ear, and somewhat below it. The ball had taken an oblique direction from the left temple just above the eye to the back of the head below the right ear. The wound was no doubt the cause of death. In answer to Mr. Lewis, sen., the witness said the distorted and jagged appearance of the ball was not caused by striking the temple and bones of the skull. The ball must have struck some hard substance before it entered the skull, which was unusually thin. Mr. Lewis, sen., said the evidence of Mr. Tothill, who was employed by the Government, supported his theory that Mr. Debenham never fired at the deceased, and that the ball struck the brick wall, the corner of which was chipped, and from the deflection struck the deceased. Without the exculpatory evidence of the Surgeon, Mr. Tothill, a coroner's jury came to the conclusion that Mr. Debenham only fired a pistol to frighten the man who strayed into his grounds. Magistrates generally acted on such a finding. Mr. J. Smith said that all Mr. Lewis had advanced could be confuted in a moment. The deceased was a trespasser in Mr. Debenham's garden, not a thief or a burglar, and was shot down and killed. Mr. Lewis, sen., said he should proceed until the magistrate had told him he was acting improperly, and, in a lengthened argument, contended that his client only intended to frighten the man, as a coroner's jury had found, and that he ought to be discharged. Mr. Paget said the valuable evidence given by Mr. Tothill proved the wisdom of the step adopted by the Home Office in ordering the exhumation of the body. There was no doubt what his duty was in this case, and that was to send the accused before another tribunal. He would give no opinion on the merits of the case; that was the province of a jury. It was very important it should go forth to the world that the taking of life could not be justified, except under extreme circumstances, by an attack on the person, or an attack upon property. The magistrate went into the law of the case briefly, and committed the prisoner for trial for manslaughter, taking the same bail as before—Mr. Debenham's own personal recognisance in £4000, and four responsible householders in £1000 each. Bail was at once tendered and accepted.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Lawson Tait's paper on the "Results of Temporary Metallic Compression of Arteries" is in type, and shall appear very shortly.

Subscribers who send us newspapers will oblige by marking the article to which they desire to call our attention.

W. M.—The College of Physicians had persons whom they called "Strangers of the College:" Licentiates were unknown. This was in 1578.

Erinensis.—The Barber Surgeons of Edinburgh were incorporated by a Charter from James IV.

A Country Fellow.—You are late in your application for a dinner ticket. Write at once to Mr. Hulme, of Gower-street, or to Mr. Stone, College of Surgeons. Mr. De la Garde, of Exeter, will preside.

G. P. R., Clapham.—The last *conversazione* at the College of Surgeons took place later in the season, viz., on August 5, 1862, and was given in honour of the Medical Association, which held its annual meeting in London.

A Member.—The authorities of the College of Surgeons were certainly remiss in not inviting the Prince of Wales to the *soirée* on Wednesday last, as there is no doubt H.R.H. would have attended, as he did at the sister institution in Pall-Mall the preceding day at the delivery of the Harveian Oration.

We are informed that our statement that the examination of candidates for the Medical service of the army has been lessened in severity is not correct. There has been no alteration whatever in the practical and Professional subjects of Medicine, Surgery, Anatomy, and Physiology since the examination was instituted in 1855. The only change which has been made has been that the Natural History examination is now optional, and not compulsory. This was not done by the army authorities *ex proprio motu*, but in consequence of the strong opinions expressed by Professors Syme and Christison, that candidates for Army Surgeoncies should be tested on admission only in the practical Medical subjects, and not in the collateral sciences. The alteration was not made in consequence of the dearth of candidates, and has had practically little effect, as the majority of the candidates have since voluntarily undergone the examination in Natural History. Instead of lessening the severity of the entrance examination, the Director-General has invariably maintained the standard long ago fixed by the examiners.

Curiosus.—We believe M. Beau's views to be—1. That the auricle has the most important office in the functions of the heart; that the ventricle is in one way the commencement of the arterial system. 2. That the auricle, filled by a sudden rush of blood from the veins, emptics itself into the ventricle by a strong contraction, and that the ventricle, thus rapidly dilated, strikes against the walls of the thorax in its turn. It almost immediately contracts and drives the blood into the arteries, then dilates and then remains quiescent till the next auricular contraction. 3. The current of blood against the walls of the ventricle produces the first sound; the current against the wall of the auricle which dilates it, the second sound. A short paper upon glycogenesis suggests the following explanation of this process:—"That fat and glycin are both formed in the liver, and can be found in the hepatic vein, whether or no they exist in the portal: that the glycin is formed generally at the expense of the starchy ingredients of the food; but these being absent, Dr. Liotard thinks it may be formed from the fat which may be found either in the food or which may exist in the body."

Unqualified Assistants.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Two Surgeons in partnership in a town in England have lately opened a Branch Surgery, which is managed by an unqualified assistant, who has his name alone on a smaller separate doorplate below that for the principals, thus—

BROWN AND JONES,
Surgeons.

Mr. Robinson.

Is there anything contrary to Professional etiquette in having the name of a legally unqualified man on the door? I have heard remarks made on the subject implying that it was so, and wish to know your opinion. An answer in this week's *Medical Times and Gazette* will oblige.

Oldham, June 27. I am, &c. M.A., M.D., etc.

*** We are of opinion that the thing alluded to is contrary to Medical etiquette and against the spirit of the law, and against wholesome custom and the interests of the Profession.

Suggestions for the Improvement of the Position of Officers of the Army Medical Department.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The ranks of Surgeon-Major and Assistant-Surgeon are most objectionable. The grades of Medical officers in the army should be as follows:—Inspector-General, Deputy Inspector-General, first, second, and third class Surgeons; to be regulated as follows, rank of Surgeons of third, second, and first class to correspond with those of Assistant-Surgeon, Surgeon, and Surgeon-Major:—

No. of years on full pay.	Rank.	Relative rank in army.
On joining	Surgeon of 3rd class.	Lieutenant.
After 6 years	Do.	Captain.
After 12 years	Surgeon of 2nd class.	Captain.
After 15 years	Do.	Major.
After 20 years	Surgeon of 1st class.	Major.
After 25 years	Do.	Lieut.-Colonel.

The ranks of Deputy Inspector-General of Hospitals and of Inspector-General of Hospitals are to be given by seniority only, with relative rank of colonel and brigadier-general.

Rates of pay:—On joining, 10s. a-day; after 6 years on full pay, 13s. a-day; after 12 years' full pay, 15s. a-day; after 15 years' full pay, 20s. a-day; after 20 years, 25s. a-day; after 25 years, 30s., and one shilling a-day for every year's service after 25 years.

Retirement:—That every Medical officer who has served upon full pay for twenty years shall be entitled to retire from the service, and that the rate of his retiring allowance for that time shall be 17s. 6d.; and for every year he may serve beyond the twenty years he shall be entitled to 1s. a-day additional. I am, &c.

An Assistant-Surgeon of near Eleven Years' Standing.

Naval Medical Department.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Mr. Seely's motion the other night in the House of Commons on dockyard mismanagement was excellent as far as it went, but it had this great defect, that it failed to grasp the origin of all evil in the Naval Service,—the want of departmental responsibility. There are chiefs of departments duly gazetted in the Navy List, but they have no real influence in the departments over which they are said to preside. Take, for example, the Medical Director-General, whose title implies power and influence, but who has practically very little of either in the discharge of the duties of his high office. A naval officer at Whitehall, a man notoriously inimical to the Profession, "lords" it over him, and regulates promotions and appointments pretty much as he likes. It is thus that we find junior Surgeons preferred from time to time to those who have served long and well, for no other reason, apparently, than because they have served with some naval officer of influence, and paid due attention to his family and domestics.

With your kind permission I would submit this fact to the notice of the schools; and after all the information with which you have favoured them on the mismanagement of the Naval Medical Department, I should think that no competent man will be entrapped into the Naval Service.

To such as may be desirous of entering the public service, I would say, of two evils choose the least, and, if competent to compete, select the Army in preference to the Navy. I am, &c.

London, June 28. A Naval Medical Officer.

Extemporaneous Splints.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I was interested in your correspondent's ingenuity in turning the *Times* to so useful a purpose as a splint. Most Medical men have had to make shift occasionally in this manner. Hat boxes I have often found serviceable. Once, in a remote part of the Scotch Highlands, being at my wit's end for a splint in a case of a broken arm, I caught sight of a young fir-tree that had been felled. The bark stripped off, and some string pulled into tow, found me all I required.

I am, &c., Marshall Holmes, M.D.

Sheen, Staffordshire, June 12.

"Wet-Nursing."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have been prevented up to this time taking notice of the editorial remarks on the above subject that appeared in your number of June 10.

I wish to offer no opinion upon the course you then thought fit to adopt in withholding my letter altogether, and at the same time commenting very freely in general terms upon the views expressed in it; thus depriving your readers of the opportunity of knowing the precise nature of the arguments employed by me, and of forming a correct judgment as to the merits of the question on either side.

If you consider that "fair criticism," I can only say that I differ from you on that point as much as upon the principal subject of controversy between us. I cannot expect, therefore, that you will open your columns to a thorough discussion of this important subject; and I now only ask permission to say, in general terms, that I have an answer to every one of your propositions; and I should be very glad if an opportunity could be afforded me for analysing your arguments *seriatim*. However, as the principles from which you start are so entirely opposed to mine, it is not likely that either would convince the other, and it would be a fruitless task to attempt it. You will, perhaps, excuse me for saying that I consider your mistake is this: your premises being unsound, your arguments are illogical and your conclusions necessarily erroneous.

I am, &c. M. A. B.

P.S.—As you have denied me the opportunity of stating my arguments through your columns, perhaps you will not object to be the medium of communication to any of your readers who may feel sufficient interest in the question to pursue it beyond its present limits. Any communication so addressed, with your permission, enclosing real name of the writer, will receive attention.

*** Our correspondent might have stated her case as strongly as she pleased in this very letter. We must say that we doubt whether our correspondent has any *premises* to argue from.

A New Quack Dodge.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—One of my patients and I having nearly fallen victims to an ancient quack trick, which has lately been revived on a somewhat grand scale and under a most insidious guise, I may as well make your readers parties to our experiences.

Mr. H. B., some eight years ago, suffered from complete hemiplegia, which disappeared in due time, but left many of its distressing effects. Among other remedies, such as nux vomica, etc., I thought I had found some decided benefit from galvanism.

The other day some wise lady in the neighbourhood strongly advised him to try certain electro-chemical baths in London; and as he had then an opportunity of visiting some friends there, and as I considered that the change alone would be very beneficial to him, and that electricity in any form was likely again to improve matters, I readily assented to the plan without (I must confess) making any very searching inquiries into the manner in which the baths were conducted, and without the least suspicion that in a dark corner of the bath-room lurked an old quack spider who would pounce upon his victim the moment he found him safely entangled in his web. Such was the case, however; the bath could not be had without Medical advice. Some cleansing powders were administered. He was ordered to remain immersed one hour and ten minutes; and the following deterious minerals were found in the bath after his removal, all of which, of course, his usual Medical attendant (my humble self) had introduced into his system to his infinite prejudice and injury. Here is a verbatim copy of the original report which lies before me:—

"Mr. B——. "June 12th, 1865.

"Deposits in Bath.

"June 9.—Iron, antimony, iodine, and a little arsenic. Great number of small spots of calomel. Sides: Iodine, iron, and antimony mixed.

"June 10.—Large patches of arsenic, bordered with antimony and iodine. A little calomel round the edges. Sides: Iodine and antimony, with calomel in patches all round the top."

(Signature of expert.)

Hide your head, O, Taylor, and you, O, Letheby! You but discover your 1-10,000th of a grain in a barrel or so of water; but here is a philo-

opher who finds "large patches of arsenic," "antimony," and "iodine," where none ever existed. By what accident the strychnine which Mr. B. had taken eluded his search I am at a loss to guess.

Seriously, though I was glad in this case to assure my patient's friends that he had never since I had attended him (i.e., during the last twenty years) taken one particle of either iodine, antimony, or arsenic, nor, indeed, any calomel excepting in the form of an occasional aperient—say a drachm in twenty years; and before that time he had never had a day's illness, and consequently had taken no medicines. Had the commander of the bath got hold of some other of my patients, I need hardly say that I could not have given the same assurance, and should probably have been looked upon by the sufferer and his friends as the cause of mischief to himself and his children for a generation or two to come.

I am &c.,
THOMAS EDWARD AMYOT.

Diss, Norfolk, June 27.

COMMUNICATIONS have been received from—

M. A. B.; AN ARMY MEDICAL OFFICER; Mr. R. F. SNAPE; Mr. H. B. SPURGIN; ROYAL INSTITUTION; APOTHECARIES' HALL; Mr. THOMAS E. AMYOT; Mr. EDWARD HERFORD; M.A., M.D.; Dr. WILLIAM PIRRIE; Dr. R. LAWSON TAIT; EPIDEMIOLOGICAL SOCIETY; A NAVAL MEDICAL OFFICER; Dr. JOHN BURTON; ETHNOLOGICAL SOCIETY OF LONDON; Dr. MCLEOD; ROYAL COLLEGE OF PHYSICIANS; Dr. W. YOUNG.

BOOKS RECEIVED.

Small-pox: how to Annihilate it. By R. T. Lodge, M.D. Liverpool: H. Greenwood.

*** This is a good summary of the argument in favour of good vaccination and revaccination. But the truth seems to be, that while the upper and middle classes of society, as a rule, appreciate this protection, and avail themselves of it under the advice of their Medical attendants, there is below them a substratum of crass ignorance, unreasoning prejudice, and careless negligence of all save the supply of the animal necessities of our nature, which no pamphleting will ever reach.

A Letter to the Trustees of the British Museum. By Philocosmos. London: R. Hardwicke.

*** We sincerely hope that the trustees of our grand national museum will be impressed by the arguments of the writer of the letter. He tells us that as to material our collection of invertebrata is the finest in the world, but, to the disgrace of the conservators appointed by the State, that this priceless material is stored away, unstudied, unarranged, unknown. "If the collections are worth accumulating and showing, they are worthy of being increased; if they are worth having, they are worth utilising; if they are to be retained, they should exist to the national credit."

Surgery in Bengal. By J. Fayrer, M.D., Calcutta. 1865.

*** This is an address to the Bengal Branch of the British Medical Association. It consists mainly of a discussion of the acute and diffusive form of osteo-myelitis. The author regards it as an analogue of diffuse suppuration in the areolar tissue. He is not disposed to regard its endemic occurrence in an Hospital as due to unsanitary conditions, although admitting that it "occurs, no doubt, like other diseases of the same genus, more readily where numbers are crowded together, and where the ventilation and other sanitary arrangements are also defective."

Remarks regarding the Disease known as the Delhi Sore. By H. M. Fraser, Surgeon, Rifle Brigade.

*** The author regards the disease, which commences as a papillary speck or boil, covered with a crust, and is mostly multiple, as due to the use of the highly nitrated water of the city of Delhi, and advocates removal of the patient as the most rational mode of dealing with the malady.

The Geological Magazine. No. 12. London: Longman and Co.

*** Such of our readers as are curious about such matters as have been in discussion between Bishop Colenso and other Biblical critics and their more orthodox adversaries, will find two articles to interest them in the June number of the *Geological Magazine*. The one is by the Rev. T. G. Bonney, "On the Evidence of Recent Volcanic Eruptions in Central France;" the other, by the Rev. H. B. Tristram, "On the Geology of the Valley of the Jordan, the Dead Sea, etc."

The Food of the People. By Joseph Brown, M.D. 1865.

*** Gossiping and Medico-politico-economical, but containing nothing very new. Nevertheless, it is a small book, and will beguile a tedious half-hour in a railway train, or while waiting for a lady, or for dinner.

Chloroform: its Action and Administration. A Handbook. By Arthur Ernest Sansom, M.B. Lond. 1865.

*** We shall review the book soon, and in the meanwhile recommend it to our readers.

Case of Successful Ligature of the Common Iliac Artery. By W. B. McKinlay, M.D.

*** Reprinted from the February number of the *Edinburgh Medical Journal*. The operation was performed on account of secondary hæmorrhage from a stump. The ligature had been previously applied, first upon the femoral and then on the external iliac artery, hæmorrhage succeeding each operation.

Report of the Council of Hygiene and Public Health of the Citizen Association of New York upon the Sanitary Condition of the City. New York. 1865.

*** We shall give an account of this work as soon as possible.

On the Physical and Chemical Constitution of the Fixed Stars and Nebulæ. By Wm. Huggins, Esq., F.R.A.S.

*** This is an abstract of an account of the results of spectrum analysis as applied to these bodies, which was given recently by the author at the Royal Institution.

The Study of Science, and its Undue Neglect as a Branch of Education. By Geo. Padley, L.R.C.P.

*** The author condemns the too exclusive devotion of a boyhood to classical studies, and advocates the study of the natural sciences as calculated to train usefully the faculties of perception, thought, reason, and memory.

Edinburgh Medical Journal. June, 1865. Edinburgh: Oliver and Boyd.

*** Contains an interesting paper by Dr. Crichton Brown on the Action of Bromide of Potassium upon the Nervous System, and one by Mr. Kerr on a combination of narcotics, which he designates "A New Remedy for Dysentery."

The Phenomena of Radiation as Exemplifying the Wisdom and Beneficence of God. By George Warington, F.C.S. London: W. Skeffington. 1865.

*** The Actonian prize essay. Will be noticed shortly.

Report of the Lunatic Asylum for the North and East Ridings of Yorkshire.

*** The appendix is particularly interesting, consisting of a long enumeration of mechanical works executed by the male attendants and patients in the Asylum, and articles made both by male and female patients during the year. This is an asylum in which meat is supplied daily at dinner, and in which the diet generally is liberal.

Observations on the Treatment of Collis's Fracture with Gordon's Splint. By Geo. Porter, M.D.

*** A reprint from the May number of the *Dublin Quarterly Journal of Medical Science*.

The Physician and his Work. A Sermon. By S. A. Pears, D.D. Derby: Bemrose and Sons. 1864.

*** We have been much gratified by the perusal of this pamphlet.

Report of the Asylum for Idiots.

*** We are glad to notice the progressive prosperity of this admirable institution.

The First Annual Report of the Perth District Asylum. Monthly. March, 1865.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 24, 1865.

BIRTHS.

Births of Boys, 1022; Girls, 927; Total, 1949
Average of 10 corresponding weeks, 1855-64, 1754·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	705	654	1359
Average of the ten years 1855-64	559·0	511·4	1070·4
Average corrected to increased population..	..	..	1177
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	3	7	7	..	7	8	30
North ..	618,210	6	2	14	3	17	14	57
Central ..	378,058	2	2	3	..	8	10	34
East ..	571,158	..	1	4	..	11	9	28
South ..	773,175	3	13	14	2	13	10	38
Total ..	2,803,989	14	25	42	5	56	51	187

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·121 in.
Mean temperature	61·1
Highest point of thermometer	87·6
Lowest point of thermometer	42·4
Mean dew-point temperature	48·4
General direction of wind	Variable.
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK.

July 1. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

3. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Professor Hirsch, of Berlin, "On the Outbreak of Cerebro-spinal Meningitis in the District of Dantzic."

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

4. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

ETHNOLOGICAL SOCIETY OF LONDON, 8 p.m. Dr. Donovan, "Craniology and Phrenology in Relation to Ethnology." Edward B. Tylor, "Photographs from Central America." Professor Bell, "On Visible Speech."

5. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

7. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LECTURES ON CHEMICAL AND MECHANICAL DISEASES AND THEIR RELATIONSHIP.

By H. BENCE JONES, A.M., M.D., F.R.S.

Lecture VI.

DISEASES OF SUBOXIDATION.—ON XANTHIN AND CYSTIN.

In the previous lectures I have dwelt on a few of the different diseases arising from different degrees of sub-oxidation of sugar and albumen. If you call to mind how out of the body very many different substances may be produced by different degrees and kinds of sub- and peroxidation of organic substances, you will see that in the body it is probable that innumerable different substances may also be produced, depending on slight variations in the circumstances under which these oxidations take place.

In the oxidation of coal, for example, different series of substances are produced by different variations of the circumstances under which the oxidation proceeds. Professor Hofmann, in his Report on the Exhibition of 1862, mentions fifty-one different substances produced by destructive distillation of coal alone, and many more products have been obtained since that time.

There can be no doubt but that in different parts of the body different series of substances are formed by different degrees of oxidation of the albuminous substances of the body. For example, the very small amount of oxygen that reaches the liver influences the formation of a series of totally different substances from those that are produced in the kidneys rich with oxygen. The sulphocyanogen that is formed in the salivary glands indicates a different oxidation from that which occurs in the lachrymal glands. The substances produced by oxidation in the spleen from the different mechanical structure of the organ will be totally different from those produced in the supra-renal capsules. The oxidation that takes place in the muscles depends on the amount of oxygen and the composition of the muscle, and so will give rise to substances that will differ from those produced in the nerves, and so of each portion of the body.

If our knowledge permitted, we might draw up different series of substances produced in each part of the body, and each series might begin with the least oxidised and end with the most oxidised that could be produced under the different circumstances in which the oxidations proceed; and each series would vary according to the substance oxidised, the supply of oxygen, and the more or less perfect and continued contact of these with one another.

Our knowledge is so little advanced that the place or places where the different substances are produced are very inexactly determined. That some, if not all, the uric acid is produced out of the kidney, and that in the kidney it is oxidised into urea and oxalic acid, or urea and carbonic acid, cannot be doubted. It is also most probable that some substance, as, for example, leucin or creatin, or both, is the antecedent of the uric acid produced in the textures, and in the kidney. Whatever the substance may be from which the uric acid is formed, and wherever the oxidation may occur, chemistry can prove that in some rare occasions a slight arrest of oxidation takes place partly or wholly, and instead of uric acid xanthin is formed; and this substance has been detected because it forms one kind of calculus—in other words, because it is capable of producing a mechanical disease.

The following table shows the relationship of xanthin to uric acid, and also shows the less oxidised product immediately preceding the formation of xanthin:—

Sarcin or hypoxanthin, $C_{10}H_4N_4O_2$, occurs in the liver, spleen, and probably in the kidneys.

Xanthin, $C_{10}H_4N_4O_4$, occurs in the liver, spleen, and sometimes in the urine.

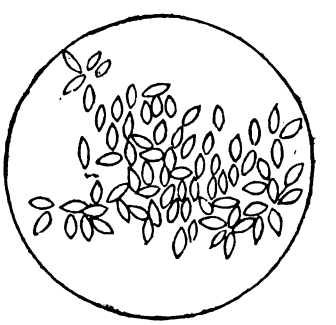
Uric acid, $C_{10}H_4N_4O_6$, occurs in the muscles, glands, and always in the urine.

In all the proportion of nitrogen to carbon is the same—that is, one to two and a-half; whilst the proportion of nitrogen to carbon in urea is as one nitrogen to one carbon, showing that in the formation of urea the removal of carbon, probably as carbonic acid, must have occurred. The pathological condition that obtains wherever and whenever xanthin is produced is similar to that which leads to the diseases I have previously brought before you—namely, suboxidation.

Xanthin arises from imperfect or insufficient oxidation of the products of albuminous matter. As in diabetes, so here, the cause of this imperfect oxidation is still unknown; but the direction in which the cause must be looked for, and the means of prevention, if the chemical error were a frequent one, is very clear. It is probable that in young persons varying conditions are much more likely to occur than in the middle-aged, and hence youth is the time in which the greatest chemical variations in the working of the body are most likely to be found. Thus it is in youth that xanthin, and probably also cystin, will most frequently be formed. In middle or old age the same variations of oxidation may sometimes occur, for cystin has been found in the urine of old people, although hitherto xanthin has not yet been met with except in the young.

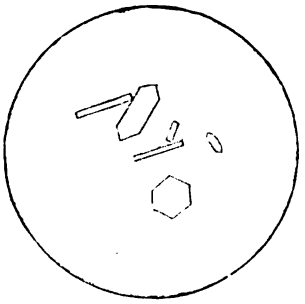
On the Means of Recognising the Xanthic Diathesis.

The following case was published in the *Journal of the Chemical Society* in 1862:—"In July, 1861, I was consulted regarding a schoolboy, nine years and a half of age. The following history was given to me. He had good health until seven years old, when he was seized one night with violent sickness and pain in the stomach, which continued incessantly for three days. Neither mustard poultices, blisters, nor leeches relieved the pain or stopped the sickness. The third day his water gradually became of the colour of blood; it then stopped altogether, and nothing was passed for four days; then delirium and convulsions came on, and these lasted for twenty-four hours, when he was relieved by a most violent perspiration. No stone was seen to pass. In a few days he was perfectly well, and continued so for nearly three years, when in June, 1861, he caught a slight cold, and was delirious one night. A Medical man saw him, and found some albumen in the urine, which then was generally thick, and the quantity of deposit was increased by excitement or temper. Cold produced the same effect in a less degree. He never complained of pain in the back, and was able to take more exercise than other boys of his age without fatigue. He always had a good appetite, and was allowed to eat everything. On examination, I found a very small quantity of albumen in the water made at night, and none in that made in the morning. There were no blood-cells, no tubular casts, and the specific gravity was high. I examined many specimens without finding anything remarkable. About the end of July, when he was leaving London, a small vial of urine was sent to me, which was quite thick and deep-coloured. A drop was placed under the microscope, and a crystalline deposit was found resembling one form of uric acid. From the form I considered the deposit



was uric acid. On examining the unfiltered urine for albumen by heat, I was surprised to see the crystalline deposit entirely dissolve. A fresh portion of sediment showed the same crystalline appearance and the same solubility by heat. This was so utterly unlike any uric acid deposit, that a closer examination of the sediment was made, but so little substance was left that no satisfactory conclusion could be arrived at, except that it was not uric acid. A day or two afterwards another specimen was brought to me containing the same crystalline deposit soluble by heat. The sediment formed about an eighth of the bulk of the fluid. It was collected on a filter, washed with alcohol, and it gave the following reactions:—It dissolved in water and in hydrochloric acid; when treated with nitric acid, it dissolved without effervescence, and when evaporated to dryness, it left a yellow

residue. When the solution in hydrochloric acid was evaporated to dryness it left beautiful minute crystals of this form :—



These crystals were soluble in water. The sediment was easily dissolved by alkalies. The watery solution of the sediment had a feebly acid reaction, and, when evaporated to dryness, left an amorphous residue, which was again easily dissolved in water. These reactions agree only with the latest and best observations of the reactions of xanthin. Hoping to get more of the substance, I wrote to the country for the sediment of the urine. It was collected on many occasions, but I could only find urates and uric acid, and none of the crystalline deposit soluble by heat. In January, 1862, the same boy was brought to me, with two specimens of urine and four different dried deposits; and at different times for three weeks I examined the urine. It was generally of high specific gravity —1026, 1026, 1027, 1030; once as low as 1013. It sometimes contained a trace of albumen. Usually it contained urates, and sometimes uric acid and oxalate of lime, but never the crystalline deposit soluble by heat. The dried deposits consisted of urates and uric acid, and one of them consisted of phosphate of lime, with a little phosphate of ammonia and magnesia, without a trace of uric acid or xanthin."

In the summer of 1863 I could find no albumen in this boy's urine, and his health was very good. In the summer of 1864 he appeared quite well when he was brought to me. No xanthin could be found on either occasion.

The stone which Langenbeck removed at Göttingen was from a boy also. The most minute portion of this stone which I have examined did not allow me to determine the form of the crystals so as to identify them with those I found in my patient.

Although in this case albumen was present in the urine, yet I consider that it probably bore no relationship to the first crystalline deposit which was found. As in the production of uric acid in albuminous urine, there are two different causes in action, producing two different effects, which may have no connection whatever, so I consider in this case the albuminous urine depended on some altered condition of the kidney, possibly on a previous renal attack, whilst the xanthic acid crystals depended on a very rare degree of suboxidation. The slightest degree more of oxidation would have given uric acid. The least degree less would have given hypoxanthin. In the varying changes of oxidation in the body it is most unlikely that that degree should be long kept which produces xanthin; and on this, its rarity and probably its short continuance as a diathesis depend.

Other gravel occurring at the same time and afterwards, and probably causing renal calculus two years previously, point also to a deficiency in the oxidising actions in the body. The following year, in this boy, urates, uric acid, and oxalate of lime were found appearing separately or simultaneously for three weeks, during which I had very frequent opportunities of examining the urine. If these substances are considered to be products of different degrees of suboxidation, when the oxidation was least, the uric acid formed; when the oxidation was somewhat more, uric acid and oxalate of lime appeared; when there was still more oxidation, oxalate of lime alone was produced; whilst in some very rare degree of oxidation between the degree that caused uric acid and that which causes oxalic acid, the peculiar substance xanthin was formed, and lasted only until a different degree of oxidation was set up.

The treatment, then, of xanthin is identical with the treatment of uric acid or of oxalic acid. It consists in promoting oxidation—first, by diet; secondly, by exercise and clothing; and, thirdly, by medicine. I need only recapitulate here little fuel in the food; much oxygen from cool, fresh air; exercise and warm clothing to promote circulation; and, lastly, alkalies and iron. These will probably quickly stop the formation of xanthin, if it ever comes before you. Very possibly from the appearance of the crystals it has often come and gone, and been throughout regarded as uric acid.

On Diseases of Suboxidation.

On Cystin.—The production of cystin in the body must depend on a very much lower as well as a very different process of oxidation of albumen from that which produces uric acid and its derivatives. The composition of cystin is $C_6H_6HO_4S_2$. The proportion of nitrogen to carbon is one to six, whilst in uric acid it is one to two and a half, and in urea it is one to one. Six, one and a half, and one may be taken as the indices of the amount of suboxidation in cystin, uric acid, and urea.

Even in the secretions of the body in health traces exist of the want of oxidation of complex sulphur bodies. Thus, in the bile and in the saliva sulphur compounds exist. Taurin from the liver has the composition $C_4H_7HO_6S_2$, and sulphocyanic acid from the salivary glands contains C_2HS. It is in the highest degree probable that these substances are not built up in the body, but are the products of the disintegration of the albumen.

In consequence of peculiar and as yet unknown conditions, the sulphur of the albumen is only partly oxidised, and one portion is left combined with the other elements, giving rise to cystin, or taurin, or sulphocyanic acid.

Hitherto I have tried in vain to discover the relationship of cystin to uric acid and urea by means of the products of its decomposition.

I was given by Dr. Percy a considerable piece of cystin, but it proved insufficient to admit of a determination of that relationship which chemistry will one day make clear. Some of the results of my experiments may be mentioned here.

Cystin when boiled with hydrochloric acid is not decomposed. Treated with oxide of silver, it is decomposed very slowly. Sulphide of silver, sulphate of ammonia, and an uncrystallisable yellow substance, very soluble in water, is obtained.

When nitrous acid is passed through water which contains cystin it is rapidly dissolved with effervescence. The acid solution contains sulphuric acid; when this is neutralised with carbonate of baryta and filtered, the filtrate gave, with nitrate of silver, chloride of mercury, and acetate of lead, a white amorphous precipitate insoluble in water. When the silver precipitate was well washed with water, and decomposed by sulphuretted hydrogen, and filtered, a solution was obtained which left a residue of an oily consistence, and acid reaction when evaporated in a water-bath. When this was boiled with carbonate of zinc, filtered, and evaporated, a gum-like residue was obtained, very soluble in water, with a feebly acid reaction.

Among these products of the decomposition of cystin none of the ordinary substances occurring in the urine except sulphuric acid were found. Perhaps this was from the want of sufficient material to operate upon, but more likely because cystin may arise from and pass down through a totally different series of oxidations from uric acid.

Since the paper by Dr. Ronalds on unoxidised sulphur and phosphorus in the urine (see *Phil. Trans.*, 1846, p. 461), it has been thought that possibly some substance related to cystin, if not cystin itself, might be found to be present always in the urine. In regard to this sulphur substance, also, I have only obtained negative results in endeavouring to insulate this unoxidised sulphur body in the urine. It certainly is not cystin; it escapes precipitation by acetate of lead, basic acetate of lead and ammonia; even in this last precipitate, from one litre of urine only very little unoxidised sulphur could be found.

If the clear fluid from the ammonia precipitate has the lead separated by hydrochloric acid, and is then evaporated and burnt with nitre, chloride of barium gives a considerable precipitate. If, instead of being burnt, the fluid is evaporated, and then mixed with so much oxalic acid that all the lead and all the urea are separated, and if the excess of oxalic acid is removed by lime water, and the liquid then filtered and evaporated and extracted with ether, sulphuric acid is obtained. If after this a syrupy solution of chloride of zinc is added and left to stand a short time, then a crystalline precipitate of creatin in chloride of zinc is formed, but no sulphur body is thus obtained.

Another method was followed in the endeavour to isolate the unoxidised sulphur body. The urine was precipitated by the lead salts and ammonia, the urea was separated by oxalic acid, and the hippuric acid by ether. On evaporation a brown coloured fluid like a syrup was obtained. Lime water was

added until the reaction was alkaline. The fluid was then filtered from the oxalate of lime, and evaporated as far as possible. After standing four days crystals appeared, and after standing some days longer all the fluid became solid. These crystals, however, contained no sulphur; very probably they were crystals of inosit; and thus again the sulphur body for the present escaped from me.

The amount present is indeed very small, for seven ounces nearly of urine contained only 0·5 grains of unoxidised sulphur. (200 cc. of urine contained sulphur 0.5 grains; 150 cc. contained sulphur 0.38 grains.)

When cystin is present in the urine, the unoxidised sulphur body of healthy urine is certainly not increased; of this the following case may be taken as an example. It also proves that the cystin diathesis may continue for many years, and that it does not imply a very deteriorated state of health, for the patient follows his ordinary occupations, and hardly ever takes medical advice.

A very active lawyer, aged 36, said he had been subject to colds and coughs all his life. He had lived freely, always drinking beer, with wine, spirits, and cider. The bowels act well. General look is pale; pulse 84; tongue whitish; has lost little if any weight; takes but little vegetables, but much bread; urine generally pale and plentiful, frequently containing cystin calculi the size of a pin's head. Some time before he consulted me he passed a larger stone, the size of a large pea; two months after this he passed another, and at intervals of three weeks others. A fortnight before I saw him at least twenty of different sizes, from a small pea to a pin's head, were passed together.

I examined the water passed after breakfast; it was alkaline, from fixed alkali, specific gravity 1022, and had an irridescent pellicle of phosphate of lime on standing. It contained no crystals of cystin. Hydrochloric acid and muriated tincture of iron were taken with advantage; but the patient living in the country I had no opportunity of seeing him.

Some of this patient's urine when loaded with cystin was examined to see, firstly, whether the unoxidised sulphur substance that occurs in the fluid that filters from the ammonia precipitate was in greater or less amount than in ordinary healthy urine; secondly, whether any excess of sugar above the healthy amount would be found in it; thirdly, whether Schunk's blue colouring matter was present.

1st. The fluid filtered from the ammonia precipitate contained only a little unoxidised sulphur.

2nd. The ammonia precipitate, decomposed by sulphuretted hydrogen, contained so much sugar that it could be detected with great facility even in 500 cc. of urine.

3rd. The ammonia precipitate from 400 cc. was decomposed by strong hydrochloric acid, and none of Schunk's indigo colouring matter could be detected after twenty-four hours.

(To be continued.)

ORIGINAL COMMUNICATIONS.

PRACTICAL OBSERVATIONS ON ACUPRESSURE—ILLUSTRATED BY CASES.

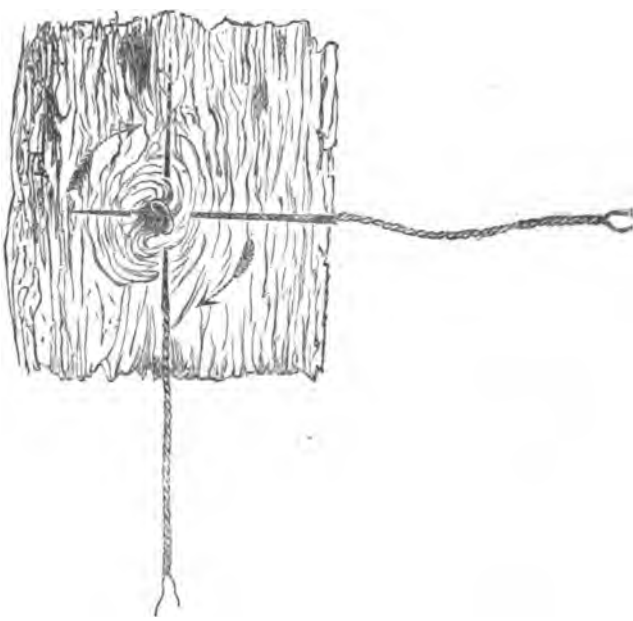
By WILLIAM PIRRIE, M.C., M.D., F.R.S.E.,
Professor of Surgery in the University of Aberdeen; Surgeon to the Royal Infirmary of Aberdeen.

(Continued from page 7.)

The sixth method, or that by transfixion and twist, consists, as hitherto tried, in transfixing the tube of the artery, causing the point of the needle to emerge on the surface of the wound, giving a quarter rotation to the needle and fixing its point in the tissues beyond the vessel, as shown in the accompanying illustration (Fig. 14). I have no experience of this method; and as others are more secure, I would not feel inclined to practise it. I have heard of a case in another part of Scotland where this method was tried in amputation of the thigh, and hæmorrhage occurred.

The seventh method consists in passing a long needle through the cutaneous surface, pretty deep into the soft parts, at some distance from the vessel to be acupressed, making it emerge near the vessel, bridging over and compressing the artery, and dipping the needle into the soft parts on the opposite side of the vessel, and bringing out the point of the needle a second time through the common integument. In this method the soft parts are twice transfixed, and the artery is compressed between the bone and the middle portion of the needle without the integument, between the first point of exit and the second point of entrance. Three portions of the needle are left without the integument—namely, its central portion and its extremities. Case 12 in this communication furnishes an example of the employment of this method.

Fig. 14.



Cases of Acupressure.

In the hope that other Surgeons may be induced to favour the Profession with the benefit of their experience of acupressure, I now proceed to give a brief account of thirteen cases in which I have employed that method of checking hæmorrhage.

Case 1.—*Amputation of Thigh—Acupressure by the Third Method.*—A boy, 6 years of age, had amputation of the thigh performed, for disease of the knee-joint, on March 16, 1864. The hæmorrhage was speedily checked by Professor Simpson's third method of acupressure, by means of common sewing needles and loops of iron wire. The needles were removed in forty-eight hours, and no bleeding followed. The wound healed almost entirely by primary union, but as there were a few drops of pus, I did not consider the case a perfect example of that mode of healing. This was the first time I had ever employed acupressure, and the result produced a great impression on my mind, as it was the nearest approach to perfect primary union I had ever seen after amputation of the thigh.

Case 2.—*Amputation of Thigh—Acupressure by the Twist—A Half Rotation of the Needle.*—Amputation of the thigh was performed on June 29, 1864, upon a girl 13 years of age, for disease of the knee-joint. In this case the hæmorrhage was speedily checked by a new method, which consisted in passing a sewing needle threaded with iron wire below the artery, giving it a twist to the extent of a half rotation of the needle, and then pushing it into the tissues beyond. The needles were withdrawn in forty-eight hours, without a drop of blood following. Although the result of this case was most gratifying, still union by primary adhesion was not perfect, as a little pus was formed near the margin of the wound. The history and varieties of acupressure by the twist have been described under the head of the *fifth* method. This was the first instance in which the femoral artery had ever been secured in this way.

Case 3.—*Amputation of Thigh—Acupressure by the Twist, or Fifth Method—A Quarter Rotation of the Needle.*—A man, 51 years of age, had his thigh amputated on July 20, 1864, for disease of the knee-joint, and, at the same time, an enormous hydrocele of twenty years' standing was tapped. Acupressure by the fifth method was employed, and the hæmorrhage was completely checked. In this case a quarter rotation was only made by the needle, and the whole proceeding consisted of four movements:—First, the needle was inserted by the side of the artery; second, its point was made to emerge as represented in Fig. 10; third, a quarter rotation was give-

to it; fourth, the needle was secured by sending its point into the soft parts, as shown in Fig. 11. The needles were withdrawn in seventy-two hours, and no hæmorrhage occurred. It is probable that the needles were allowed to remain unnecessarily long; but as this was the first time I had tried the method by the twist to the extent of a quarter rotation only of the needle, and as there was no experience to guide me, I did not think it judicious to remove them in forty-eight hours. In this patient one angle of the stump refused to heal, and six weeks after the operation he died from exhaustion caused by chronic bronchitis. When admitted into Hospital he was suffering severely from extensive bed sores, which improved under treatment, but never thoroughly healed.

Case 4.—*Amputation of Thigh—Acupressure by the Fourth Method by Means of Long Pins and Loops of Iron Wire—A Quarter Rotation Given to the Pins.*—Mrs. K., 66 years of age, was sent to the Aberdeen Hospital by Dr. Forbes, of Fochabers, and admitted on January 7, 1865, with the largest and most remarkable example of epithelial cancer I have ever seen. It affected the upper half of the leg, and involved the integument on the outer part of the thigh above the knee to a considerable extent. After a candid statement was given to her of the great risk of amputation of the thigh at her period of life, and in her particular state, she earnestly begged to have the thigh removed. Amputation was performed pretty high up above the middle of the thigh on January 11, and owing to the situation of the operation and size of the thigh, the surfaces of the flaps were very large. With the exception of a case in which I performed amputation at the hip-joint, it was the largest wound I have seen in amputation of the thigh. It was a great object in this case to lose as little blood as possible, and five arteries were secured by long pins and wire loops in not more than half the time it would have been possible to do so by ligature. When the flaps were brought together, the heads of the pins and ends of the loops projected a little beyond the lips of the wound, and after the patient was put to bed, the pulsation of the femoral artery communicated an impulse to the pin by which it was secured; so that for two days the pulse could be counted by looking at the glass head of the pin. I have usually removed the needles in forty-eight hours; but in this case, while pulsation continued, I did not think it advisable to remove the pins till the third day, when the pulsation had ceased; and then, seventy-two hours after the operation, I removed the whole of the pins and loops without a single drop of blood following, and the patient said their removal was unattended with pain. Considerable suppuration took place, but notwithstanding the patient's advanced period of life, and the great size of the wound, it healed up perfectly, and she left the Hospital much gratified with her state, and pleased with the kindness she had received.

Case 5.—*Amputation of Thigh.—Acupressure by the Third Method.*—Alex. F., 14 years of age, of a highly scrofulous constitution, was sent to the Hospital to have his thigh amputated, on account of destruction of the cartilages of the knee-joint and disease of the bones. When placed on the operation table he was very feeble, and required the administration of brandy. The Physician who gave chloroform was alarmed at its depressing effect on the heart's action during one stage of the operation. The arteries were speedily secured by Professor Simpson's third method, needles and loops being used. There was little blood lost, and no hæmorrhage afterwards; but the patient sunk in thirty-six hours, vomiting and symptoms of shock continuing during that period. The femoral vessels were cut out of the stump, without disturbing the needles and loops, by our able pathologist, Dr. Beveridge; and I afterwards had an opportunity of seeing him make a very careful examination of them. The superficial femoral artery and vein were both included in the loop, and before the vessels were opened it could be distinctly seen that the artery contained a coagulation extending upwards from the needle for an inch and three-quarters, and that the vein was empty to nearly the same extent. On removing the needle and loop, and on laying open the vessels, it was found that the artery and vein were both free from any trace of inflammation, and that their coats were perfectly entire and uninjured where they had been embraced by the needle and loop. The obliterating coagulum in the artery was composed of three pieces, adherent to each other, and very slightly so to the interior of the artery.

Case 6.—*Amputation of Thigh—Acupressure by the Fourth Method, Long Pins and Wire Loops having been Used.*—Some weeks ago, Thos. G., an extremely emaciated and debilitated young man, 15 years of age, applied to me for advice on account of disease of his right knee-joint and lower third of the femur. The case presented all the symptoms, both local and general, of a well-marked example of medullary carcinoma, with the exception that there was no perceptible dilatation of the veins over the swelling—a symptom I have sometimes, though rarely, found absent in other cases. A few similar instances are recorded, in which, as here, the accuracy of the diagnosis was verified by examination of the tumour after operation. In compliance with the wishes of the patient and the members of his family, I, with the assistance of several of my apprentices, performed amputation at the lower part of the upper third of the thigh. Five arteries were secured by long pins and wire loops, according to the fourth method. The pins and loops were removed on the third day without the slightest appearance of blood, and the patient, notwithstanding his great weakness, recovered very rapidly. The wound healed with extremely little suppuration. It certainly required great faith in acupressure as a hæmastatic agent to prefer it in this case, as the loss of very little blood would have proved fatal to so feeble a patient. There were many points of great pathological interest in this case, but they are foreign to the object of this paper.

Case 7.—*Excision of Mamma—Acupressure by the First and Third Methods.*—For a large cancerous tumour in a female, 42 years of age, I removed, in the Hospital, a mamma of great size, and acupressed four bleeding arteries: one by the first method, for which it was favourably situated, and three by the third. For the first method, a long pin was used, and for the third, sewing-needles threaded with iron wire, and loops of iron wire. The hæmorrhage was completely arrested, and the wound closed by silver sutures. Six hours after the operation there was slight bleeding, on account of which the House-Surgeon opened the wound, and tied an artery which, he said, was not situated near any of those seen to bleed during the operation. The needles and pins were removed in forty-eight hours, and the ligature came away on the seventh day. Primary union took place throughout this large wound, except in the track of the ligature, where slight suppuration continued until the end of the second week after the operation.

Case 8.—*Excision of Mamma—Acupressure by the Third Method.*—On March 8, 1865, I excised the right mamma of a female, 35 years of age, and acupressed three arteries by the third method. The vessels were relieved from acupressure in forty-eight hours without the slightest appearance of blood, and the wound *healed entirely* by primary union,—a result which I had up to that time seen in two other cases of excision of the mamma, where the vessels were so small as to require no ligature.

Case 9.—*Excision of the Elbow-joint—Acupressure by the Third Method.*—Mrs. S., a delicate-looking woman, 22 years of age, on admission into Hospital suffered great pain in her right elbow-joint, and had done so for many months. The slightest motion greatly aggravated the pain, and, in consequence, she could scarcely allow the limb to be moved. Involuntary startings of the arm caused excruciating agony, and often deprived her of sleep. The soft parts were greatly swelled; several sinuses communicating with the joint discharged large quantities of unhealthy pus; there were painful ulcerations on the lateral aspects of the elbow, and the poor woman was in a very debilitated state. This was an extremely unpromising case for Conservative Surgery; yet, as soon as the patient was got into a state at all favourable for operation, I performed excision of the elbow-joint by the single perpendicular incision, as the experience of sixty-eight cases has satisfied me that, theoretically and practically, it is the best. One artery, which bled very freely, was acupressed by the third method, and an extensive general oozing from other vessels was soon checked by cold water. The wound was closed by wire sutures, and the needle and loop were withdrawn on the second day without being followed by any blood. The wound healed in three weeks, and the soft parts are gradually getting into a satisfactory state, while the general health is rapidly improving.

Case 10.—*Excision of Testicle—Acupressure by the First Method—No part of a Needle in the Wound.*—On the 6th of March, 1865, I removed a young man's left testicle for medullary cancer, and at once checked the hæmorrhage by seizing the integument containing the cord between the thumb and forefinger of the left hand, and with the other hand passing a pin by a single straight movement immediately behind the cord. No part of the pin was within the wound, as the integument was transfixed three-quarters of an inch higher up than its upper extremity. The wound was carefully closed by silver sutures; no dressings were applied; the

vessels were relieved from acupressure in twenty-four hours; no blood appeared, and healing by primary union was perfect. I cannot but consider that the entire absence of any foreign body in the wound in a great measure contributed to this favourable result.

Case 11.—*Amputation of Leg—Acupressure by the Twist, or Fifth Method—A Quarter Rotation of the Needle.*—A young man, 18 years of age, had amputation of the leg below the knee performed for disease of the ankle-joint and tibia, on the 14th of September, 1864. Acupressure by the twist was successfully employed for securing the arteries, and the needles were withdrawn in forty-eight hours without any hæmorrhage. It is no part of the method by the twist, as practised in Aberdeen, to transfix the artery; on the contrary, care is taken to avoid doing so. In this case, as in two amputations of the thigh, the needle was inserted by the side of the artery, its point made to emerge, a quarter rotation given to it, and then fixed by sending its point into the tissues beyond the vessel. Nearly a fortnight after the operation secondary hæmorrhage, caused by sloughing of the stump, took place on several occasions; but it was easily subdued by elevation and the application of cold water. The sloughing was the result of erysipelas, which disease, with small-pox, prevailed at the time, and my patient was so unfortunate as to be seized with the latter, only three weeks after his recovery from erysipelas. This occurred before the wound was healed, at the part where there had been the greatest sloughing. After recovery from small-pox, the extremity of a bit of wire under the corner of the flap was discovered; and on its being pulled, a small needle, used in compressing a muscular branch of an artery, was withdrawn. The patient was much distressed from the day of the operation by starting of the stump, and frequently called for the nurse to hold it. The impression I formed was, that the wire must have been drawn in by some spasm of the muscles before the removal of the larger needles, and this accident suggests the necessity of leaving the wires sufficiently long to render such an event impossible. The wires with which the needles were threaded—the only wires in the method by the twist—were carefully arranged before closing the wound after the operation; but unfortunately, or, perhaps, fortunately, as the case turned out, the small needle escaped my memory while the larger ones were removed. I have been told that a similar case, as far as disappearing of the wire is concerned, occurred in the experience of a Surgeon in another part of Scotland. This unfortunate patient eventually got perfectly well, and came up to Hospital about three months ago to show me how he could walk with an artificial limb. The account by Ambrose Paré of his patient who was "merry with a wooden leg," was brought to my mind by this poor fellow's great delight at being again able to walk, and having two limbs, to appearance, alike.

Case 12.—*Deep Wound of Forearm—Acupressure by the Seventh Method—Perfect Primary Union.*—John M'K., a stout farm servant, 22 years of age, while descending a high unrailed stair, fell and struck the back part of his left forearm against the point of a scythe, causing a wound six inches long, extending upwards to the head of the radius, and forwards between the bones. The scythe did not divide the whole of the muscles or any part of the integument in front. The hæmorrhage was excessive; there was no pulsation of the ulnar artery at the wrist, that of the radial was feeble, and the impression conveyed to the finger on being placed over the last-mentioned vessel was that its size was not half that of the corresponding artery in the other forearm. The hæmorrhage proceeded from the deep part of the wound in front of the forearm, and the bones rendered it impossible to dilate the wound so as to see the injured artery, which I supposed was the ulnar. The hæmorrhage was perfectly suppressed by passing a strong needle, four inches long, into the soft parts in the middle of the arm, making it to emerge on the outer side of the humeral artery, bridging it over the artery and dipping it into the soft parts in the inner side of the arm, transfixing them, and bringing the point out very far back. This was easily done by pressing the soft parts forward with the left forefinger, while I guided the needle with my right hand. The moment the parts were allowed to recede the hæmorrhage was completely suppressed by the compression of the humeral artery between the humerus behind and the middle of the needle in front of the integument. The pressure after the parts were allowed to recede was considerable, and instantly accomplished all that was desired. The pulsation of the radial artery, previously feeble, ceased the moment the soft parts were allowed to retract, but it soon again became perceptible. The wound was washed out and kept exposed to the air for half an hour, until it became quite glazed, when its edges were brought together by four silver sutures. No dressing of any kind was applied, and the needle was withdrawn in twenty-four hours. The silver sutures were removed on the third day, when the wound was perfectly healed, and furnished an admirable example of primary union. I was much gratified with the result of acupressure in this case, and I do not know any other means by which this accident could have been brought to such a favourable termination with so little trouble to patient and Surgeon. In this case deligation of the bleeding artery was impossible from its depth and position, and stuffing the wound would have been most undesirable, and probably ineffectual. The acupressure used accomplished every object with perfect simplicity and safety.

Case 13.—*Excision of Mamma—Acupressure by the First and Third Methods.*—Seven days ago, in presence of my colleague Professor Macrobin, and two other friends, I excised the left mamma of a female, 47 years of age, on account of a large tumour, which weighed sixty-one ounces, and exhibited in a marked degree the common and microscopic characters of medullary cancer. The resulting wound was necessarily very large, and five arteries required to be secured. Four of them bled profusely, and were acupressed according to the first method by means of three pins, one pin having been made to compress two vessels at some distance apart. The four arteries thus secured were favourably situated for the first method, and a small vessel in the bottom of the wound, which could not be acupressed by that method, was easily compressed by the third. Many Surgeons would have checked the bleeding from the last-mentioned artery by torsion, but I have strong objections to that proceeding, and never adopt it where healing by primary union is possible. The wound was exposed to the air for about ten minutes, until it became glazed, when it was carefully closed by sutures and strips of isinglass plaster, the latter having been used to prevent the possibility of any tension near the sutures. The pins and needle were removed in forty-three hours, and the sutures in three days. Notwithstanding the great size of the wound, it promises to furnish an all but perfect example of primary union.

The above cases may be tabulated as follows, to show the condition for which acupressure was used, the method employed, and the age of the patient:—

No.	Operation.	Age.	Method.
1.	Amputation of thigh. . .	6	Third method.
2.	Do. . . .	13	Fifth, or twist, half-rotation.
3.	Do. . . .	51	,, quarter-rotation.
4.	Do. . . .	66	Fourth method.
5.	Do. . . .	14	Third method.
6.	Do. . . .	15	Fourth method.
7.	Excision of mamma . . .	42	First and third method.
8.	Do. . . .	35	Third method.
9.	Excision of elbow-joint . .	22	Third method.
10.	,, testicle . . .	21	First method.
11.	Amputation of leg . . .	28	Fifth method, quarter-rotation.
12.	Wound	22	Seventh method.
13.	Excision of mamma . . .	47	First and third method.

Appreciation of Acupressure.

Having given a brief and necessarily imperfect history of acupressure—described its chief methods, and recorded the principal cases in my own experience; I have now only to state in a very few words the appreciation I have formed of this proceeding.

The first and great point to be determined is, whether or not acupressure is a perfectly reliable method of checking Surgical hæmorrhage. That it is so, my belief is as strong as it could well be on any Surgical point; and I have a decided impression that any Surgeon who gives it a fair trial will assuredly arrive at the same conclusion.

Besides being as reliable as any hæmastatic yet employed, it appears to me to have the advantages of being the quickest, the easiest of application, and the safest means yet devised for arresting bleeding. That the vessels in a large amputation can be acupressed in a much shorter time than they can be ligatured, I am perfectly satisfied, and in cases where every drop of blood is precious, it seems to me that to do all that can be done to preserve life, as far as saving of blood has influence, it is the duty of the Surgeon in all suitable operations to give his patient the benefit of this new proceeding. But shortening the period occupied in arresting hæmorrhage is not only important for diminishing one of the early dangers of an op-

tion—namely, that from loss of blood, but also for lessening the risk of the more remote dangers from suppuration, and many distressing results of the higher grades of the inflammatory process in the stump. I have long thought we are too apt to forget that living tissues are resentful of even slight injuries, and that we are not sufficiently careful to use the sponge as seldom, and as gently as possible. Whatever shortens the period of hæmorrhage must diminish the risk from frequent touching of the parts.

That acupressure can be applied with the greatest facility and ease, any Surgeon may satisfy himself by giving it a trial. For arriving at a just appreciation of acupressure, one of the most important points to be determined is, the effect of its use on the frequency of pyæmia, which is admitted by all to hold a high place among the causes of death after great operations. It is only by the careful observation and record of a long series of cases that this question can be definitely determined. It will, however, be generally admitted that whatever promotes primary union diminishes, and that which induces suppuration increases, the tendency to pyæmia. Primary union never does or can take place throughout the whole of a wound where the arteries have been ligatured; but where they have been acupressed that desirable result is often obtained, and the risk of the occurrence of pyæmia entirely obviated. Whatever be the alterations that take place in the blood in pyæmia, and whether the morbific matters are absorbed, imbibed, or generated in the blood passing through an unhealthy inflamed tissue, there can be no doubt that, for the occurrence of pyæmia, inflammation of, or having a tendency to assume, a suppurative character, is absolutely necessary. The presence of purulent, irritating, and decomposing materials, and more or less of devitalised tissue at every point of deligation, renders it highly probable that the risk of pyæmia is much greater after ligature than after acupressure, which does not so readily give rise to these untoward local results. Acupressure requires a far briefer sojourn of the foreign body in the wound; the obliterating foreign body is safer and less irritating, because it is of a metallic and not of a textile nature; and the acupressure needle does not cause that mechanical division and strangulation of the arterial coats which is the inevitable result of the application of the ligature.

I considered it a duty to give acupressure a fair trial. I wished to form an unprejudiced judgment regarding it, and the conclusion at which I have arrived is, that it has many and great advantages over the ligature. I have therefore resolved, in all suitable cases, to give it the preference,—a resolution in the propriety of which two of my excellent Hospital colleagues, who have also employed acupressure with satisfactory results, several able Surgeons who made visits to our Hospital to see the proceeding, and the whole body of Medical students at the University most cordially concur.

I have always felt and taught that the application of the ligature by Ambrose Paré to arrest hæmorrhage in amputations and other wounds is the greatest single improvement in the history of Surgery; that it was the greatest of the many benefits that truly great and good man was the instrument of conferring on his fellow-men, and that he might well say,—"For the good of mankind, and for the improvement and honour of Surgery, I was inspired by God with that good thought." Ambrose Paré earnestly implored Surgeons to "bid eternally adieu to all hot irons and cauteries used in arresting hæmorrhage" in amputations and other wounds,—an advice which the operators of those dark and cruel times of Surgery were careful not to follow, but persecuted him exceedingly on account of his beautiful and simple proposal of using nothing but deligation in amputation wounds. In these later and milder times of Surgery, we cannot bid adieu to the ligature, because there are some conditions in which acupressure cannot be used, as there are others in which it is impossible to employ the ligature; but, while many great operations have such a high rate of mortality in the practice of *all* good Surgeons in *all* countries, it seems a duty not "to rest and be thankful," but to receive, and gratefully to adopt, acupressure, in the hope that some of the sources of danger may be modified or entirely removed.

Royal Institution of Great Britain. — General monthly meeting, Monday, July 3, 1865; Sir Henry Holland, Bart, M.D., D.C.L., F.R.S., President, in the chair. Samuel Spalding, Esq., was elected a member of the Royal Institution. The managers reported that, in pursuance of the deed of endowment, they had appointed Thomas Henry Huxley Esq., F.R.S., to be Fullerian Professor of Physiology.

A CASE OF POISONING BY ATROPINE.—RECOVERY.

By HARRY LEACH, M.R.C.S.

The following notes may be acceptable to your readers, as cases of poisoning by this drug are, happily, rare, and its effects, when taken in injurious doses, but little known.

On the evening of the 3rd of June, at 10 o'clock, I was called to the bedside of a patient, having been told that he had swallowed the contents of a draught phial, marked "Atropine. Poison.", and which, upon subsequent inquiry, must have contained about one grain of the sulphate of atropine in solution. He had been under my care for some time, suffering from chronic rheumatism, the long duration of which appeared to have affected his spirits considerably. The draught must have been taken at least an hour before the discovery was made, and on examination the following symptoms existed:—Pupils enormously dilated, so that the irides were hardly visible, eyes moving restlessly from side to side, very refractory when any attempt was made to examine them closely; refusing obstinately to swallow anything, or to answer questions in any other way than by a grunt; pulse very quick, and at this time of good volume. He was immediately removed from bed, and with great difficulty a pint of warm water was pumped into the stomach, and almost immediately expelled, little altered in colour or general appearance. At this time his actions were those of a man profoundly intoxicated. Several energetic attempts were made to induce him to swallow strong coffee mixed with a small proportion of whiskey, which only partially succeeded. An hour had passed, and his hands were now cold, with a very weak pulse, and continual dragging of the legs when assisted, or rather held up, in walking. During the next four hours he was kept nearly constantly on the move by relays of men, and a tolerably strong galvanic current was passed along the nape of the neck about four times in the hour, which latter operation roused and irritated him in a very great degree. At 3 a.m. he took a small draught of whiskey and water spontaneously, began to quarrel incoherently with his supporters, to laugh in an idiotic manner, and when well roused by additional pushes would walk very well. The pulse improved greatly between 4 and 5 a.m., and at the latter hour he devoured ravenously a large slice of dry bread. At 6 o'clock he was undressed, and sent to bed in the following condition: Thoroughly wakeful, incoherent in observations, great helplessness, amounting to partial paralysis, of arms and legs, complete unconsciousness of all preceding events, and no change as to pupils. He continued wakeful and partially delirious all day, but took fluid food well, passed very little urine, with slight action of the bowels. During the succeeding night he was morbidly sensitive to sounds and objects, with symptoms akin to the early stage of meningitis, but was perfectly rational next morning with a pulse at 108, furred tongue, and dry, hot skin. During the next four days catheterism was required several times, partial paralysis of the bladder being evidently the cause of retention, and a week elapsed before the pupils regained their normal condition. A fortnight has now passed, and the patient is tolerably well, but much weaker than before.

This case affords an illustration, by way of contrast, of the difference between poisoning by opium and by belladonna:—(1.) The absence of that profound coma so constant as an effect of opium. (2.) The excessive irritability and obstinacy of the patient, who was easily aroused, and commenced immediate resistance to all remedial arrangements. (3.) The apparently idiotic and drunken state in which the patient remained for some time after. (4.) The great want of power manifested for a still longer period.

The treatment indicated appears to be that in cases of poisoning by opium. There is little doubt that the poison was altogether absorbed before the stomach-pump was used, as nothing in the way of food had been taken since 5 p.m. in the same afternoon. It is as clearly indicated that the system requires as much nourishing and stimulant support as possible, for I cannot but conclude, from observation of this case, that the ulterior results produced by an overdose of belladonna are far more exhausting than those by opium poisoning.

Greenwich, July, 1865

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

BIRMINGHAM GENERAL HOSPITAL.

SCIRRHOUS STRICTURE OF THE TWO ORIFICES OF THE STOMACH AND OF THE RECTUM SIMULTANEOUSLY—AMUSSAT'S OPERATION.

(Under the care of Dr. RUSSELL.)

THE following case has considerable interest as presenting scirrhous cancer in an unusual form, implicating at once the pyloric and cardiac orifices of the stomach and also the rectum. With this affection of particular portions of the alimentary canal is united a remarkably general production of the same morbid tissue in the peritoneal folds and in the lymphatic glands; and it will be further observed that the diseased portions of the stomach and of the rectum were connected to one another by a complete chain of cancerous formation, formed principally by the lymphatic glands. The question will present itself, whether the disease in the two extremes of the alimentary canal was simultaneous in its development, or whether the one was secondary upon the other—that in the rectum upon the disease of the stomach? The inquiry, however, would seem to be almost one of words only in the face of so powerful a disposition to the formation of cancerous tissue as is evidenced by the great extent of its development in the present case. It will be observed that the morbid changes in each part affected exactly corresponded in the advance they had made. However, the chain of infiltrated glands between the pylorus and the cardiac orifice, conjoined with the much greater liability of the former orifice to cancerous disease, renders it not improbable that, so far as the stomach is concerned, the cancer at the cardiac orifice was secondary to that in the pylorus.

The extreme exhaustion of the patient and our not in the least suspecting that the stomach was implicated prevented our obtaining a satisfactory history; nevertheless, from the short account obtained, we can perceive some symptoms which did not receive a complete explanation from disease not in an advanced stage, limited entirely to the rectum.

G. M., aged 42. His health has been failing about six months; he has been emaciating for four months. For the last three months he has been in the habit of ejecting about half a pint of clear water from his stomach two hours after his breakfast and dinner. At the same time he began to suffer from vomiting after meals, throwing up merely the food; and during the last two or three weeks hardly any food has remained upon his stomach.

He first became constipated three months ago, and during the same time has had great pain over the whole abdominal region. During ten days a considerable discharge of mucus, free from blood, has taken place from his rectum. He has twice had obstruction of the bowels during the past nine weeks, and now has not passed fæcal matter for eight or nine days. There is no history of cancerous disease connected with his family.

At his admission the symptoms of obstruction were very urgent, and the patient was extremely exhausted. Immediately within the anus, the finger encountered an obstruction, as though caused by a firm tumour lying in front of the rectum, and pressing the bowel against the sacrum. Admission was obtained for a bougie behind the constricting tumour, but no means succeeded in obtaining an evacuation. The operation of opening the descending colon was therefore performed by my colleague, Mr. Pemberton. A tolerable discharge of fæcal matter followed the operation; but the patient died in the course of the ensuing day.

Sectio Cadaveris.—The abdomen contained a considerable quantity of fluid of a deep bilious colour, in which floated some flocculi of lymph; but there was no evidence of local inflammation. The intestines were nearly empty—a circumstance fully explained by the strictured condition of the gastric orifices as well as by the preceding vomiting. The stomach was contracted to fully one-half its normal capacity, and collapsed very imperfectly when laid on the table; its walls were universally hypertrophied to a very considerable extent, but the three coats were quite distinct. The mucous membrane was entire in all parts, though very coarse and granular, and thrown into large firm permanent folds by thickening of the submucous cellular tissue. The two orifices presented a firm scirrhous stricture, in each case, however, leaving a fair passage. At the pyloric valve the wall was fully half an inch in thickness, and thence gradually diminished, until, at a distance of three inches, it was reduced to the thickness of the remaining portion of the organ. At the cardiac orifice the thickening was somewhat greater, but diminished more rapidly. The disease extended to a short distance up the œsophagus on the exterior of that tube, but in the pylorus ceased abruptly at the valve. The duodenum and the small intestines were healthy. At each orifice the wall of the organ presented the ordinary characters of scirrhus, implicating all the coats. The terminal inch of the rectum was quite healthy, and formed a capacious loose pouch, terminated abruptly above by a firm, prominent ridge projecting into the bowel. This ridge was occasioned by cancerous thickening of the wall of the rectum. In front the rectum was fully half an inch thick for a height of two inches. This portion, by projecting into the gut, had suggested the idea of a tumour connected with the rectum. As the disease spread out on each side, the wall became much thinner; but the morbid change occupied a larger portion of the bowel, ascending to the height of four inches. The thickening ended abruptly in all parts, leaving the remainder of the bowel, together with the entire mucous membrane, healthy. The surrounding cellular tissue was very dense, and infiltrated with cancerous matter. These three strictures were perfectly alike in all their characters. None of them presented any evidence of softening or of ulceration. The gastro-hepatic omentum and gastro-splenic omentum were greatly thickened and contracted; the former contained many infiltrated and enlarged glands. A particularly firm mass, composed of infiltrated omentum and glands, ran between the two orifices of the stomach. The small and large omenta were much corrugated, and were filled with granular fat, densely infiltrated throughout, as was proved by the microscope, with cancer cells; cancerous matter also occupied the root of the mesentery, but had advanced only for a short distance along that fold. The mesenteric glands were healthy. A chain of enlarged infiltrated glands ran from the stomach along the vertebral column into the pelvis. The peritoneal fold attached to the sigmoid flexure of the colon and the meso-rectum contained numerous infiltrated glands, and a hard cancerous ridge ran along the peritoneum at this part at its insertion into the bowel quite down to the strictured portion of the rectum. Mr. Pemberton discovered the presence of this ridge in the course of the operation. All the other organs of the body were quite healthy; the pancreas and right kidney, however, were forgotten in the examination. The cancerous tissue in every part presented the same microscopic appearance, varied only by the nature of the different tissues. The cancer cells were very abundant; they were mostly spherical, some ovoid or angular; they varied in diameter from $\frac{1}{70}$ inch downwards. With the cells were minute oil globules and molecular matter in varying amount.

THE LONDON HOSPITAL.

DEATH FROM RUPTURE OF THE SPLEEN IN A CASE IN WHICH THERE WAS ALSO SEVERE INJURY TO THE HEAD.

(Undor the care of Mr. HUTCHINSON.)

THE following case well shows the importance of making an examination of the viscera of the trunk before giving an opinion as to the cause of death in cases of injuries of the head. Had it not been done, the case might easily have been supposed to be an example of fatal consequences from a comparatively slight cerebral injury.

A man, aged 39, was brought into the London Hospital on Wednesday evening, February 8, 1865, at about ten o'clock. He was said to have fallen a height of about thirty feet, striking his head. He was stunned, and was only partially sensible. There was a large scalp laceration on the left side of the forehead, and a linear fracture without displacement was seen in the exposed bone. The pericranium was detached over an extent as large as a crown piece. The eyelids and face were contused; there had been a little bleeding from the nose (a few drops only), and none from either ear. Mr. Hutchinson did not see him until the following day.

Thursday, 3 p.m.—At the time of the visit he was still in

heavy, half-conscious condition. He struggled much when examined, and expostulated in an indistinct manner. It was ascertained that he had no paralysis either of face or limbs. He sat up on the edge of the bed, and tried to stand, but he had not strength to do so. His face was dusky, and his respiration hurried. Pulse quick, and rather feeble. When he was quiet in bed, there was some gurgling in the throat. On account of the embarrassment of respiration, Mr. Hutchinson expressed a very unfavourable opinion of his condition.

During the following night his breathing became more and more difficult, and he died about four o'clock on Friday, forty-two hours after his admission.

At the post-mortem it was found that the fracture extended from the supra-orbital foramen upwards, over the frontal eminence, nearly to the sagittal suture, and that it crossed the anterior part of the base of the skull obliquely inwards, passing through the orbital plate of the frontal bone, to the side of the crista galli. The ethmoid bone itself was loosened, so that by pressing on the crista galli, it could be made to move; and on the right side a fissure passed outwards to the optic foramen. No fracture could be found at any other part of the base of the skull. Between the dura mater and the bone at the seat of injury, there was a patch of extravasated blood as large as a crown-piece, but quite thin. The dura mater was not injured, but it was detached from the bone at this part. On removing the dura mater the left anterior lobe of the brain showed a slight indentation, as if it had been squeezed, but it did not appear to be contused on its surface. On section, however, it was seen to be dotted by ecchymoses; these involved both the cortical and medullary structures, and extended inwards in the latter to the depth of an inch from the surface. The pia mater was much congested and thickened, and in many parts its tissue contained extravasated blood, This was especially the case in the upper and posterior parts. The arachnoid was milky, but there was no lymph on the surface, nor any effusion of blood. A single spot of extravated blood about the size of two pins' heads was found in the middle of the corpus callosum. A similar extravasation, but somewhat larger, was seen in the centre of the medullary portion of the right anterior lobe. Effects of *coutre-coup*.—The outer surface of the right middle and posterior lobes showed several patches of ecchymosis, and at one part, at the lower edge of the posterior lobe, at a position exactly opposite to the fracture, the cortical substance was much softened by bruising. Nothing abnormal was found at the base of the brain. The cerebellum, medulla, etc., were carefully examined, and nothing abnormal was found. The heart was contracted; its left cavities empty, its right contained fibrinous coagula. Both lungs were greatly congested, especially in their posterior lobes. In the abdomen there was a quantity of fluid blood, amounting probably to not less than a pint. The meshes of the great omentum contained fluid blood. The hæmorrhage had proceeded from a rupture of the spleen. This organ was lacerated on its under surface extensively, and showed besides, at several different places, small lacerations to which blood-clots adhered. A considerable portion of its structure was indurated by the effusion of blood into its own substance.

Remarks.—It is probable that in this instance the rupture of the spleen was the cause of death. The cerebral lesions found were only those which occur in a large majority of cases of severe concussion. The fracture was without displacement, and there was no injury to the dura mater. No vital part of the brain had been damaged, and the surface contusions were quite superficial. During life there was no paralysis. Mr. Hutchinson remarked at the post-mortem that, seeing that the line of fracture crossed obliquely the ethmoid bone, it was worthy of note that there had been only very slight hæmorrhage from the nose. Although free bleeding from the nose was usually a prominent symptom when fractures crossed this part, yet he had in several instances known it to be wholly absent or exceedingly slight. In such cases there would, however, always be found a certain amount of ecchymosis between the bone and the mucous lining of the sinuses below. Fractures in this region were, he believed, far more common than they were usually thought to be, the orbital plates being thin and very brittle.

HEMIPLEGIA COMING ON SUDDENLY IN A YOUNG WOMAN A WEEK BEFORE CONFINEMENT.

(Under the care of Dr. FRASER.)

This patient had hemiplegia of the common kind, so far as parts paralysed are concerned. It was of the kind which we so often meet with from disease of the corpus striatum. But the circumstances under which it occurred are unusual. It is very unlikely that it could have been due to the commonest cause of paralysis—clot—as the patient was a young and healthy woman. The sudden occurrence of paralysis in such a person looks more like an accident, and was probably due to plugging of the right middle cerebral artery. The occurrence of paralysis with pregnancy and parturition is now well recognised. For authorities and information on this subject, with many cases, we may refer our readers to Dr. Churchill's work on "Diseases of Women."

Sarah M., aged 21, was admitted March 29 under the care of Dr. Fraser for hemiplegia.

Six weeks before—one week before her confinement—she suddenly lost the use of her left arm and leg. There was a little giddiness when the paralysis came on, but no actual loss of consciousness. She could speak plainly from the first.

The labour, a week later, was quite natural, and her baby was quite healthy. It was admitted with her, and she continued to suckle it. Her health had always been good, and except for the natural disturbance of parturition and suckling, she was in good general health when admitted, and kept so until her discharge. It was particularly mentioned that she had never had scarlet fever nor rheumatic fever, and a careful examination of the heart detected no bruit. In short, here was a woman, apparently in excellent health, except that the arm and leg were completely paralysed. Her mental condition also was good, and her speech especially was noted to be perfect in every way.

Dr. Fraser treated her at first with tonics, iron, and quinine, and then with iodide of potassium. For a week or two she made little progress, but then she slowly improved until her discharge towards the end of May. She is now under care as an out-patient, and is still improving. There is no rigidity of the muscles, and it is hoped that she will gradually recover the use of her limbs.

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Medical Times and Gazette.

SATURDAY, JULY 8.

THE ELECTION AT THE ROYAL COLLEGE OF SURGEONS.

In another column we give the results of this election. Mr. Quain was returned by a majority of the sort which indicates the greatest personal attachment and confidence on the part of the Surgical Profession. Mr. Turner came next, and his election may be hailed as evidence that the Surgeons of England are determined no longer to be mere hangers-on to a *London* corporation. Of Mr. Paget we can only say that his high character was sure to place him well, so soon as he determined to become a candidate. Now that the election is over, we can cordially express our hope that all misunderstandings may be promptly wiped out. It would be a sorry sign for the College if these elections excited no interest, and it would be a monstrous dull kind of election if there were any lack of candidates. Thanks are, therefore, due to all the gentlemen who presented themselves for the suffrages of the Fellows; and if we single out the name of Mr. Charles

Hawkins as deserving of especial commendation, it is that he came forward voluntarily, whilst others held back, and expressed himself anxious to break the neck of selfish Routine, and to let the interests of the Profession have equal weight in the Council with the interests of the Corporation. On the result of these elections depends much of the future of the Profession. A rapidly-growing Scientific Art like Surgery cannot thrive under the narrow rules and absurd restrictions as to education which were inspired by the selfishness of the last generation.

MEDICAL REPRESENTATION.

The session of Parliament now closing has been singularly barren of results, if we except the vote of censure and the consequent resignation of the Lord Chancellor. Cynical people might be disposed to say that its whole career had been redeemed from right down uselessness by its last act. We, however, confess that the Union Chargeability Bill was a good measure—an undoubted benefit to the poor, and, we believe, a relief to large bodies of unfairly taxed ratepayers. Our readers are quite aware of the opinion we hold as to the mode in which the claims of Medicine, both as a science and as a Profession, on public consideration have been entertained—or, we should rather say, ignored—by the present Government and the majority of its supporters. We have already disclaimed all political bias in this journal. As the exponents of Professional feeling and opinion, we support neither Whig nor Tory, neither Radical nor Conservative measures. Our sole object and intention is to obtain an adequate representation of Medical opinion—a fitting consideration for the Profession in the social scale, and a due remuneration for Professional services when required by the State. We are free to confess that the interests of Medicine have hitherto obtained greater consideration from Lord Derby's Government, when in power, than they have from the present Ministry. General Peel and Sir John Pakington have been the firm friends of the Army and Navy Medical Departments, both on the Treasury Benches and in Opposition; and we are reminded, by a letter from Mr. Griffin, which we publish elsewhere, of Mr. Sotheron Estcourt's pledge to the accomplishment of a substantial Poor-law Medical Reform had he continued at the Poor-law Board. We leave our readers to contrast the tone of these gentlemen in the discussion of Medical matters with that adopted by the Marquis of Hartington, Lord Clarence Paget, and Sir Charles Wood. We, however, utterly disclaim the advocacy of any party. We reiterate that the Medical Profession is, or ought to be, a party in itself, having its own especial representatives, and exerting its influence in every borough and county. We are glad to see that there appears a prospect that more than one Medical man will have a seat in the next Parliament, and we have already received information that pledges will be given by various non-Professional candidates to support the measures and principles which the Profession have at heart. A correspondent informs us that one of the candidates for the borough of Finsbury—Mr. Phillips—is anxious to become a representative of the Medical Profession in its public relations, and the advocate of those social and hygienic reforms the very suggestion of which has been the result of the advance of Medical science. All candidates who will pledge themselves in the same manner have our best wishes, and we hope will have the support of the Medical men of their several electoral districts. We should be glad if we could announce to our readers the names of more candidates from Professional ranks. We have heard that of Mr. Quain whispered in connection with the representation of Marylebone. We know not, however, what this gentleman's intentions may be. We can only say that, should he come forward at this or at any future election, we are certain that he would receive the support of the whole Profession. His Professional position, won by a long and successful career both as a teacher and a Practitioner, his conspicuous talents, and his high place in the social scale mark him as a man to whom the interests of the great Medical body might be safely confided.

THE INDIAN MEDICAL SERVICE AND SIR CHARLES WOOD.

Sir Charles Wood has not forgotten the defeat of last year, and he has not the good taste to conceal the lingering sense of chagrin under which he smarts. Our readers will recollect that the bill which he described on Thursday night as a measure "for the purpose of enabling a sufficient number of Assistant-Surgeons who had entered the Queen's general service to be drawn upon to form a Medical staff" for India was nothing less than an ill-concealed attempt to gain the power of appointing Medical officers to the Indian army at his own will and pleasure, to the ruin of the Indian service and the degradation of the Medical Profession at large. Our own efforts and those of our contemporaries in the Medical press, together with Mr. Pope Hennessy's determined and courageous opposition in the House of Commons, so thoroughly exposed the nature of the *ruse* that the Bill was thrown out at the last moment. The Indian Warrant of June, 1865, afforded ample evidence of Sir Charles Wood's real regard for the Indian Medical service. The universal cry of opposition and remonstrance that it raised both in this country and in India will not soon be forgotten, and even Sir Charles's stolidity was forced to give way. The present Warrant, which Sir Charles tells us is still in force, although far from giving satisfaction to all classes in the Indian Medical service, was an undoubted improvement on the former. Nevertheless, the tone of Sir Charles Wood's speech is by no means assuring. The hint that pressure had been put on the Government to induce them to do away with the double establishment is ominous. With the disposition which the present Government has shown towards the Medical departments of the public services, we cannot conceive that it will introduce any change that will not inflict injustice on some class of Medical officers. We therefore again reiterate to our readers our warnings and advice on the subject of the forthcoming election. Unless the Profession as a body, having its own interests to protect and its own purposes to forward, obtain sufficient representation in the House of Commons, its members in the public services, whether civil or military, must submit to be the puppets of whatever party are in power, to be used in times of war or pestilence, but to be thrown aside without consideration or respect when they are no longer needed. This very Indian Medical service, created and fostered as it was by the old East Indian Company, had grown into a body of public servants of which any nation might be proud. A service that produced such men as Annesley and Martin, O'Shaughnessy and Hare, Forbes Royle and Hugh Falconer, and many more we could mention, was one, we should have thought, that any Government which called itself liberal would have been most anxious to foster. Last year its very existence was threatened, and we draw from Sir Charles Wood's statement that it now lingers on sufferance only. If the veterans in its upper ranks are not now mulcted of large portions of their pay and retiring allowances they have not to thank the Government. Expenditure in India is not what it was even before the mutiny. Food and clothing, and all the necessaries of life, are largely advanced in price. In its leading article on the Indian Budget, the *Times* of June 30 states that "in the cities rent is higher and accommodation less, though mansions and warehouses rise on a larger scale than any to which Anglo-Indians have been hitherto accustomed. All the official people are well paid according to English notions, and yet they complain of the hardness of the times and how impossible it is for a man with a fixed income to compete with

the grandees of trade." With a higher rate of expenditure on all sides, if the Indian Medical officer is to maintain his place in the social scale, his emolument must have a proportionate increase. But it takes but little of the prophetic faculty to foretell that it will be only by the exercise of political influence on the part of the whole Profession that sufficient inducements will be held out to attract men of talent and enterprise into the Indian Medical corps, and to rescue that service from sinking to the dead level of mediocrity with which our heads of departments at home seem so well satisfied.

MEDICAL AMENDMENT ACT.

A MEETING of the Executive Committee of the Medical Council was held on Friday last, and at this meeting an official communication from the Home Secretary was read, to the effect that he had no intention of introducing during this Session an Act to amend the Medical Acts. We have much reason to fear that this conclusion of the Home Secretary was arrived at, not from want of inclination to undertake a duty which he, in some measure, felt to be a necessity—not from want of time as regards the Session of Parliament, but simply from the difficulty created by the form in which the Council proposed to deal with the principal question before them, viz., a restriction on the assumption of Medical titles by those who had no legal title to assume them. In seeking to suppress one grievance, a far greater one would have been created in the monopoly which the amending Bill would establish, a proposal which could never have received the sanction of Parliament. This is a sad result of the time and cost involved in the lengthened discussions on the subject which have taken place, and it also adds another to the dreary catalogue of failures which have marked the existence of the Medical Council. "Experience teacheth," is an axiom in which some people sometimes find consolation; let us hope that it may be found to be so in the case of our Medical legislators, and that finding wisdom in failure, they may become wise at last.

THE WEEK.

PARLIAMENTARY.—THE INDIAN MEDICAL SERVICE—DR. SUTHERLAND'S SALARY.

IN the House of Commons on Thursday, June 29, Mr. Bazley asked the Secretary of State for India whether it was true or not, as stated in the *United Service Gazette* and *Home News*, that the Indian Medical Warrant had been cancelled. If such was the case, what measures were to be taken as regards the pay and organisation of the Medical Department, and when those measures would be reported to the House; and why, pending such changes, Medical officers in India had not at least received the pay of their relative ranks.

Sir C. Wood said he had introduced a bill last year for the purpose of enabling a sufficient number of Assistant-Surgeons who had entered the Queen's general service to be drawn upon to form a Medical staff. The House was pleased to throw out that Bill on the third reading, and he was therefore compelled to maintain a separate establishment for India. The Government of India consequently had written in very strong terms, pointing out the great disadvantage and great additional expense caused by the maintenance of the double establishment; but no step had been taken in consequence of those representations. The statement, therefore, implied in the question of his hon. friend was entirely incorrect; the Warrant had not been cancelled, and satisfaction was felt by the Medical officers in India at their position and pay.

On Friday, June 30th,

Colonel Herbert said that the Marquis of Hartington stated the other day, in answer to the hon. baronet (Sir S. Northcote), that the remuneration of Dr. Sutherland was fixed at £3 3s. a-day, and was afterwards "continued at the same rate so long as he was completely occupied upon these duties." The noble marquis added that Dr. Sutherland's time had since been entirely occupied on the details of the business of the Sanitary Commission, and he therefore continued to receive the above rate of remuneration; that his salary was charged in the vote of £20,000 taken for sanitary services; and that this arrangement was generally approved by the Treasury. It appeared from the papers since published that on June 5, 1858, a letter was written from the War Office to the Treasury by direction of the right hon. and gallant gentleman (General Peel) with reference to certain committees and sub-committees appointed to assist in organising the Hospital and sanitary arrangements of the army; and in this letter occurred the following passage:—

"As there are expenses for travelling and attendance arising out of the same, and as the sub-committees are offshoots and extensions of the Royal Commission, I am to request the Lords Commissioners of Her Majesty's Treasury will authorise the charges incidental thereon being issued temporarily from army funds, and reclaimed as in the case of Royal Commissions from the vote for civil contingencies."

It appeared that Dr. Sutherland was now altogether employed, was therefore drawing £3 3s. for every day in the year, and had been doing this for several years past. There was, however, no appearance of this charge in the Army Estimates, and therefore the House had been voting about £1100 a-year to Dr. Sutherland for some years past, without the slightest knowledge that it was voting anything to that gentleman. The sanction of the Treasury given through Sir Charles Trevelyan to the arrangement proposed by the War Office appeared to him a mere form, and of no value whatever, except as sanctioning a merely temporary arrangement. He wished, therefore, to ask the Chancellor of the Exchequer whether he was aware that the sanction of the Treasury had been given to this payment of £3 3s. as a salary to Dr. Sutherland, and whether he approved such a construction being placed upon the Treasury sanction of the "expenses" of the Sanitary Commission?

The Chancellor of the Exchequer said that in the only document which had issued from the Treasury on the subject—namely, the letter of the 11th of June, 1858, signed by Sir C. Trevelyan—the question raised was one quite of departmental routine and practice, and did not refer to any particular change. In looking at the letter of Sir B. Hawes of the 5th of June, 1858, he was bound to state that he did not see any reference to a salary to Dr. Sutherland or anybody else, but only to expenses for travelling and attendance; and he certainly should not have inferred that the payment of members of the Committees was included in its terms. He regarded the letter of the 5th of June, 1858, as having reference simply to a matter of account.

General Peel observed that the letter of Sir B. Hawes was written in consequence of an account having been sent in by the late Lord Herbert, as President of the Sanitary Commission, for the sum of £500 paid to Dr. Sutherland. That was before he (General Peel) came into office, and all he did was to ask the Treasury how the money, the charge for which had been sanctioned by the President of the Sanitary Commission, was to be paid.

The Marquis of Hartington said the payment of three guineas a-day to Dr. Sutherland was originally fixed by Lord Panmure, and as long as Dr. Sutherland's services were required it was fair to remunerate him at the same rate. Dr. Sutherland's appointment was justified by his great experience in all sanitary matters, and as long as the vote of the Sanitary Commission continued it was impossible to place a more useful or valuable member on that body. The reason why the appointment was not referred to the Treasury was because it was not intended to be permanent. The hon. and gallant member was entirely in error in stating that Dr. Sutherland's salary escaped notice by the manner in which it was voted in the Estimates, for a few years ago a discussion on the appointment was raised in Committee of Supply, and an hon. member moved that the sum paid to Dr. Sutherland should not be allowed.

FROM ABROAD.—A STUDENTS' CONGRESS—DEATHS FROM LIGHTNING—FRENCH EULOGIUM ON HARVEY.

OUR own is emphatically the age of congresses, and little Belgium is their fertile mother, for whether statistical, charitable, or economical, most of them have sprung to life on this convenient neutral ground. The most recent of the series is shadowed forth in a "Manifesto of the Committee of Students of the University of Liège, addressed to the Students of all Nations," which is in nowise deficient in the magniloquence characteristic of this period of life.

"Students," it exclaims, "your Belgian brothers have con-

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ceived the idea of an association of University Students of all nations. All around us everything is in action, and great social problems are under discussion, the solution of which will do honour to our epoch. In so universal a movement, cannot a part be assigned to us? and must we, because we are young, abstain from taking part in this great work? But does not youth signify both strength and the future, and must not the pioneers of progress issue from our ranks? We belong to the age of generous ideas; and for us the love of country is not to be circumscribed within the narrow limits of political boundaries. We belong to that magnificent, intellectual country, bounded by neither mountains nor seas, which extends everywhere that there are men who think and men who suffer. . . . The practical measure which seems calculated to realise our project is the holding an international and periodical congress."

After due consideration, our young friends have determined to limit their deliberation at their first congress to one subject, and that the important one education.

"This question interests the whole of society, and the future depends on it, and concerning education our impressions are fresh, and we are of an age to analyse them and to draw sound conclusions. We shall first discuss the more general questions, the different modes of teaching, freedom of teaching, and the part which the Government and clergy should take in this. We shall next proceed to more special problems, such as compulsory education, the instruction of girls, the position of instructors, etc. Is there not also a good ground for inquiry, whether a too special education is not injurious to the very specialty itself? Should not more literary studies be combined with Professional studies, and should not those who cultivate the humanities know a little more of the sciences of observation? Coming, then, to the higher grades of education, which more immediately interest ourselves, we shall have to examine whether public and gratuitous courses of lectures should not be instituted; whether free and rival chairs should not be founded, as a guarantee against any indifference which professors may manifest; and finally whether certificates of attending lectures should not be abolished as useless. This is a mere sketch, exhibiting the fertility of the subject, and within its domain any one will be at liberty to bring forward his own views."

Happy age! when generous propositions have all the attraction of novelty untroubled by considerations of practicability. It will be admitted that for a congress of students a subject of a singularly staid character has been chosen for discussion, and one which it is generally believed falls more naturally under the consideration of persons of more mature years and prolonged experience. But who can say but that the unbiassed disinterestedness and fresh practical observations of this period of life may not furnish many an useful hint or well-placed caution to grave Medical Councils, involved in tedious debates, fettered by routine, cramped by prejudice, and swayed by corporate privileges?

That indefatigable statistician, M. Boudin, has laid before the Académie des Sciences a return of the deaths which have been produced by the action of lightning in France during the period 1835-63. During these thirty years 2238 persons were struck dead. Among 880 victims during 1854-63 there were but 243 of the female sex; and in several instances the lightning, falling among groups of persons of both sexes, especially struck those of the male sex, and more or less spared the females. In a great number of cases flocks of more than 100 animals, cattle, hogs, or sheep, have been killed, while the shepherds or herdsmen in their midst have remained uninjured. There are many examples of beech trees being struck, so that Maxwell is in error when he states this tree to possess an immunity—an assertion repeated at the Manchester scientific meeting. In 1853, of 34 persons killed in the fields, 15, or nearly a half, were struck under trees; and of 107 killed between 1841-53, 21 had taken shelter under trees. Reckoning, then, at only 25 per cent. the proportion struck under trees, we find that of 6714 struck in France, nearly 1700 might have escaped the accidents which occurred to them by avoiding trees during storms. The maximum of these accidents occurred in France and England during June and July, between nine in the morning and nine in the evening.

The Historical Lectures, or "Conferences," delivered at the Paris Faculty of Medicine, by the different Assistant Professors, every Monday, have proved very attractive, exhibiting as they have, the talents and capabilities of several of these aspirants to office in a very favourable light. That on Harvey, by M. Bèclard, seems to have been one of the most successful, in which the labours of the great physiologist and his predecessors were appreciated with philosophic acumen. Our object in noticing it is, however, in order to extract a passage or two from an able criticism from the pen of M. Guardia, in which he speaks of our great men in a tone not always met with in French writers:—

"England is great," he says, "among all modern nations in the geniuses of the first order which she has presented to philosophy and science. Not to speak of the two Bacons, the Friar and the Chancellor, she has good right to feel proud of her Newton, her Hobbes, her Locke, her Sydenham, and her Harvey. Italy herself, with all her illustrious men, *magna virem*, could not dispute with her without fear the palm of scientific glory. The English race is endowed with a virility which characterises all that springs from it, and its productions are distinguished by solidity and durability. It is from this native strength its power has arisen; and it would seem to be for this robust race that Buffon furnished his profound and just definition of genius. Never has a people manifested so persevering and so firm a good sense in the minds of those who have honoured it. An indefatigable ardour and a prodigious calmness are the distinctive traits of the national character. The pride with which it is reproached is but the consequence of an indomitable will. The great men of this privileged land are remarkable for an elevation of mind that nothing can disturb. What power, what dignity, what imperturbable serenity do they manifest, and how well do they possess the secret of their strength! We know the impassibility of Newton on the occurrence of an accident which destroyed the work of half a life, and his reply, sublime in its simplicity, to those who asked him how he came to discover the system of the world. His illustrious predecessors had, without doubt, prepared the way for him, and the names of Copernicus, Kepler, and Tycho-Brahe shine with brilliancy by the side of his glorious name. But no glory approaches to his, for what others had dreamed, guessed, caught a glimpse of, or predicted, he affirmed and demonstrated with invincible logic. Galileo is truly great among the most illustrious, but Newton is incomparable.

"We may say as much of Harvey, for he did for physiology what Newton was to do for physics. And here is the place to remark that the great discoveries in the organic sciences preceded the grand discovery which overthrew the old theories of the universe. The microcosm, to speak in the language of the old philosophers, was revealed before the macrocosm; and the ideas which had been current for ages concerning animal and living nature disappeared, never to return, before the prejudices which continued to domineer, in the names of tradition and religious dogmas, over astronomy and physics.

". . . It is in books like this *(De Motu Cordis)* that the man of science should study philosophy. What candour! what simplicity! what logical power! The heart expands with the understanding as the veil is torn away, and the light penetrates from all parts the impenetrable mystery. We feel that this man, who relates to us the marvels it has been given him to see, and which he imparts to all, is one of those who do honour to humanity; and it is not without emotion that we complete the perusal. M. Beclard stopped at the proper time, having had the good sense not to present even a *resumé* of Harvey's labours and discoveries. We shall follow his example, and, full of respect for the sacred work of Harvey, we will resist even the temptation of extracting from it some of those profound and luminous ideas which remain as aphorisms, or, rather, let us say as laws, in the code of science."

SHREWSBURY ELECTION.—Mr. Henry Robertson, the present member for Shrewsbury, having signified his intention of retiring from the representation at the close of the present Session, is succeeded by Mr. Clement, and it is generally believed that he, in conjunction with the present member, Mr. G. Tomline, will be returned without opposition. Both profess Liberal principles.—*Times*, July 1.

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THE TRIAL OF EDWARD WILLIAM PRITCHARD.

On Monday, July 3, there was commenced before the High Court of Justiciary in Edinburgh a trial for murder by poison, which, both from its criminal and Medico-legal interest, is certain to take rank amongst British *causes célèbres* with those of Palmer and Smethurst. The accused is a member of the Medical Profession, an M.D. of Erlangen, M.R.C.S. Eng., and L.S.A. Lond. He was formerly an Assistant-Surgeon in the Navy. Before his apprehension he resided in Glasgow, where he had practised, it is said, with some success during a period of six years. He is charged with the murder of his wife and of her mother. The prosecution is conducted on the part of the Crown by the Solicitor-General, Mr. Gifford, and Mr. Crichton. The prisoner is defended by Mr. A. R. Clark, Mr. Watson, and Mr. Brand. In noticing this case we shall endeavour to present our readers with an abstract of the proceedings and of the evidence advanced on each day, reserving all comments, whether on the circumstantial or scientific evidence, until the verdict of the jury is pronounced. The presiding judges are—the Lord Justice-Clerk, Lord Ardmillan, and Lord Jerviswoode.

The first portion of the indictment preferred against the prisoner refers to the case of his mother-in-law. It states that the prisoner "did wickedly and feloniously administer to, or cause to be taken by, Jane Cowan or Taylor, now deceased," "in tapioca and in porter or beer, and in a medicine called Battley's Sedative Solution, or one or more of them, or in some medicine to the prosecutor unknown, or in some articles or article of food or drink to the prosecutor unknown, or in some other manner to the prosecutor unknown, tartarised antimony, and aconite, and opium, or one or more of them, or some other poison or poisons to the prosecutor unknown," and that in consequence Jane Cowan or Taylor died on or about the 25th of February, 1865.

The second part of the indictment charges the prisoner with having feloniously administered to his wife, Mary Jane Taylor, "in egg flip and in cheese, and in porter or beer and in wine, or one or more of them, or in some medicine to the prosecutor unknown, or in some articles or article of food or drink to the prosecutor unknown, or in some other manner to the prosecutor unknown, tartarised antimony and aconite, or one or other of them, or some other poison or poisons to the prosecutor unknown," and that in consequence Mary Jane Taylor or Pritchard died on or about the 18th of March, 1865.

The counsel for the defence moved that the two charges made in the indictment should be separated and not go to trial at once. This motion was opposed by the prosecution, and was negatived by the presiding judges. The prisoner pleaded in a firm voice "Not guilty."

After Sir A. Alison, Mr. P. Morton, and Mr. R. Wilson had been called to prove certain declarations made by the prisoner in the Sheriff's Court at Glasgow, the first important witness for the prosecution, Catherine Lattimer, was examined. She deposed that she had lived in the service of Dr. Pritchard as cook for ten years, and that she left his service on the 16th of February last. In the previous October she was absent from Dr. Pritchard's house for a fortnight. On her return in the same month she found Mrs. Pritchard unwell, complaining of cold. At that time the only other servant in the house was a girl, named Mary McLeod. The household consisted of Dr. Pritchard, his wife, four children, two gentlemen boarders, and the two servants. They lived in Clarence-place, Sauchiehall-street, Glasgow. Dr. Pritchard's eldest child, a girl of eleven years of age, was absent with her grandmother in Edinburgh. At the time of Catherine Lattimer's return in October Mrs. Pritchard was not confined to her bed, but in a few days she became worse and took to her bed. She then had frequent attacks of vomiting. After being confined to her bed for four or five days she appeared to get a little better, and towards the end of November she went to Edinburgh to visit her mother. She complained to the witness of sickness and vomiting until near the time of her leaving for Edinburgh. The witness was not aware that any Medical man had been called in to her before her visit to Edinburgh. She returned from the latter place a few days before Christmas; she was accompanied by her mother and daughter. About a week or more after her return she was again attacked with vomiting. The sickness sometimes came on before and sometimes after eating. On or about the 1st of February, about six o'clock in the afternoon, after dinner she had a severe attack of vomiting in the pantry. She had dined with the prisoner at between three and four o'clock. Deceased went from the pantry into her bed-room, and about twenty minutes or half an hour afterwards rang for the witness. On going into the room the latter found Mrs. Pritchard in bed with her clothes on, very ill. Deceased said, "Catherine, I have lost my senses; I never was so bad as this before." Cramp then appeared to seize her in her hands and down her side, and she said her tongue was affected. Witness thought her speech a little affected, and noticed "that the fingers of her hand were straight out and the thumb twisted underneath." Her face seemed flushed. Witness called Dr. Pritchard, who immediately came; he administered a little spirits and water and rubbed her hands. Deceased seemed in great pain from cramp in the stomach. The cramp left her in about half an hour. Witness then left her, and saw her again between nine and ten that night. She was then much better; Dr. Pritchard had carried her into another bedroom, and had ordered a fire to be lighted there for her. The next day she appeared better, and did not complain of anything, but she remained in bed for a week, until the arrival of her mother, Mrs. Taylor. During the time that she was in bed witness heard that she was occasionally sick. She was principally waited on by the other servant, Mary McLeod. Deceased remarked to witness that "nothing seemed to stop her sickness," and that she was generally sick after slops—often after tea. No one cooked any food for Mrs. Pritchard except the witness and Mrs. Taylor. The tea was made in the dining-room, and taken to deceased by Mary McLeod. During the ten years the witness had been in the prisoner's service she had not known Mrs. Pritchard sick, except during this illness. During the month of February the deceased was visited by Dr. Cowan, who remained in the house a day and a night. After he had left, on or about the night of February 14, witness heard the deceased cry out from her bedroom as if in pain. She went up stairs, and found Mrs. Pritchard in bed, and Dr. Pritchard with her. She seemed to be under the influence of chloroform, and said that she had taken chloroform. She was very much excited. The prisoner stood calmly by her bedside, and tried to soothe her. She said she wished to see Dr. Gairdner, who was immediately sent for. Witness noticed that deceased's hands were "all drawn together with cramp." When Dr. Gairdner arrived deceased told him that she had taken chloroform, but that she did not blame Dr. Pritchard—she never liked chloroform. Deceased was a very temperate person. Witness remained with her all that night. She complained of thirst, which continued next day, but her thirst was not remarkable. After Dr. Gairdner arrived, deceased was in a very excited state; she said the Doctors were all hypocrites together, and told her husband not to cry, adding "If you cry, you are a hypocrite." Witness did not observe that Dr. Pritchard was shedding tears at the time. Soon after this occurrence Mrs. Taylor arrived. Mrs. Pritchard continued for the most part confined to her bed until the time of the witness's leaving. Deceased had another attack of cramp a day or two after her mother's arrival. The attack was not so severe. It occurred in the afternoon or evening, deceased having taken something for her dinner at 1 o'clock. On this occasion deceased said, "I am not nearly so bad this time as I was last." Witness left on February 16. Mrs. Pritchard was then in bed. A week afterwards, on a Friday, she called, at eleven in the forenoon, and saw Mrs. Taylor. Mrs. Taylor told her that she did not understand Mrs. Pritchard's illness—that she was one day better and two worse. Mrs. Taylor at that time looked wearied and not well; but she did not complain of anything. Mrs. Taylor nursed her daughter. Everything for Mrs. Pritchard was cooked either by Mrs. Taylor or witness. The latter sometimes took a potato or a poached egg to Mrs. Pritchard, which the latter found she kept on her stomach better than other things. Mrs. Taylor died on the Friday night or Saturday morning after witness saw her. Witness first heard of her death on the following Monday, when she called at the house. She saw Dr. Pritchard, who said "they had a sad house to-day." The next day she called again, and saw Mrs. Pritchard. She came from her

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bedroom into the drawing-room. She seemed very poorly and in great grief, very emaciated and thin. Shortly after Mrs. Taylor came to the house witness recollected preparing some tapioca for Mrs. Pritchard and Mrs. Taylor. Witness did not recollect who procured the tapioca, or who brought it into the kitchen; but it was brought in in a paper bag. She made the tapioca, and Mary McLeod took it into the dining-room to Mrs. Taylor, who was to take it up to Mrs. Pritchard. She heard that it stood in the dining-room for half an hour. Nothing was put by her in the tapioca but tapioca and water. The remainder of the tapioca was put by her in a closet in the kitchen. After the apprehension of the prisoner the bag containing the remainder of the tapioca was seized by the police. The witness further deposed that the prisoner and his wife had lived happily together, and that he was attentive to her during her illness. After Mrs. Taylor's death Mrs. Pritchard said to her, in answer to a question whether she would not like to have a nurse, "It's my own fault that I have not got a nurse, for the Doctor (meaning the accused) wished me to get one." Dr. Pritchard kept medicine in the house, but he was not in the habit of dispensing. He generally gave prescriptions. There were a good many bottles in his consulting-room. The place in which they were kept was sometimes open and sometimes locked.

The next witness examined was Mary McLeod. She stated that she was seventeen years of age, and had entered the prisoner's service as nurse and housemaid in 1863. She gave similar evidence to the last witness as to the state of her mistress's health previous to her journey to Edinburgh in November, 1864. She said that she had frequently seen her mistress vomiting at that time. She was sometimes sick after dinner and sometimes before dinner. She was not sick every day. No Doctor attended her besides her husband before she went to Edinburgh. Dr. Pritchard prescribed medicine for her, which the witness procured. There was a white liquid medicine, like milk, and some red powders. Some of the powders were in the house when the prisoner was apprehended. (The powders were produced.) Some time after Mrs. Pritchard returned from Edinburgh she was again attacked with sickness. Witness stated that on one occasion she found her mistress vomiting in the pantry at 12 o'clock at night, after the rest of the family had gone to their bedrooms. She was generally sick about an hour after dinner, between 4 and 5 o'clock, sometimes also in the forenoon about 1 o'clock. She breakfasted at 9. Sometimes she was sick during the night—at least, she told witness so. Sometimes the slops were emptied, and witness supposed that her master had emptied the slops. The witness gave similar evidence to that of Catherine Lattimer as to Mrs. Pritchard's attack when Dr. Gairdner was called in. She said:—

"On the occasion when Dr. Gairdner was called about the attack of illness which she had, I heard her cry out after 12. Catherine and I went up. We found Mrs. Pritchard undressed and in bed. She had been seized with cramp and seemed to be in pain, and was excited. She did not complain of pain in any particular place in my hearing, but just of pain generally. Her husband was there. He was attending her, pouring hot and cold water on her hands. She said, 'Be sure and go for another Doctor directly, Mary.' After I returned I saw Dr. Pritchard crying. I am not sure that he was not crying before I went away. She said, 'Don't cry, you're a hypocrite if you cry; it was you that did it.' The sickness of Mrs. Pritchard continued till her mother came, a day or two afterwards. Mrs. Taylor slept with her daughter, and attended to her. As housemaid I continued to wait upon the room, and I saw Mrs. Pritchard several times every day. She was sick almost every day while her mother was with her. She complained of great thirst; great heat in the head, and pain in the stomach. Dr. Pritchard was living in the house all the time Mrs. Taylor was there, and took his meals at home. He generally had dinner at half-past 3, while Mrs. Pritchard usually dined between 1 and 2 o'clock. He was sometimes in the room when she dined. Her tea was sometimes made by me, and sometimes by the cook. It was poured out in the dining-room into a cup by the Doctor, or whoever was at the table. Sometimes it was poured out by the Doctor, and at other times by Mrs. Taylor. Dr. Pritchard sometimes put the butter upon her bread. After Mrs. Taylor's death, Mrs. Pritchard's tea was generally taken up either by the Doctor, by one of the children, or by me. Her breakfast and tea were sent up from the dining-room. Her dinner was taken up after Mrs. Taylor's death generally by me. She generally took chicken or fish to dinner. Before her death, Mrs. Taylor sent me to the shop of Messrs. Murdoch Brothers, apothecaries, in Glasgow, to purchase a bottle of Battley's Solution. She gave me a bottle to be filled. (Shown small bottle.) That is the kind of bottle which was given me, but I cannot say that it is the same. It was like it. I paid 8s. 4d. for the solution, and gave it to Mrs. Taylor. I saw the bottle, or one like it, after her death, in the bedroom. She was complaining the day before she died. She first said to me that she wanted to vomit, but could not. That would be about 5 o'clock in the afternoon of the 24th of February, the day before her death. This was between 6 and 7. She said she thought she was ill through being confined so much in the same room. She said she thought she had got the same complaint as her daughter. She came downstairs to the dining-room. I left her in the dining-room. A little later she came to the stair-head and called out to me. She sent me out for sausages for supper. When I returned she was in the consulting-room writing a letter. That night I saw her going upstairs. She said nothing to me. This would be about 9 o'clock. She was going up to her bedroom when I saw her. About half-an-hour after she went up she rung the bell, which I answered. She wanted hot water to drink, because she said it would make her vomit. I brought the hot water to her. Mrs. Pritchard was in her bed at this time. She told me to go for the Doctor. I found the Doctor engaged with a patient in the consulting-room; but he came within a few minutes after the person who was with him had gone away. The bell was rung again for me before the Doctor came. When I went up I found Mrs. Taylor in the bedroom. She was not any better, and was worse than when I went up the third time. The second time the bell rung she wanted warm water. She tried to vomit both times that she took the water, and she threw up a little water. When the bell rung the third time the Doctor was up. Mrs. Taylor was sitting on a chair when I went up. She seemed insensible, with her head on her breast. I think her eyes were shut. Mrs. Pritchard had got up beside her mother. The prisoner was in the room, and we put Mrs. Taylor into bed without her clothes being taken off. Mrs. Pritchard herself was sick that evening before her mother had gone up to the bedroom. Mrs. Taylor's death took place on Saturday morning, a little after 12. After her mother's death Mrs. Pritchard was brought down to the spare bedroom. On the Saturday she was brought down. It was after dinner on Sunday that she was sick. The dinner was sent up from the dining-room to her. I took it up. It was roast beef and potatoes—nothing else. It was the Doctor who gave me the dinner to take up. It was shortly before tea that Mrs. Pritchard became sick. Dr. Pritchard left the house on the Monday with Dr. Taylor and Mr. Taylor. They went away in time for the 11 o'clock train. I don't remember if Mrs. Pritchard had breakfast before the Doctor left. I don't remember the Doctor taking her breakfast to her. She was not sick that morning. She lived about three weeks after her mother. She was ill sometimes twice a-day, after breakfast generally, and sometimes after dinner. She generally vomited her breakfast. I remember getting a bit of new cheese from the Doctor to give her one night. I think it was the week before she died, but I cannot be sure. The one end was thicker than the other. It was new in the house, at any rate. Dr. Pritchard gave it to me in the dining-room to take up. I did not see him cut it. She asked me to taste it. I did so, and it tasted very hot. It produced a burning in my throat. I took only a small bit of it. I had never felt the same sensation in my throat before. Soon after taking the cheese I became rather thirsty. I remember getting some chamomile tea to take to Mrs. Pritchard. It was left in the bedroom by the Doctor. I saw him taking it up, and I afterwards saw it in the bed-room. I was in the bedroom when he brought it in. It was in a jug. Some time after this the Doctor poured out some of it for his wife into a wineglass. He said that was for Mrs. Pritchard, and I gave it to Mrs. Pritchard. It was to be given to her when she wanted a drink. She vomited it immediately after taking it. This was in the week before she died. In the course of the week in which she died I got some egg-flip to give to her. I got it from Mary Paterson, the girl who came to succeed Catherine as cook. This was at night. I got the egg-flip in the pantry in a tumbler, and took it down to Mary Paterson to get the hot water poured upon it. I saw her taste it after she had put the water on it. When she had tasted it she said, 'What a taste it has!' This was between 11 and 12 o'clock at night. I took the egg-flip up to Mrs. Pritchard. The Doctor was in the room when I took it up. Mrs. Pritchard got some of it. I did not taste it. Mrs. Pritchard took about a wineglassful.

I remained in the bedroom with her till 4 o'clock in the morning. The prisoner remained in the bedroom too. Mrs. Pritchard was sick that night very soon after she had taken the egg-flip. In the morning after the egg-flip had been given to Mrs. Pritchard Mary Paterson, I think, told me she was sick. In the course of the week that Mrs. Pritchard died—on the Tuesday or Wednesday—I gave her some port wine. It was set in the bedroom by the Doctor. I gave her a wineglassful. I gave her more than one glassful, but not in one day. She was not sick after it. I saw her on the morning of Friday, the 17th, the day before she died. I asked her if she was better, and she said she could not tell. She was in bed all day on Friday. I was along with her in the afternoon about 5 o'clock. I met her on the stair at the drawing-room landing. She had been sleeping in the spare bedroom. She was dressed in her night clothes. She pointed to the floor and said, 'There is my poor mother dead again—take her into the bedroom.' I went down stairs and called Mary Paterson, and we put her to bed. When we got her into bed she did not become quiet. Mary Paterson began to rub her hands, and she asked us to rub her mother, and never mind her. Her hands appeared to be cramped, and were very cold. She was speaking quite clearly. She became more quiet and sensible while we were there. The Doctor was out at this time. I don't know if she had anything to eat or drink. Shortly before her bell rung she had tea in the morning, but not in the afternoon. She had dinner between 1 and 2. The Doctor came home about 7 o'clock, and after he came home Dr. Paterson was sent for. I was in the room while Dr. Paterson was there. I remained in the room during the night till she died, about 1 o'clock on the morning of Saturday. The Doctor was present at the time. He was in bed with her when she died. I was lying on the sofa. I think the Doctor had on his clothes. While I was lying on the sofa she complained of feeling very cold. I was told to go downstairs and get the mustard. He asked me to go down, and she said, 'Be quick.' I went down and got the poultice, and it was applied to Mrs. Pritchard's stomach. She seemed to be no better after the poultice was applied, and I was sent for another. I went and brought it, and then went down for Mary Paterson, and by the time I returned Mrs. Pritchard was dead."

It was elicited from this witness that she had been debauched by Dr. Pritchard, and had become pregnant, but had miscarried in the autumn. The question was asked by the prosecution whether Dr. Pritchard had given her anything to produce the miscarriage; but the question was not allowed by the Court, as not bearing on the indictment. After a great deal of questioning, the witness confessed that Dr. Pritchard had said to her, "That when Mrs. Pritchard died, if she died before him, and I was alive, he would marry me." She also said that she thought the prisoner was in joke when he spoke of marrying her. The examination of this witness closed the first day's proceedings.

On Tuesday, the 4th, the first witness examined was Mary Paterson, who succeeded Latimer as cook in Pritchard's service. On February 16 Mrs. Pritchard was ill, and witness never was upstairs to see her till the night of Mrs Taylor's illness. Heard Mrs. Pritchard exclaiming, "Mother, won't you speak to me?" and went in and found Mrs. Taylor's body getting cold. She died the same night, and witness dressed the body, which had a pinkish streak on the left side. On the Tuesday before Mrs. Pritchard died witness found a bit of cheese in the pantry, and ate a little bit about the size of a pea. After eating it she felt a burning sensation in the throat, and got sick and vomited. Her sickness continued from morning till night. Next day the prisoner asked witness to make some egg-flip for Mrs. Pritchard. The Doctor gave her the egg, and while witness was beating it he came once or twice into the pantry, and dropped in what witness took to be pieces of lump sugar. He said he would add the whiskey when it came upstairs. On pouring in the water, to see if it was hot enough witness tasted it, and remarked to Mary M'Leod it had a horrible taste. She had the same sensations after it as from the cheese, and continued sick till four o'clock next morning. When Mary M'Leod came down to bed she told her the mistress was so ill that she would not allow the Doctor to leave the room. Witness did not see Mrs. Pritchard till the Friday. She was well at noon, when she saw her drink something from a glass, which the Doctor took from her. She became very ill at 5 and excited. She was raving about her mother. She asked witness to rub her hands, and was much cramped. She spoke about her children incoherently. About half-past 1 witness was called out of bed to make a mustard poultice, and about five minutes after was called upstairs. The Doctor was in bed with his wife. She touched Mrs. Pritchard and found her cold. The Doctor proposed to apply the poultice, and to get hot water, saying she was only fainting; but witness said nothing could be done for a dead body. He said, "Come back, come back, my darling Mary Jane; do not leave your dear Edward." And added, "What a brute! what a heathen! So gentle, so mild." He asked witness to shoot him; and in answer to her rebuke how he should stand before a righteous God, said, "True, Paterson; you're the wisest and kindest woman I ever saw." Witness did not tell the Doctor she had been sick after eating the cheese, but did so after tasting the egg-flip.

Jessie Nabb, a washerwoman, deposed to having assisted in dressing Mrs. Taylor's body, and to finding the bottle of Battley's solution in her pocket. She showed the bottle to Dr. Pritchard, who told her to say nothing about it, because it might lead to trouble.

Mr. T. A. Connell and Mr. R. J. C. King, Medical students boarding in Dr. Pritchard's house, gave evidence confirmatory of that of the former witnesses as to the illness of Mrs. Taylor and Mrs. Pritchard. The former stated in cross-examination that while Mrs. Pritchard was in Edinburgh, he had been seized with sickness and cramp one day after dinner. He was ill in the same way in February, when he was ill for about a fortnight, and was four days away from table. He was sick about two hours every day after breakfast. The sickness came on about the end of February, when Mrs. Taylor was in the house. In re-examination he said he could take no food without being sick, and was unable to account for the sickness. Prisoner said he was afraid it was gastric typhoid. After the sickness in November he went home as soon as he was able and had no sickness. In further cross-examination he said the prisoner had also been ill in February in the same kind of way.

The next witness examined was Professor Gairdner, M.D We reproduce his evidence *in extenso*:—

Dr. William T. Gairdner, Professor of Medicine in the University of Glasgow, deponed:—"I know the prisoner. I got a message to call at his house between the night of the 8th and the morning of the 9th of February. I think it was between 12 and half-past 1 o'clock. I had not retired to rest, as I was making preparations for a lecture next morning. I was told to come and see Mrs. Pritchard. I went immediately. I had never seen her before. I met Dr. Pritchard at the house, and he took me to his wife's bedroom. He told me in general terms before introducing me what was the matter with her. He said she had been very sick, and her stomach was not able to bear any food. He said she had been some weeks in that state. I found Mrs. Pritchard in bed. She was lying on her back, with her face considerably flushed. She appeared to be in a state of considerable excitement, and she told me herself that she had been sick. Prisoner spoke about spasms; but I cannot remember if I got the first information of the spasms from him or from her. I recollect that after the spasms were mentioned to me, then he said it was catalepsy. He mentioned to me that Dr. Cowan had seen her, and ordered stimulants, and that his wife had had chloroform, but whether by Dr. Cowan's orders or not I don't know. I think he said she had had champagne. Mrs. Pritchard began by apologising for not having sent for me sooner. Dr. Cowan, she said, was a friend of the family, and she had sent for him, and he had come. She afterwards said that she was aware that I had been a classfellow of her brother, Dr. Matthew Taylor, of Penrith. I had some other conversation with her, and spoke to her of her symptoms. I found that she had been sick, but she was not sick when I saw her; she was in a state of extreme exhaustion. She had a pretty good pulse, and there was nothing in her symptoms indicating immediate danger. The most remarkable symptom was the violent state of excitement she was in and the spasms in the hands. She was holding up her arms in bed, and her wrists were turned in; her thumbs were also turned in towards the wrists. Her hands were in a very peculiar state. I think it was owing to my mentioning this that Dr. Pritchard used the word 'catalepsy.' The impression I formed as to the cause of the excitement was that she was intoxicated by the champagne and chloroform. I withdrew to the fire to warm my hands with the view to make an examination, when I had no sooner moved towards the fire than she began to scream at the top pitch of her

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voice, 'Oh, you cruel man! you unfeeling man! don't leave me!' I returned to her bedside, and said I was not going to leave, but I was going to the fire to warm my hands. I did so. In the midst of this she was in a state of the most violent hysterical excitement. After various inquiries, and after feeling the state of her skin, I came to the conclusion that she was not in a state to give evidence of her own previous history that night, and I gave the orders that I thought necessary, and left. I ordered that the stimulants should be discontinued. I gave this order emphatically to Dr. Pritchard, and told him most decidedly that she was to get no stimulants whatever until I saw her again. I hardly know what catalepsy is. It is not a disease of ordinary Medical experience at all. Almost all that we know about it is from books, and what is written about it is to a great extent apocryphal. Therefore, I do not presume to be an authority about catalepsy. Mrs. Pritchard made use of a great deal of language while in the hysterical state, but I took no notice of it, and, in fact, intentionally ignored it. I have great difficulty in remembering whether any of the servants were present. I called again between 1 and 2 o'clock on the day of which this was the morning. I saw Dr. Pritchard, who said his wife was better and quite quiet. I cannot remember whether he said anything more. He gave me the impression that she was better. We went to Mrs. Pritchard's bedroom, and I found her quiet. She was free from fever. I had some conversation with her, and assured myself that she felt better, and that she had not vomited since I last saw her; but she still had the remains of spasm in the hands. I directed that she was still to get no stimulants and no medicine. I instructed that when she required food she was to get a plain boiled egg and a bit of bread, and I told her that my object was to make her diet as simple as it could possibly be, in order that there might be no possibility of her taking anything which would disagree with her—that is, nothing that would produce sickness or irritation of the stomach. At my visit I was very much puzzled to know what was the matter with her. I thought she was intoxicated—drunk, in fact—and I thought she was hysterical. I thought it was a case which would require serious, constant attention. I never saw Mrs. Pritchard again. I had to leave town in two days afterwards for a distant engagement, and before doing so I wrote a note or sent a message to ascertain how Mrs. Pritchard was, and I received for answer that she was better. I returned on the Saturday afternoon, and on my return there was a patient waiting for me. While I was engaged I believe Dr. Pritchard called and left word that Mrs. Pritchard was better, and that I need not call. I wrote to Dr. Taylor, the brother of Mrs. Pritchard. I did so, I think, on February 9, after my second visit. My reason for doing so was that I was puzzled, and that I thought the practice bad, in so far as the stimulants were concerned at least, and I wished to be aided and backed by his assistance.

"Cross-examined by Mr. Clark: The word 'catalepsy' seemed to me to have no application to the case. I observed nothing peculiar in Dr. Pritchard's nomenclature of disease, except that perhaps it was occasionally a little at random. I mean by that that I don't think he was a model of accuracy and wisdom, and cautious in applying names to things. When I wrote to her brother the first night after I saw her, I did not indicate to him that there had been anything more than improper treatment—I did not indicate to him that there had been any foul play."

The next witness examined was Dr. Paterson, late Professor of Midwifery in the Andersonian Medical School. We shall commence our report in our next number with an abstract of his evidence.

QUARANTINE is established at Malta. Several deaths from cholera are said to have occurred on board English and French vessels between Alexandria and Malta.

THE CHOLERA AT ALEXANDRIA.—The following is the latest report, by Reuter's telegram from Trieste, of the cholera at Alexandria:—June 30.—An English steamer has arrived here from Alexandria, having on board 171 passengers all in good health. The Trieste papers publish advices from Alexandria, stating that there were 214 cases of cholera the day before yesterday, and at Cairo 70 cases. The epidemic was considered to be assuming a less alarming character. The Austrian Lloyd's steamer arriving at Smyrna was subjected to a quarantine of five days, on account of one of the passengers suffering from cholera.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF OXFORD.

(Continued from vol. I. 1865, page 656.)

MAGDALEN COLLEGE.

MAGDALEN COLLEGE, founded in the year 1456, by William of Waynflete, Bishop of Winchester, possesses few features of interest for the Medical scholar. It is, notwithstanding, one of the most interesting of the Oxford collegiate institutions, and to its students full of classical and poetical beauty. The college was originally intended for a president, forty fellows, thirty demies (men entitled to half commons), a schoolmaster, an usher, four chaplains, one organist, eight clerks, and sixteen choristers. At the present time it maintains a president, thirty fellows, forty demies, twenty exhibitions, and four Waynflete Professorships.

The only Medical notability of whom I am able to find record as connected with Magdalen, was Henry Clerk, M.D., who was elected President on March 5, 1671, and held office until his death on March 24, 1686. Here, however, Addison had "his walk," and here immortal Gibbon, before he "sighed as a lover and obeyed as a son"—before charming Mademoiselle Curchod seized him by the heart, read his first lessons, and laid the groundwork of that marvellous history which, like the earth itself, is only the more entrancing and truthful as it is the deeper explored.

Connected with this college is St. Mary Magdalen Hall, also built by William of Waynflete, and intended as a grammar school for the choristers of the College.

BRAZENNOSE COLLEGE.

Brazennose ventured originally to put on the door a brass knocker in gross and satirical imitation of a feature which all men—and, for aught I know to the contrary, women, too—prize as some trifle to do in way of ornament of the human face divine,—a brazen nose on a door, and straightway a college named after a knocker—Brazen-nose College. The College was erected in 1509, and it had two founders, Bishop William Smyth, of Lincoln, and a brave knight, Sir Richard Sutton.

The College at this time maintains a Principal, fifteen Fellows, and eighteen Exhibitioners. Three of the exhibitions are of recent date, and are called the Colquitt Exhibitions, after some ladies of that name who left the scholarships.

Connected with Brazennose is the University Hall, which, the antiquarians affirm, is the perpetuity of the second of the three schools of the great Alfred. There is no Medical name of moment connected with Brazennose.

CORPUS CHRISTI COLLEGE.

Corpus Christi College, the next in historical order, is equally devoid with the last two named Colleges in Medical value. It has no eminent Æsculapian scholar on its roll of great men. It was founded in 1516 by the Bishop of Winchester, Richard Fox. The College at this time maintains a President, twenty Fellows, and twenty scholars. The scholarships are tenable for five years from matriculation, and are worth £80 a-year. They are under no restriction in competition. There are also four exhibitions tenable for five years.

The College is indebted to one Medical man for a benefaction. In the year 1693, Dr. Arthur Parsons, M.D., gave a sum of £3000 for the purchase of an advowson.

CHRIST'S CHURCH COLLEGE.

The Medical scholar stops at the door of Christ's Church College with respect. He looks not simply at the noble building, but he enters it to feel that it has been the home of some of the best men who ever lived to adorn his Profession or any profession. There is something coincidently curious about these Oxford Colleges and the Oxford Medical scholars: certain colleges have absorbed, or, as it were, monopolised Physic. At the same time there is no very obvious reason for the fact; for here there is not, as at Cambridge, one special house, like Caius College, famed for its Esculapian element and singled out by its fame. Not at all. Still in Oxford there are colleges whence all our lights of the University have emanated. Christ's Church is one of these. As a building, Christ's Church is truly grand. Wolsey founded it, and with a taste which showed that art, not less than ambition, had a seat in his breast, he would have the building worthy of the builder and of the project. Then in course of time came Sir Christopher Wren to give the touch of his genius to what

Wolsey had left unfinished—a happy unfinishing, and a happy finish.

The site of the Priory of that St. Frideswide of whom we have spoken as of a holy recluse of royal descent, was chosen by the great Cardinal as the spot on which to erect this palace of learning. He intended to have on the foundation one hundred and fifty-two residents, together with a dean and sub-dean. But the design, as originally marked out, was not to be completed. The great Cardinal had fallen in the estimation of the petty tyrant whom he had served better than he had served his God. Wolsey had been requested to retire to his diocese, and the Court progressed without him, a dull Court, and none the less and none the more saintly, but far more cruel. With his removal from power his hands were loosened, or, we had better say, severed, from many undertakings of great splendour, and of all others from Christ's Church. From the hands of the Cardinal the College was transferred to those of the King, the foundation was claimed, and all work suspended by royal order. At last in 1532 the King thought fit to re-establish and bring to a close the work of his former minister. In doing so he added to the mutilated building his own ghastly and disgraceful name, and the Institution for some years was known as "Henry the Eighth's College." But one year before the death of the King there was a transference of the see of Oxford from Osney, once the Abbey, to the chapel or church of the College, originally the Church of St. Frideswide, and in which sacred place the shrine of that good woman was erected. On this change the Church of St. Frideswide became the Cathedral Church of Oxford, and was called Christchurch. The same name was soon after applied to the College, and has remained so applied ever since.

At the present time the College maintains a dean, six canons, twenty-eight senior students, fifty-two junior students, and six chaplains.

I might dwell long and fondly on the beauties of Christ's Church as a mere specimen carved work in dead stone. I might dwell on the tower, the hall, the library, the quadrangles; but I must leave these to contemplate the living histories of those who have been nurtured within those dumb walls and have worked for their generation as we—not, perchance, so successfully, but with the same will—work now. Three men of considerable note in their lives deserve mention by name as having been of this College, though no more be said of them. I allude to Dr. Hackluyt, M.D., the brother of the great traveller of that name; to Martin Llewellyn, one of the Physicians to Charles the Second; and to Dr. Henry Stubbe. It is clear that these men all held good collegiate position; but they have left nothing behind them more than the savour of respect due to private worth and to talent too feebly employed.

Four other names stand before us, however, which deserve something more than common and commonplace regard. These are the names of Richard Lower, Thomas Willis, John Freind, and Matthew Lee. The first is one of the greatest physiologists who ever lived; the second, one of the keenest thinkers and best chemists in all our annals; the third, a truly magnificent scholar and historian; and the fourth, a benefactor to anatomical science, whose name is writ in perpetuity in the University he served well and faithfully to his end. We will call up these Oxford men, speak with them, and translate them to those who are content to hear of them in brief terms, or to see them by our mirror for a moment at most.

Richard Lower, who in our latest biographical dictionary has been entirely ignored, was born in 1631 either at Truro or at Tregoney, in Cornwall. He went to school first at Westminster and thence to Christ's Church College. At Oxford he became acquainted with Willis, circle of Willis Willis; and the two men continued friends always. Lower having graduated in 1665, came at once to London and entered into practice. He had not been settled down twelve months before he began to experiment on the circulation of the blood. The discovery of the circulation of the blood had gained its way, and was pretty generally admitted; but the Profession was at the same time plagued with the possession of certain half-witted classical theorists, whose gowns were so stiff they would stand alone, and who in academic pride called themselves iatro-mathematicians. These men were for bringing all Physic to the rule of thumb; they considered that they were the most practical race that had been or ever would be; to them the phenomena of life were as distinct as a problem in Euclid, and on their favourite theme they wrote books which are now the very jests of science. Lower, a man of simple mind and clear understanding, saw through these pretenders at a glance, and, without seeming to meddle with them, fetched them down to their true level with one or two well-directed shots. He was not liked for his work, of course, and long after his death one of the iatro tribe made sport of him for saying and proving that the blood changed its colour from venous to arterial as a result of its exposure to the air.

As I have said, Lower began by experiment; and the first of his experiments, and the most remarkable, was that of transfusion. We English men of science urge, with natural pride, that Lower discovered transfusion; and all admit that he first practised it; but the Germans claim that in 1606 one of theirs, by name Libavius, suggested the idea of transfusion. We need not stay to discuss this point, although it is open to dispute, but may affirm broadly not only that Lower was the first man to transfuse, but that, in so far as he was concerned, he was original in devising the experiment.

The first results of transfusion were most startling, and Lower himself saw in what he had effected a new era in the art of healing. The common notion of the manner in which Lower performed his operation is not correct. He did not, as is now done, transfuse from the vein of one animal into the vein of another animal, but he transfused from the artery of one animal into the vein of another. His idea was to change the volume of blood in a diseased animal altogether. He thought that he could actually displace disordered blood by transfusing the arterial blood of a healthy animal into the venous system of a diseased animal, and by drawing off meanwhile from another part of the venous circuit of the diseased animal its own or original blood.

The first subject operated upon by Lower was a dog, and some of the effects observed stimulated other persons to the hasty performance of experiments on the human subject, which soon tended to bring the operation into disfavour. Lower, in fact, affords an example that a man may be suddenly too successful in a great undertaking. So soon as transfusion began to be talked of and described, it caught the Profession and the public, as a proceeding so novel that both ran after it and hooted it up to frenzy. The king, Charles the Second, as though he knew something about it, followed the popular cry, and went to witness an experiment. A Frenchman, named Denis, took up the operation in France, and into the veins of the human subject injected the blood of a lamb. Here, again, the first experiments carried all before them; patients who seemed at the last gasp were saved from death; and old men, shaking on their shrunk shanks, saw through the operation bright visions of renewed youth. Alas once more for popularity overwrought! Further trials led to several deaths, believed to have arisen from the operation. At last a great man, or rather the son of a great man, succumbed after it, and then the prospect was shut out for a century or more. The King of France issued a decree, and the Pope of Rome issued a bull against transfusion. Of late years—*i. e.*, within the present century—some experimentalists have recurred to what is called transfusion; but they have not followed Lower either in thought or in act. I do not believe that Lower's operation has ever been performed absolutely; and it is quite certain that his view about removing diseased blood and supplying fresh blood has never been put into practice. In fact, there would be a disposition rather to laugh at Lower's idea than to act upon it. But after all it is not an idea to be laughed at, except by the ignorant. I, whose bent in experiment has been much like that of Lower, have seen results from the injection of blood which tell largely in favour of his views, and which will perchance some day show us that he was, as he believed himself to be, on the borders of a new world in Medical science and art.

The pity in the case of Lower was, as I have said, that he was successful in the eyes of the world too speedily. This is a useful experience for the young student who is ambitious to excel and to add something to the capital of knowledge. Lower learned this lesson, and I, from a similar source of information, can repeat it, that nothing is so bad for a new truth as its too hasty acceptance. Hundreds of truths have been lost for centuries because at their first discovery they did not go through the fire. It was the very opposition to the discovery of the circulation that made it a discovery for all time. It was the very readiness with which transfusion was received that made it so long a lost art. Let the young experimentalist ponder on these truths, not with despondency, but with hope. When he has in his hand a new truth, let him tarry, wait for fame, and if he sees the world too eager after him, let him hold what he holds back rather than push

it into the teeth of the world. Thus will he win, and his disciples and converts, as they come slowly in, will not be men who for a moment have been dazed and then blind, but men who have been convinced, who have actually seized the truth, who know it as it is, who never leave it themselves until they die, and who then transmit it on. In short, in science the fire of opposition is the light that leads to the truth, and victory too easily won is worse than deleat.

Richard Lower having distinguished himself by his experiment on transfusion was at once received into the scientific circle of the day, and in 1667 was made a Fellow of the Royal Society. He continued in practice and did well; he continued in experiment, and also did well; he mixed up in some political strife, and he did not do well, for he gave offence at the Court, and for a season he went down with a run; but he soon got up again, and marched ahead with all his good name restored to him, and in great favour with the people, if not with the Crown.

In 1669, Lower published a work, entitled, "*Tractatus de Corde; Item de Motu et Colore Sanguinis.*" In this work we are presented with a *résume* of a series of experimental inquiries which were almost as important as those that led to the discovery of the circulation itself. One original observation of Lower, recorded by him on more than one occasion, and demonstrated by him to many of his contemporaries, relates to the change of colour in the blood from the venous dark colour to the arterial red. An hypothesis had been put forward on this subject, in which it was maintained that the change took place in the heart, and was due to some kind of combustion there. To detect the exact place where the change of colour of the blood really occurs, Lower performed the notable experiment of laying open the thorax of an animal, of sustaining the respiration of the animal artificially, and of watching the current of the blood in its transit from the right to the left heart. By this means he proved that the change in colour takes place in the vessels of the pulmonic circuit, and he reasoned that it was due to the contact of air with blood, because if the entrance of air into the lungs was suspended, the venous blood came over to the left heart still venous in colour and in character.

In addition to these observations on the blood, Lower first studied carefully the mechanism of the heart. He declared that the heart is always supplied with a proper covering, the pericardium; he declared the organ to be a muscle provided with vessels and nerves; he tried to determine the arrangement of the muscular fibres; he defined the tubercle in the right auricle which has ever since borne his name, the tubercle of Lower; and he gave a faithful account of the valvular machinery. Lastly, in regard to the heart, he overthrew the hypothesis of Descartes, who was of opinion that the movements of this organ depend on the expulsion of blood, and that the blood goes out of the heart during dilatation by a kind of explosive effort. He substituted for this hypothesis the rational exposition that the moment of expulsion of blood is the moment of muscular contraction of the ventricles. Had Lower achieved no more in physiology than these facts in regard to the motion of the heart, he would have ranked amongst the first of his order; with these and his other works in happy combination, he remains, to all who love scientific pursuits, very dear, a light of the English school eclipsed by none. Another work was published by Lower in 1671, entitled, "Dissertatio de Origine Catarrhi in quâ Ostenditur illam non Provenire a Cerebro." This work brought out a reformation in pathology. It had been held that in catarrh there was an actual descent of fluid from the brain into the nose and pharynx. Lower showed that this was an utter fallacy, and that the fluid thrown out was, in truth, produced or eliminated from the lining membrane of the nasal cavity. His last works were a volume entitled "Bromographia," and a book of "Receipts." In great repute as a Physician, admired as an experimental philosopher, an esteemed Fellow of the Royal Society, the *Transactions* of which he has enriched, Lower lived until he attained the age of sixty years. He then—viz., on January 17, 1691—went to his rest, and was buried at St. Tudy, near to the town of Bodmin.

DISCOVERY IN CENTRAL AFRICA.—The Government have received information from the British Consul at Alexandria that Mr. Baker, the African traveller, has succeeded in discovering the second great source of the Nile. The telegram states that it is "the main source" of that river. The latitude of the lake is 2 deg. 17 min. It has been named by the discover the Lake Albert Nyanza.

REVIEWS.

The Surgeon's Vade-Mecum; a Manual of Modern Surgery. By ROBERT DRUITT. Ninth Edition; much improved, and illustrated by 360 highly-finished wood engravings. Pp. 860. London: Renshaw; John Churchill and Sons. 1865.

WHEN a work upon any subject not strictly popular has reached a ninth edition, it is impossible to come to any other conclusion than that there must be some particular reasons for such a demand for the book, as the fact implies. It may, therefore, appear superfluous to do more than simply announce the circumstance that the well-known "Surgeon's Vade-Mecum" has been re-issued for the ninth time; but it is our duty to point out the causes of the great success which has followed Dr. Druitt's efforts, and it would be unjust towards him not to dwell at some length upon the particular improvements and additions which are to be found in this present issue of the work in question.

At the time the first edition of this "Vade-Mecum" made its appearance, Surgery was in a transitional state, if we may so term it. As an art, it is true, it had been carried by its cultivators to a high state of perfection, but it was considered so little worthy of being deemed a science that one of its most distinguished Professors actually wrote a book to prove that Surgery could not be ranked amongst the sciences properly so-called. Since this period, however, there has been such a rapid progress in modern Surgical research, and there has been so much light thrown upon it by learned investigators, that it is impossible to regard Surgery in any other light than a highly scientific art; and it is very evident that the author of the work now under notice is deeply impressed with this truth himself, and is anxious that others should share this conviction. Hence the main reason of its popularity not only amongst students but with those engaged in the daily routine of practice. The book has also been a favourite amongst pupils especially, for a reason obvious to all, and this is, that Dr. Druitt has always been enabled to give the best and latest information on any important subject connected with the domain of practical and scientific Surgery, modestly confessing that for that purpose he has availed himself of the labours of others more intent upon the daily pursuit of practical Surgery than he is himself.

A glance at the work before us, and a comparison between the present edition and one issued but a few years since, will show at once what a large amount of careful labour must have been bestowed upon it, and how much additional information is furnished therein. The author is compelled to commence by making an apology for the delay which has occurred in its preparation. Very truly does he state—"In dealing with a constantly shifting and enlarging body of knowledge such as any branch of Medicine, there is not a single fact, or hypothesis, or mode of practice that does not require to be repeatedly weighed and examined and tested by the most modern researches."

In an admirably written preface, Dr. Druitt lays before his readers fully, but concisely, the changes which have taken place in the theories and rules of practice which have occurred during the period which has elapsed since the first edition of his work was published. We most earnestly advise all to read these excellent remarks; the mind and purpose of the author are here well pourtrayed, and we are herein directed more especially to those parts of the work where additions and improvements will be chiefly found.

Dr. Druitt's concise review of the various theories and doctrines which have from time to time existed regarding inflammation is replete with good, sound, practical sense; and on turning to the body of the work itself, we find the subject fairly and fully treated in an excellent and well-written essay. He disposes very summarily of some of the extraordinary notions which have existed regarding the employment of various remedies for inflammatory action. He regards the use of blood-letting, we believe, in its proper light,—neither despising it nor putting too much faith in it, but looking upon it as a measure of great benefit in certain instances where it is especially indicated; he very properly speaks of it as "a measure life-giving in its proper use, and deadly if abused." With regard to mercury, the following are his remarks, which will be endorsed by most of those who have had large opportunities of watching its effects:—"The author believes that the absorbefacient and antiphlogistic virtues of mercury have been grossly exaggerated, except in the case of syphilitic in-

flammation of the eyeball. All salivation is a cruelty and a mischief. The author has seen low pneumonia arise in a case where the system was thoroughly impregnated with mercury. Hence it is no antidote. The truth seems to be, 1stly, that much of the benefit arising from calomel and opium is due to the opium; 2ndly, that the calomel does good to some extent as an eliminative; 3rdly, that mercury possesses some absorbent or rectifying virtue in lingering inflammations, but that very small doses suffice."—P. 41.

The great and important subject of syphilis seems to have attracted the attention of the author in a particular manner, and the long chapter devoted to it has been entirely re-written. The various questions concerning the pathology and treatment of this disease are thoroughly considered, and the reader will, in a comparatively small space of time, find all that is new regarding it. His remarks on the employment of mercury and the influence of iodide of potassium on constitutional symptoms of syphilis are exceedingly sound and practical. Dr. Druitt is evidently one of those who look upon syphilis as a subject surrounded with questions of the utmost difficulty and interest.

The new and important subjects of acupressure, and other modern remedies for aneurism, of the radical cure of hernia, and of ovariotomy, have a large share of attention paid to them, and the student and Practitioner will find nearly everything essential connected with these matters. To Mr. John Wood in particular he pays a well-deserved tribute for his ingenious and admirable method of treating hernia. There is a spirit of fairness towards others throughout the whole of this work, and especially do we see this noted whilst the author is treating of the great question of ovariotomy. Some of the writers on this subject would do well to take a leaf out of Dr. Druitt's book. Every one who has at all distinguished himself in this operation has been made honourable mention of, and whilst weighing the arguments for and against ovariotomy fairly and calmly, Dr. Druitt castigates with well-deserved severity those foolish objectors to this operation, who, wildly running amuck against it, have no better remedy to suggest, and who, in the author's emphatic and most truthful words, are thus well described:—

"With minds thoroughly fossilised, incapable of making one advance in science themselves, their sole pleasure is to revile those who do; to excite odium against them; to use vituperative expressions, such as "belly ripping," where argument fails; and to delight themselves in the miserable notoriety which they gain by their frantic attacks on scientific men."—P. 537.

Of course we cannot pretend to make any extended analysis of this work, and we must of necessity pass by many matters to which we should wish to refer. We cannot, however, conclude without calling attention to the last section, which treats of the operations of Surgery; and here very properly the author commences with a full account of anæsthesia; the properties and value of ether, chloroform, and intense cold are discussed with a minuteness which the subjects deserve. The causes of death from chloroform, the manner in which it is brought about, and the best means of obviating it are clearly laid down; and whilst duly appreciating the immense value of the agent, Dr. Druitt is by no means insensible to the dangers which may attend its administration. We are glad to find him, whilst describing the mode of administration, giving the first place to that method which is adopted by Dr. Simpson—viz., the employment of the chloroform on a handkerchief. It has fallen to our lot, perhaps, to see as much chlorformisation as most people, and after having witnessed and tried all sorts of instruments and inhalers, we have come to the conclusion with Dr. Simpson and Dr. Druitt that the simplest, safest, and most effectual plan is to use a handkerchief or piece of lint as the medium through which the chloroform is slowly and carefully exhibited to the patient. Inhalers are cumbrous, obnoxious, and dangerous things, adapted only to strike terror into the minds of patients, and to give importance to those who exhibit the chloroform.

The various operations in Surgery are, as in the former editions, well described and illustrated by capital drawings. Of that proceeding which has perhaps of late years produced the most interest and discussion amongst Surgeons—viz., excision of the knee-joint. Dr. Druitt gives a very full and fair *resumé*, and pays a high tribute to those Surgeons who have successfully striven against much opposition to establish it as a legitimate operation.

From what we have stated it will be apparent that we consider this work as one of the most useful to which either the student or busy Practitioner can refer. This present edition has evidently not been sent forth without very great care on the part of the author, and whilst he has confessedly made use of the talent and experience of others, there is ample evidence throughout the entire work of the presiding spirit which has brought together such a vast amount of valuable information as is found in this volume we have had the pleasure to notice.

Chloroform: its Action and Administration. A Handbook. By Arthur Ernest Sansom, M.B. Lond. London: John Churchill and Sons. 1865. Pp. 192.

The author of this book does not write without the advantage of a somewhat extended experience, and a mind well disciplined and well informed upon most branches of science. The book comes to us, also, at a time when some general summary of individual experiences and teaching was needed, and the want has been well and ably supplied, nothing being omitted of importance, while the volume is not disfigured by redundancy. The first two chapters are devoted to the history of the discovery of chloroform as an anæsthetic agent, and the influence which it has had upon Operative Surgery, in which Dr. Sansom maintains that the preponderance of its influence has been for good, and that it has been a direct conservator of human life. Then follows a chapter devoted to the chemistry of chloroform, after which that portion of the book commences which is more specially interesting to the practical Surgeon. In the chapter upon the effects of the inhalation Dr. Sansom holds that the first symptoms—those of excitement—gradually give way to narcosis in such a manner that prior to loss of consciousness, and while still there remains the power to express a wish and perform voluntary acts, the anæsthesia is sufficiently advanced to permit of the painless performance of certain operations, such as an incision into the skin or the extraction of a tooth. "Just at the time that sensation is quite abolished there occurs a muscular tremor, a struggling; slight if the chloroform be administered slowly, occasionally violent if a large dose be given;" and it is on this sign that he prefers to rely, rather than upon the customary test of the eyelids refusing to wink upon touching the conjunctiva, as indicating the time at which a serious and painful operation may be commenced. In the fifth chapter, upon the Physiological Action of Chloroform, Dr. Sansom compares its action with that of other agents capable of producing narcotism by inhalation, such as carbonic acid, amylene, sulphuric æther, alcohol, etc., and he predicts that in the hereafter it is more than probable that we shall be able to select amongst these agents according to the special physiological operations of each, and thus "command in a much more perfect manner than we now do abolition of sensation, abolition of motion, or abolition of consciousness at our will." He utterly repudiates the doctrine that chloroform produces its effect by mere contact with or soaking into the tissues of the nervous system. The doctrine which he advocates very ably in this work is that the narcosis is due to a suppression of the normal action of the blood upon that system; that the primary operation of the chlorofoom when absorbed into the circulation is upon the blood, and that the nature of that action is the arrest or suspension of a due oxygenation. In support of this view he quotes the experiments of Dr. Harley and the observations of Lallemand, etc., and details briefly his own observations to show how the blood is acted upon by chloroform. He thus sums up his views: "Anæsthetics are agents which, when absorbed into the circulation, exert an influence upon the blood. They are shown to have the power of altering its *physical character* and its *physical properties*. By an action upon its constituent (proteinous) elements, they tend to alter (and by a profounder action destroy) its organic molecules. Its physical perfection being interfered with, its function is held in abeyance; the changes which contribute to constitute perfect life are retarded. Narcosis ensues, and is due, not to the influence of a circulating poison, but to the influence of an altered blood."—P. 55. The action of chloroform upon the heart after a temporary stimulus is depressent: "To produce the anæsthesia which chloroform effects, the following causes combine:—1. The special action of chloroform upon the blood preventing its oxygenation. 2. Diminished arterial supply. 3. Sluggishness of flow in the capillaries. 4. Subdual of energy of nerve filaments distributed to the lungs. 5. Shallowness of respiration contributing to prevent free entrance of air into the blood." Chapters 7, 8, 9, and 10 are occupied with the

dangers arising out of the use of chloroform, the circumstances which modify, and the signs which indicate it. They constitute some of the most important portions of the book, and deserve careful study. The general principle of tolerance is that "the feeble bear chloroform better than the strong; children are the best subjects of all; women are better than men; men are most prone to death when they are in the prime of life; and when they are debilitated by pre-existing disease their chance is better than when they submit to chloroform for trivial causes in more perfect health and strength; and further, the chance of ultimate recovery is greater when an operation is done under chloroform for a diseased condition than when it is undertaken for an injury."—P. 70. Of all the diseased conditions of health which increase the danger of chloroform, Dr. Sansom places alcoholism first. Intemperance induces a state of system most inimical to chloroform. It is also fraught with danger in poisoned conditions of the blood during a nervous shock. The only conditions of the lungs which contraindicate its use are a general congestion or acute hyperæmia. In heart disease, the only remarkable danger is in those whose heart fibre is incompetent. "The general lesson inculcated would seem to be this,—that in cases of marked fatty degeneration of the heart chloroform should not be administered; that in cases wherein a debility of the heart is suspected, unusual care should be exercised to administer a free dilution, so that the heart should not be paralysed by the sudden shock of an influence which it cannot withstand."—P. 77. As regards the mode of administration, the author says,—"I recognise two principles for attaining the maximum of safety in chloroform administration: 1. The continuous inhalation of an atmosphere of known strength, an atmosphere of about 3½ per cent. We may call this the principle of definite dilution. 2. The administration of an extremely dilute atmosphere at first, and the progressive increase in its strength, never once passing 5 per cent. We may call this the principle of tolerance."—P. 86. The following represents the relative frequency of the signs of danger observed in the course of chloroform narcosis:—"Cessation of pulse, 19. Concurrent signs—muscular contortion, vomiting, relaxation of sphincters (in 2 cases only the pulse showing signs of failure before actually stopping). Pallor of face and lips, 11; cessation of hæmorrhage from wound, 2; vomiting followed by immediate death, 2; muscular excitement, 15; starting, endeavour to rise up, opisthotonos, epileptiform convulsion, trismus, in many cases accompanied by lividity of countenance, embarrassed respiration, 13: laboured irregularly, or profoundly stertorous; cessation of pulse and respiration simultaneously, 2."—P. 86. He points out how the mode of death may, under different circumstances, be by syncope, by asphyxia, or by necræmia. In the chapter upon the methods of administering chloroform, Dr. Sansom describes fully Dr. Snow's inhaler, Mr. Clover's apparatus, and his own, which certainly has the advantage of portability, in addition to more solid and important advantages. Nothing can be better than the practical rules for administration laid down in chapter 15. Dr. Sansom wisely prohibits anything like hurry or impatience, especially as it is in those cases where the period of excitement is prolonged that the greatest danger is met with and the greatest care required. Where there is difficulty in inducing the narcotism, he says:—"My strong advice is that, regardless of anything, the inhalation should be slowly continued,—never suddenly pushed. It *is* better to put off the administration and the operation than to force the former against the signs of intolerance." Then follows a chapter upon anæsthetic mixtures; one on the use of chloroform in Surgery, and another on its use in obstetric practice. With due care, he considers it safe and allowable in natural labour, especially since it is not necessary to induce a profound action or to carry its operation beyond the first stage, the pain being subdued before consciousness is destroyed. The nineteenth chapter relates to its use in practical Medicine for the relief of neuralgia and other painful diseases; in infantile convulsions, diseases of the air passages, etc. The twentieth chapter discusses its use in dentistry, in which it is especially necessary to give the chloroform gradually. In no case should a deeper anæsthesia be induced than the circumstances of the case require. For the removal of a single tooth, the first stage, short of unconsciousness, is sufficient; but when several teeth have to be removed, the second stage is required, and the repetition of the chloroform may be necessary. Both in this and in other operations about the mouth and face it may be necessary sometimes to administer the chloroform by the nostril—an operation which Dr. Sansom describes at length, and for which, in his apparatus, a special tube is provided. We think that this book is one which will be extensively read—it certainly deserves to be so.

The Phenomena of Radiation as Exemplifying the Wisdom and Beneficence of God. By George Warrington, F.C.S. The Actonian Prize Essay. London: Skeffington. 1865. Pp. 186.

Theology is one thing, religion is another. The former is a science, the latter is nothing if not practical; but its obligations are very apt to sit lightly upon the man who troubles himself but little with contemplation of the Supreme Being, His grandeur, His power, and His beneficence. It was with the object of displaying these attributes in those manifestations which peculiarly come under the observation of scientific inquirers that the Actonian Prize was instituted in 1838. Two awards were made, one in 1844 and another in 1851; the third has fallen to Mr. George Warrington, whose name is as familiar to us all as those of the former prize essayists, Dr. George Fownes and Mr. Wharton Jones, one of the ablest scientific and practical chemists of the day; the inventor of those aquaria which carry their wholesome lessons in life into every educated family. We say Mr. Warrington was the inventor of them; that is of the microscomic vessel, with its nicely-balanced arrangements for oxygen and food, which is as different a thing from a mere fish glass as a Thames wherry is from a washing tub. Mr. Warrington's name will acquire additional respect from the very able manner in which he has fulfilled his task. Thoroughly versed in the topic which forms the basis of his essay, he has condensed into a comparatively small space, and brought within easy range of the popular comprehension, not only a number of familiar and long-established truths, but all the most important results of modern observation and reasoning, and the most recent speculations of philosophy. We have read the book with the utmost interest. We defy any intelligent reader who once commences its perusal to put it down willingly until he has arrived at the very last page. Once let him commit himself to the guidance of Mr. Warrington, and he feels no desire to quit his hand as he leads him to contemplate one after another of those admirable adaptations to the necessities of man and all created things upon our earth in which the phenomenon of radiation plays a part.

It cannot be expected that we should present our readers with anything like a summary of the volume. All we have to do is to recommend it as one which each of them should study, and which each will be the better for studying and thinking over. We shall content ourselves with saying that the subject is discussed under five sections. 1. The Nature and Laws of Radiation—2. Radiation as the Distributor of Light and Heat—3. Radiation as the Mainspring of Meteorology and Climate—4. Radiation as the Physical Cause of Vegetable and Animal Life—5. Radiation in its Relation to Geology and Astronomy.

The following extracts from the concluding chapter will give perhaps a better idea than any other of the style of the writer and of the mode in which he has sought to bring his scientific knowledge to bear upon the immediate aim of the foundress of the prize.

Mr. Warrington repudiates the notion that the highest function of natural theology is to operate as a weapon against the infidel. "To suppose the testimony of Nature to her God, then, to be wholly, or even chiefly, intended for such cases is as degrading to her true dignity as to regard the Bible as a mere text-book for refuting heresies. Both volumes were most surely given us for very different and far higher purposes—to instruct and cheer and edify those willing to believe, to guide their readers to right views of God, right lines of action for themselves. . . . Man is apt to forget God, even though believing firmly He exists. Science in its religious teaching would lead him to remember Him. . . . More still is man disposed by Nature to distrust his Maker, to think Him harsh and fickle, to doubt the wisdom of His special providence, albeit admitting fully as a general truth that God is wise. Science rebukes the impious thought, and leading him through endless mazes of arrangement, seeming evil, apparent contradictions, greater far than any which perplex *his* path, shows him how out of all, yea, *by means* of all, God has brought highest good to pass. . . . Most of all is man inclined to overlook God's love, and, in so doing, neglect to pay to Him that tribute of affection in return so justly due. Here, too, truths of science have their fitting

remedy . . . pointing out that special favour he enjoys above all other creatures upon earth. . . . So, again, does science counteract the two opposed but equally pernicious notions, that man is cared for only as a race or only as an individual. . . . The facts of Nature equally refute both." . . . But the theology of science has certain other special truths to teach. "Where else but there can man be taught rightly to estimate the all-embracing intellect of God, the vastness of His plans, the minuteness of His execution? Where else but there the immeasureable space of time and space in which He acts? The highest notions human minds are capable of forming of the infinities of God—omnipotence, omniscience, eternity, and all-fulfilling presence—are learnt from due reflection on the facts and truths disclosed by modern science." The following remarks remind us of the occasional parenthetical outbursts with which an eloquent and happily still living teacher of comparative anatomy used in our student days to astonish and entrance his class. None who have been thus privileged will fail to recognise whom we mean. "So, too, of man. What but science can unfold so plainly the peculiar dignity, yet littleness, of human beings? Placed on the topmost summit of terrestrial creation, served by all other creatures, all past time, enjoying many blessings peculiar to himself; yet, as contrasted with the Universe, a speck so small as scarcely to seem deserving of regard. . . With dignity and privilege must always be also responsibility proportional. To man most has been given, of him most is required; and if he be, then, but a single member of a world-wide system, then surely higher offices and duties are required of him than the mere satisfying of his individual necessities." "Thus, and in such measure, does physical science teach religion; exhibiting, in wondrous form, the divers attributes of God, the office and relationship of man; unravelling the hidden mysteries of Nature's book, and spreading forth its glittering pages for perusal—inspiring him who reads them aright with reverential awe and gratitude, firm faith, and heartfelt love. To study and decipher the deep meaning of this precious volume is the peculiar privilege of modern days. The book itself, indeed, is old; thousands of years ago poets and prophets scanned its leading features, and stored in the truths it taught. Much there is which the most ignorant in scientific lore may learn from its perusal. But to modern science has it been specially reserved to unfold in all their fulness the priceless treasures of instruction it contains. We know more of Nature's character and meaning, and so can better read and understand her lessons. Let us, then, of the nineteenth century, on whom the gift of knowledge has been thus abundantly bestowed, employ that knowledge to the eternal honour of the giver; and catching inspiration from those ancient minstrels, set forth like them, but in yet higher strain, the glories of creation and Creation's Lord, and hallow every branch of science with such a first-fruit offering of praise and adoration as shall bring down His blessing and approval on the whole."—P. 177.

It is thus that Mr. Warrington concludes his admirable homily.

I. *Estudos Estatisticos, Hygienicos, etc. Sobre as Doenças e a Mortalidade do Exercito Portuguez de Junho de* 1851, *a Julho,* 1861. Lisboa. 1862. Small 8vo. Pp. 270.

Statistical, Hygienic, and Administrative Considerations on the Diseases and Mortality of the Portuguese Army during the Decennium from June, 1851, *to July,* 1861, *with Numerous Comparative Data, etc.* By Dr. José Antonio Marques, Surgeon of Brigade, Knight of the Order of Christ and of the Order of N.S. da Conceicão da Villa Viçosa, etc., etc.

II. *Resultas d'uma Commissão Medico-Militar em Inglaterra, França, Belgica, e Paizes-Baixos, "Londres Medica," etc.*

Summary of a Medico-Military Commission in England, France, Belgium, and Holland, followed by chapters under the head of "Medicine in London." Idem. 1859. Large octavo. Pp. 396.

The description which the Italian poet has given of human life, as "transient and of no duration," is in the highest degree applicable to the forms of political existence which surround us at the present day. Made to bend to the circumstances of the hour, and in correspondence with the idiosyncracy of those in high place, they afford opportunities for personal advancement and perversion of principle not inferior, perhaps, to the despotic governments which have preceded them; but in any case abuse is more endurable when the best fruits of hope may possibly be realised, and when reason may be expected to alternate with error. In societies where open expression is encouraged, and every complexion of thought is entertained, the idea of general progress allays the fever of expectation, and reconciles the worthiest and best to the struggles of opposition, since they may even hope for the final triumph of sound principle out of the seed of bad transactions. The "initiative" which is felt to flow more brightly and kindly from the hand of a king is liable to come down to us, in constitutional governments, choked and muddled by party compromise and the sordid interests of the represented, in such wise, that the gross, the material, and the expedient, seem constantly to predominate over enlightened, free, and comprehensive views. Nor is an imperial parliament always a true exponent of the most advanced intelligence of the age; in points of delicate issue it is apt to give them the go-by, as finding occupation enough in questions of a lower level. There are countries, however, where corporeal wants are less crying and imperious than in our own, and we are always pleased to see science assuming in them such a position as is worthy of it and of the epoch in which we move. With gratification, therefore, we perceive the Portuguese nation (favoured by the temper of its later sovereigns and a representative Chamber of the most liberal tendencies) renewing itself like a shotted snake in spring time, and marking progress by the support it is giving to science, through commissions of inquiry and research, in things of rare and social interest, both at home and abroad; an employment of public means which is instructive to successive ministries, subsidiary to native culture, and as advantageous to the world at large as it is honourable to the Portuguese nation and people. The works which lie before us under the name of Dr. Marques partake of this character, and in various fields of inquiry Portugal has now many others. We are not prepared to state that these under notice are the very best which have been produced, but we have found them written with great ability, and none, we think, are more highly calculated to create an interest in the affairs and literature of Portugal.

The first of these publications is a report on the health of the army, not inferior in character and merit to that of which we avail ourselves in England, but preceding by many years any effort of the French Government in the same direction; it is compiled and commented on by Dr. Marques in connexion with the health department of the War Office at Lisbon. A careful perusal of the contents will show him to be a highly instructed and keen observer, and will serve to corroborate many of those intrinsic maxims of military hygiene which have most need to enter into the convictions of the military profession and of Governments, let alone the crowd. The work may be read with especial interest at the present hour in connection with the train of argument with which Dr. Playfair is just now favouring the public. A scale of dietary undoubtedly insufficient gives to hemeralopia, stomatitis, anæmic and gastric affections a predominance which tells as plain a tale as scurvy could do of false economy in nutritive material. The practical turn of the author's mind, and his readiness in hitting a blot, are sufficiently apparent throughout.

The larger volume allows more scope for literary talent. It is made up of the details of various commissions in European countries wherein Dr. Marques has received direction from his Government. By one of these he was deputed to the ophthalmic congress held in Brussels, in September, 1857, when the question of army ophthalmia was exhaustively discussed; a very high degree of Professional interest attaches to that division of the work. A further object was fulfilled by a report on the organisation of the army Medical service in different countries in Europe, with particular attention to the hybrid Medico-military educational establishment at Utrecht, an institution where the most refined and closest principles of utilitarianism, with an especial view to state economy, are subservient to the training for military service of a Medical corps who may be considered, from the period of their entrance to school until they quit the uniform, to be as sharply divided from the outer world as a brigade of Mamelukes or a seminary of Jesuits; but still, in after life, at least partially rewarded by privileges of free practice, at the expense of the civil side of the Profession. An arrangement of such character, rather suited to the meridian of Moscow than to the atmosphere of a country which boasts itself the cradle of European liberty, however it might tally with the narrow notions of a few, has, we opine, but slight probability of adoption among us, inhabiting as we do a country where those who contribute funds to a government are inclined to assume direction in the mode of

its expenditure, and not always reconciled to social wrong by the plea of economy and state convenience. The very best is not to be argued of a service whose ideal unit is a charity boy.

But perhaps the most interesting of these commissions, and the one which has produced the most unexpected revelations, is that which regards Hospital aids and the employment of sisters of charity in military Hospitals. The results of Dr. Marques' inquiries completely falsify all those preconceptions which natures rather tender and enthusiastic than humane and experienced have indulged in with regard to this subject. The lady nurse, according to him, has proved itself a failure; two good things are spoilt and a great error is fostered, as commonly is the case where fancy dominates over usefulness and experience. Devotion to religious exercises leads to no reasonable conclusion of aptitude for prompt and laborious accomplishment in every-day serviceableness, but rather the contrary is suggested. Varied observations in France, Belgium, and elsewhere have left Dr. Marques firmly convinced of the truth of these data, in which opinion he is sustained by the agreement of the Medical Profession in every country where an association with the conventual system has been in operation. We may add that experience afforded by the Crimean War, and the later American campaigns, incline us to coincide with his matured opinions. Organisation, ample remuneration, firm discipline are needed for Hospital service; all these were wanting with us before the Crimean campaign; since that time things stand upon a better footing. A corps of Hospital orderlies furnished from the ranks, accountable to comrades and to the Medical officer, are far more likely to meet every requirement than amateur visitors under sanction of the most elevated rank. Fully conceding that the interest displayed by the Empress of the French in the *assistance* at the Hospitals of Val de Grace and Gros Caillou is exceedingly creditable to her benevolence, yet it seems that the advantage gained is not on the side of the public, and decidedly not to be placed to the account of the soldier. The soldier has nought to do with fashion; he should be found at all times sufficient in and for himself, and should be provided for in that sense. In any changes that are toward, we hope that the experience of Dr. Marques, which has met with such full acceptation in his own country, will not be without its influence here. We may add that some degree of improvement in the soldiers' pay and alimentation in Portugal have already resulted from the able report of Dr. Marques, but by no means in just proportion to the unanswerableness of his representations.

Mental Exertion in Relation to Health. By Amariah Brigham, M.D. Edited, with a Chapter on the Cause and Treatment of Indigestion in Literary Men, by Arthur Leared, M.A., M.R.I.A. London: Hotten. 1864.

The preface to this edition of Dr. Brigham's work, which was originally intended to awaken public attention to the importance of modifying the education of children so as to pay a higher regard to their physical development, points out Dr. Leared's reasons for its re-publication. He says—"It is not known in proportion to its merits and to the importance of the subject. Its special aim is to point out the bad effects of an untimely exertion of the intellect in childhood. But the general question of mind *versus* body at all periods of life is largely entered into. Since the book was written, one of the fleeting generations of man—as well as the author himself—has passed away. Nevertheless, that over-stimulation he so well described was never more prevalent than at present. The opening remarks upon the mental excitement and its causes, which existed in the United States at the time they were written, are now quite as applicable to this country. Nowhere is the influence of education more paramount than it is in England. The phrase, 'knowledge is power,' has taken a new significance. Honourable positions and independence are the rewards of superior education alone. The distribution of appointments by the competitive-examination system confers honour alike on the people who conceived it and the rulers who carried it out. There is danger, however, lest the value of the prizes should over-stimulate the efforts to obtain them; lest the intellectual powers should be cultivated at the expense of the physical. It is already rumoured that some of the selections for the civil service under the present system have not been quite successful. A want of elasticity and vigour of character has been observed. These are serious disqualifications in men holding posts of high responsibility."

GENERAL CORRESPONDENCE.

POOR-LAW MEDICAL REFORM.

Letter from Mr. Richard Griffin.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the course of a few days the Poor-law Medical officers will be called upon to exercise their elective franchise. Allow me space, therefore, to beg of them that they will not promise their votes until they have communicated either personally or by letter with the candidates for their suffrages: and, at least, obtain a general promise that when questions of Poor-law Medical relief come before the House of Commons that they will give the subject their serious attention. I think the communication should be made privately, and not on the hustings, for fear of exciting opposition from the guardians, who are more numerous than the Medical officers, and consequently have more influence. Let them inform the candidates that the subject is one of vast importance, and the treatment of the sick poor in the workhouses, as revealed by abundant evidence, is most lamentable. Tell them there are a million and a quarter of the labouring poor annually under the Medical treatment of the Poor-law Medical officers, who are about three thousand one hundred in number, and that the payments made to those officers do not average more than three shillings per patient, a sum so small that it is quite inadequate to the duties required of them. Tell them that the resolution of the Select Committee, so far as Medical Relief is concerned, is not borne out by the evidence, as will be readily perceived by an examination of it; and that the single, incorrect, and unsupported evidence of Mr. Cane, an inspector of the Poor-law Board, has been allowed to outweigh all other evidence on the subject, even the statement of the Right Hon. T. Sotheron Estcourt to the deputation of about 100 Medical men and several members of Parliament who waited upon him in 1859, when he was President of the Poor-law Board. The Right Hon. gentleman said, "The matter ought not to continue in its present state, and if I continue in office I shall use the best means in my power to put the question on a better footing, and to make such arrangements as will be satisfactory both to you and to the public." Much more may be said in conversation on this subject so as to convince the candidate of its great importance, and, if the opportunity permit, the question of general Medical reform and the grievance of the army and navy Medical men may be brought under consideration. I am, &c.,

Richard Griffin.

12, Royal-terrace, Weymouth, July 3.

P.S.—I take this opportunity to acknowledge the receipt of one guinea (the tenth subscription) from Dr. F. J. Brown, of Rochester, towards the expenses of the Association.

SUBCUTANEOUS INJECTION.

Letter from Dr. Alexander Wood.

[To the Editor of the Medical Times and Gazette.]

Sir,—Mr. Charles Hunter in your paper of the 1st inst. professes to answer my letter inserted a fortnight previously. I cannot see why Mr. Hunter should use the strong and unjustifiable language he does. I have not lost my temper, and see no reason why this controversy should not be conducted in a gentlemanly spirit.

Mr. Hunter takes great credit for having on all occasions allowed my claim as the introducer of the practice of the injection of narcotics. My complaint against him is that he limited my invention to its local effect, and took to himself credit for discovering this method of producing "general medicinal effects."

In the preface to my paper published in 1855, I say—"A method of treatment is pointed out in the following pages, generally palliative and often curative; and this is coupled with an explanation of the method of action of the proposed remedy, calculated to show on what its beneficial effects depend. Whether this explanation of the *modus operandi* be accepted or not, there can be no doubt."

So that I did not rest any claim on my *theory* being the correct one.

Mr. Hunter says—"I *proposed* the injection of the cellular tissue with the view of producing general medicinal effects."

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Is this the case? Certainly not. If Mr. Hunter will turn to the bottom of page 18 of my pamphlet, he will find these words:—

"Have we no means of introducing medicinal agents very rapidly into the body, in a situation where they will not be readily decomposed, and where in certain cases we can have at once their local and *their remote effects?* The value of such a procedure in *many* diseases will be apparent. We shall instance but one—neuralgia."

Again, on page 21, I show that my method produces, 1st, a local effect, applied directly to the affected nerve; 2nd, a remote effect, ensuing almost instantaneously on the application of the remedial agent. Further on in the same page I say "that in all probability what is true in regard to narcotics will be found to be equally true in regard to other classes of remedies."

Further, immediately after I first communicated this method of treatment, I suggested to our police Surgeon here to try the injection of a solution of ipecacuanha in the obstinate coma of narcotic poisoning and drunkenness.

When next, therefore, Mr. Hunter feels inclined to claim the discovery of the "general use of the syringe," let him remember—1st, that Dr. Wood's first paper showed the general effect as well as the local; 2nd, that in the same paper its application to other classes of remedies besides narcotics was suggested. I am, &c.

ALEXANDER WOOD.

10, St. Colme-street, Edinburgh, July 1.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 13.

Dr. ALDERSON, President.

(Continued from page 659, vol. i., 1865.)

A PAPER, by Dr. A. WYNN WILLIAMS, was read on

TUBERCULOSIS: ITS TREATMENT BY THE LOCAL APPLICATION OF IODINE; WITH A CASE OF PULMONARY AND LUMBAR ABSCESS DEPENDENT ON CARIES OF THE VERTEBRAL COLUMN.

The Author, after alluding to a paper read before the Society in 1860, wherein he recommended the application of a weak solution of iodine, covered with impermeable cloth, in scrofulous diseases of bone, etc., stated that he had since treated tuberculous deposits in a similar manner when situated in any or every part of the body with more beneficial results than he had seen produced by any other means, using for the purpose flannel wetted with a solution of iodine, ʒiij. of the compound tincture of iodine to ʒviij. of water, covered with an impermeable material, the object to be attained being the permeation of the iodine into the tissues of the body. This plan need not interfere with the administration of other suitable remedies as a rule, excepting in tuberculosis within the cranium and periosteum. The tuberculous diathesis does not bear the internal administration of iodine or its salts. Mercury in any form is injurious. The Author stated that he considered the tuberculous diathesis to consist in the diminution of the red particles and an excess of fibrine. When such is the state of the blood it requires some local irritation whereby hyperæmia is induced, some of the fibrine is obstructed, and becomes the nucleus of the grey tubercle, which is thus from its commencement of low vitality. He pointed out the changes Nature herself sets up in tubercle, showing that the grey or transparent tubercle is at first under the influence of the circulating fluids, but is soon converted into the opaque or yellow. The cause of the opacity of tubercle and ultimate removal from the influence of the vital current—in fact, its death by pressure—is the imbibition of liquid material from the surrounding parts, evidenced by the great increase in oil globules; it is questionable whether the oil globules are deposited as such, fibrine being converted by certain substances, as alcohol, into an oily matter. There is also a great increase in the calcareous matter, the lime, when first imbibed, being probably in a liquid, transparent state, becoming opaque by combining with carbonic and phosphoric acids, products of the decomposition of animal matter. As the case proceeds, the liquid and gaseous matter would appear to be removed by exudation, nothing but a calcareous mass remaining. In some cases also the oil globules are converted into a crystalline or putty-like mass. Then follow extracts from Dr. Williams's work on the "Principles of Medicine," showing the destructive influence of tubercle during the different stages of its growth, softening and formation of vomicæ, with the injurious influences caused to the system in the shape of night-sweats, colliquative diarrhœa, etc., etc. In the treatment necessary to counteract the tuberculous diathesis, the aim of the Physician must be to maintain a due balance of power amongst the various constituents of the vital current. If the democratic or poorer elements should be in excess, their influence must be counteracted by encouraging the formation of the richer or more aristocratic. The Physician must endeavour to promote the removal of the fibrinous deposit of grey tubercle in its earliest state before it becomes aplastic; and this is best attained, in addition to remedies calculated to strengthen the system, by applying a weak solution of iodine, covered with an impermeable material, over the seat of the deposit. That iodine does remove this deposit the Author has no doubt. The want of success in the use of iodine in this country he attributes to three causes: 1stly, the employment of the salts of iodine instead of iodine *per se;* 2ndly, the administering it internally, and in too large doses; lastly, its being applied externally in too concentrated a form. Iodine, when applied in the manner recommended by the Author, acts as a rubefacient over a larger or smaller surface, and can be modified at will; and is not limited to the cutaneous surface, but penetrates the deeper tissues, increasing the action of the parts around the fibrinous deposits, promoting their absorption, and preventing their conversion into fatty matter. It combines also with the lime, forming a soluble salt of lime readily eliminated from the system, preventing the transparent cacoplastic tubercle from being converted into the opaque aplastic one. The beneficial influences of iodine are not limited to the first stage of tubercle, although the same advantages accrue to any fresh crop. It exerts a powerful influence over the yellow tubercles, preventing their increase in size by removing the materials from which that increase takes place—the oily and calcareous matter. In the stage of softening and formation of vomicæ and abscesses, a most important property of iodine comes into play,—that of a disinfectant—rendering the noxious gases powerless to affect injuriously not only the parts in contact with the tuberculous masses, but by their absorption into the circulation, the whole system. The author remarked that he had only appended one case to the paper, observing that the following passage in "Lugol on Scrofula, by Dr. Ranking," warranted his doing so:—"I am not acquainted with a single well-authenticated instance of the cure of lumbar abscess arising from caries of the vertebral column."

Mr. MORRANT BAKER, F.R.C.S., read a paper on

A CASE OF THE HÆMORRHAGIC DIATHESIS.

The Author said that, for the opportunity of seeing and recording the case, he was indebted to Mr. Paget and Dr. Allan, and for some part of the history to Dr. Mott. The subject of the disease was a man, 23 years old, who was strong and healthy until he came up from the country to live in London. Soon after his removal, he seemed to be suffering from disease of the kidney, but recovered quickly on returning to the country. Soon after his coming to town, however, for the second time, he again fell ill with much the same symptom as before, but, also, there appeared on the cheek, near the angle of the mouth, a small swelling, like a minute boil or acne pimple, which, after being accidentally rubbed, bled profusely, at short intervals, for a fortnight; and it was thought that he must have lost, altogether, two quarts of blood in this time. The bleeding then ceased, and did not recur for nearly a twelvemonth. At the end of this time another small pimple, which had recently appeared on the face, began to bleed with great violence, the blood spurting out forcibly to the distance of a foot or more from the patient, and its flow being almost uncontrollable, except by firm pressure. On this occasion the hæmorrhage continued until a common-sized wash-hand basin was nearly full of blood, notwithstanding the efforts made to stop it by pressure, powdered matico, etc., and at last by the actual cautery. The flow of blood ceased after some hours, but began again on the following day, until a considerable quantity of blood (although less than on the last occasion) had been lost. Similar hæmorrhages took place at intervals for about seven weeks. Sometimes, and most frequently, more or less blood was lost every day, the quantity varying from an ounce or two to half a pint; at other times, one or more days passed without any hæmorrhage at all. The

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longest interval, however, with complete absence of bleeding during the seven weeks was only four days. The bleeding was chiefly from the pimples on the face, but sometimes the nose bled also. In small quantities, too, blood was occasionally present in the fæces and in the matters rejected by vomiting. It was also constantly present in the urine. The blood was said to clot always more or less firmly. A specimen that the Author saw and examined carefully looked, in every respect, like ordinary blood, and had separated in the usual manner into clot and serum. There was much general illness accompanying the hæmorrhages, and more than could be accounted for by the anæmia which was caused by the loss of blood. No disease of any special organ could be discovered. Nothing very definite could be assigned as a cause of the patient's illness, and until it began it had never been noticed that slight wounds caused any large or long-continued hæmorrhage, although he thought he was always, as he expressed it, "inclined to bleed." None of his family were particularly subject to losses of blood, with the rather doubtful exception of his mother. No treatment seemed to do any good so long as he remained in London, and he was, therefore, removed into the country, about two months after the recurrence of the hæmorrhages. Within three days after his removal he began to improve, and gradually recovered almost his former health and strength. About two months after his removal he again returned to his house in town, and again, as if from the change, became ill, although no return of hæmorrhage took place. Soon afterwards he left London permanently, and eight months afterwards was reported as quite well. After the description of the case, the Author proceeded to point out, in the first place, the differences between the idiopathic (of which this was an example) and what might be called the traumatic variety of this diathesis, and quoted cases of somewhat the same kind from Grandidier, Wachsmuth, etc. He then noticed the symptoms peculiar to the present case, and their differences from those of purpura, which in some respects the disease resembled. He concluded by noticing the great good that seemed to be derived from change of air after all other treatment had been tried in vain.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—At the Summer Commencements, held in the Examination Hall of Trinity College, on Wednesday, July 5, licenses and degrees in Medicine and Surgery were conferred by the Right Honourable Francis Blackburne, Lord Justice of Appeal, Vice-Chancellor of the University, upon the following gentlemen:—

Licentiati in Medicinâ.—Wellington Gray, Robertus Hudson, Robertus Nelson Mally, Drelincourt Campbell Odlum, Edvardus Aloysius Stephenson, Ricardus Murray Vesey.

Baccalaurei in Medicinâ.—Jacobus Lane Notter *(soc. com.)*, Gulielmus Thomas Greene, Robertus Thomas Cooper, Montgomery Albertus Ward, Gulielmus Nolan, Johannes Holmes Joy, Johannes Latchford, Carolus Fred. Richards.

Magistri in Chirurgiâ.—Jacobus Lane Notter *(soc. com.)*, Carolus Francis Green, Gulielmus C. Hassard, Robertus Thomas Cooper, Johannes Holmes Joy, Gulielmus Henricus Witherby, M.D.

Doctores in Medicinâ.—Gulielmus Colles, Georgius H. Porter, Lombe Atthill.

At the previous Medical examination, recently held, Henry Eames and Edward W. Collins were elected Medical scholars. The Medical School Exhibition was awarded to Maunsell and Tredennick, their answering having been equal. The following gentlemen, whose names are arranged in the order of merit, also passed the examination:—

Bredon, Owen, Todhunter, O'Farrell, Dobson, Dudley, Gasteen, and Jagoe.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, June 29, 1865:—

John Cornelius Fonsworth, 37, Tavistock-street; William John Morgan, Burwood-place West; Edward Seymour Wright, London Hospital; William Cunningham Cass, University College; James Henry Worsley, Manchester Hospital.

The following gentlemen, also on the same day, passed their first Examination:—

George Lucas, St. Thomas's Hospital; Richard Matthews Pryce and Frederick William Young, University College; James Augustus Hayden, Charing-cross Hospital; John George Randall, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BURT, D. A., L.R.C.P. Edin., has been appointed House-Surgeon to the Perth Infirmary.

CAYLEY, WILLIAM, M.D. Lond., has been elected Physician to the St. Marylebone General Dispensary, Welbeck-street.

COATES, FREDERICK W., M.D. Edin., has been appointed Visiting Medical Officer to the Bournemouth Dispensary.

DRUMMOND, EDWARD, M.D. Edin., has been appointed House-Surgeon to the York County Hospital.

ELLIOT, D., L.S.A., has been elected House-Surgeon to the North Shields and Tynemouth Dispensary.

ENGLAND, WILLIAM, M.D. Edin., has been appointed Medical Officer for the Winchester Union Workhouse.

HELSDON, C. V., M.R.C.S. Eng., has been appointed a Resident Medical Assistant at the Middlesex Hospital.

HUNTER, JOHN, M.D., has been appointed Surgeon and Agent to the Coastguard at Lough Swilly.

LEWINS, F., M.D., has been appointed Assistant Medical Officer to the Sussex County Lunatic Asylum, Hayward's-heath.

OWEN, D.C.L., M.R.C.S. Eng., has been appointed House-Surgeon to the Birmingham and Midland Eye Hospital.

PALFREY, JAMES, M.D. St. And., has been appointed Assistant Obstetric Physician to the London Hospital.

SKAE, FRANCIS, M.D., has been appointed Assistant Medical Officer to the Birmingham Borough Lunatic Asylum.

STONE, WILLIAM DOUSETT, M.D., F.R.C.S., has been appointed by H.M. Emigration Commissioners Surgeon-Superintendent of the Government Emigrant ship *General Caulfield*, about to sail from Plymouth for Sydney, New South Wales.

TERRY, H., Jun., M.R.C.S. Eng., has been appointed Certifying Surgeon under the Factory Act for Northampton and its neighbourhood.

WALSH, RICHARD, L.R.C.P. Edin., has been appointed Surgeon to the Police of Clogheen.

DEATHS.

DANIELL, WILLIAM F., M.D., Staff-Surgeon, Army, at Southampton, on June 26, aged 45.

MULHOLLAND, PATRICK, M.D. St. And., at Gorbals, Glasgow, on June 21.

PERKINS, Dr. JEHU, of Louisiana, at Liverpool, on June 1, aged 64.

ROSS, WILLIAM, M.D. Edin., R.N., at Thornbank, Dollar, N.B., on June 20, aged 82.

SCOTT, WILLIAM, M.D. St. And., at Odiham, Hants, on July 4, aged 40.

ROYAL COLLEGE OF SURGEONS.—The annual meeting for the election of three Fellows into the Council of the College, caused by the resignation of Mr. J. M. Arnott, and the retirement in the prescribed order of Messrs. Quain and Shaw, was held on Thursday, when, owing to the unprecedented number of candidates offering themselves for the vacant seats, an unusually large number of metropolitan and provincial Fellows attended the meeting. At 2 o'clock the President, accompanied by the Vice-Presidents, Messrs. Wormald and Kiernan, entered the library, when the former gentleman explained the objects of the meeting, and called on the Secretary to read those portions from the charter and bye-laws relating to elections. This having been done, balloting papers, containing the names of the right candidates, were handed to the Fellows, from which list, there being but three vacancies, the Fellow voting was required to strike out the names of those for whom he did not intend to vote, taking care not to have more than three names remaining. The corrected papers were then handed to the President, and by him deposited in a box. It was not, however, until nearly five o'clock that this process had been completed, when, having ascertained that all had voted, the President ordered the box to be opened, and, scrutineers having been appointed, the President handed to the Secretary the names to read over, and at the conclusion declared the choice of the Fellows to have fallen on Messrs. Quain, Turner, and Paget. The numbers polled by the candidates respectively were:—

Quain	. . . 225,	including	55	plumpers.
Shaw	. . . 58,	,,	4	,,
Turner	. . . 141,	,,	19	,,
Wilson	. . . 24,	,,	2	,,
Ure	. . . 20,	,,	2	,,
Paget	. . . 205,	,,	6	,,
Hewett	. . . 118,	,,	2	,,
Hawkins	. . . 47,	,,	2	,,

THE ROYAL COLLEGE OF SURGEONS.—At a meeting of the Council of the Royal College of Surgeons, on July 4, Mr. Cæsar H. Hawkins, F.R.S., of Grosvenor-street, was elected the representative of the College at the General Council of Medical Education and Registration; Mr. John Hilton, F.R.S., of New Broad-street, was elected an examiner of the College,

in the vacancy occasioned by the resignation of Mr. J. M. Arnott; and Mr. James Luke, F.R.S., of Maidenhead, was elected a member of the Dental Board, in the vacancy also caused by the retirement of Mr. Arnott.

THE ROYAL COLLEGE OF PHYSICIANS AND THE ARMY AND NAVY MEDICAL SERVICES.—At the quarterly comitia of the College held on June 26, a report was received from the President and Censors, to whom the Fellows at a previous meeting had referred the consideration of how far, and in what way, the College could best use its influence for ameliorating the present position of Army and Navy Medical officers. The report recommended the addressing of a letter by the College to the Secretary of State for War, and to the First Lord of the Admiralty; and concluded with the draft of a proposed letter, which met with the unanimous approval of the meeting. The letter stated that it was well known that a deep-rooted discontent existed amongst the Medical officers of the army and navy. It was no less true that the Royal Warrant of 1858 had at once given universal satisfaction; and that, trusting to its promises, many of the best-educated and most talented members of the Profession had been induced to enter the army. There could be no doubt that a return to that Warrant, and to the Navy Warrant of 1859, would be followed now by a like result. The College, therefore, hoped that the propriety of such a course would be duly considered. The report of the President and Censors was adopted without dissent; and the President was requested, in the name of the College, to transmit the letter, of which the draft had been read, to the Secretary of State for War, and a similar letter, *mutatis mutandis*, to the First Lord of the Admiralty.

THE *Trister Zeitung* of June 26 publishes a report from Alexandria on the cholera in Mecca, in which it says: "The Mussulman festivals of the Kurban Bairam took place during the first twenty days of May, when 600,000 to 700,000 pilgrims annually assemble in Mecca and upon Mount Ararat to celebrate their pilgrimage with the usual religious ceremonies. The mode of life, utterly opposed to all rules of dietetic prudence, pursued by these crowded masses for ten or fifteen days at the Holy Places, yearly entails a number of diseases to which many are sacrificed. This year the cholera, or, as the Government prefers to call it, cholerina, was added to the customary pests, and is said to have carried off 20,000 people at Mecca and Gebel Ararat within the short space of two months. Private accounts place the loss of pilgrim life at 100,000—an estimate obviously exaggerated, as these do not even include the deaths by cholera. We in Alexandria have no more exact details as to this terrible drama, which makes no extraordinary impression upon the pilgrims themselves, who in their religious fanaticism believe every one certain of Paradise who dies during pilgrimage. The country being at all times inaccessible to European Medical men, the meagre reports we have are derived from a few Egyptian military Surgeons ordered by the Government to accompany the pilgrims from Egypt."

LADIES' SANITARY ASSOCIATION. — The Committee, believing that by far the greater part of the debility, disease, and premature mortality in this country results from preventible causes, and from ignorance of the laws of health, have endeavoured to extend and popularise sanitary knowledge. For this purpose they distribute simple, interesting tracts on sanitary and domestic subjects; arrange for the delivery of popular free lectures in working men's clubs, etc.; establish loan libraries; form branch associations (10 branches have already been formed); hold meetings for various purposes (from those on over-work the London Dressmaking Establishment has arisen); form gymnastic classes; send out park parties twice in each week during the summer months, giving bread to hungry children (29,000 children from the ragged-schools were sent out last summer). The Committee wish not only to continue this work, but to increase it, by offering prizes for clean and tidy rooms; by encouraging flower shows; establishing nurseries for motherless babes; by employing sanitary missionaries, etc., etc.; but the funds at the disposal of the Committee on March 31 amounted to £12. They therefore ask assistance, by annual subscriptions or donations, to carry out these objects.

DEATH PRODUCED AT THE END OF FOUR DAYS BY A FOREIGN BODY IN THE AIR PASSAGES.—A boy, aged 10, on the Monday, swallowed a bean, and was immediately seized with a suffocative paroxysm. This soon passed off, leaving the child apparently well during Tuesday, Wednesday, and Thursday; although coughing now and then, he was playing about and lively. On Thursday night another suffocative paroxysm came on, and the child died. At the autopsy, the Morgagni ventricle of the larynx on the left side exhibited a circumscribed inflammatory spot, from whence stretched lines of inflammation towards the back of the trachea. In the left bronchus, immediately after the bifurcation, lay the bean, entirely obstructing it. The portion of the bronchus where the bean was scarcely exhibited any trace of inflammation, and the entire left lung was healthy. The bean was swollen, and measured two centimetres in length and one in breadth. Dr. Beigel, who relates this case, thus explains its phenomena:—After the ingurgitation of the bean, this fell into the larynx, and remained in the Morgagni ventricle, where the marks of inflammation were found. On the Thursday night it fell into the air-tube, and left traces of its progress to and fro along the posterior wall of the trachea. Hence it must again have returned into the larynx, and, closing the cords, gave rise to the fatal suffocation. After death the relaxation of the larynx allowed it to fall into the left bronchus.—*Virchow's Archiv.*, 1863, No. 1.

OBITUARY.

MR. ROBERT COOK.

OUR obituary of June 17 contained the name of Mr. Robt. Cook, of Gainsborough. Mr. Cook was one of the oldest, if not the oldest, Practitioner in the county of Lincoln. He commenced his Medical career at Newark, where he remained only a few years, and had as his first pupil the late Dr. Marshall Hall, F.R.S., of London. Mr. Cook settled in Gainsborough in 1813, and from that time until his death—a period of fifty-two years—he continued there. Altogether he was in active practice nearly fifty-six years. Mr. Cook was very well known, not only to the Medical world, but to all classes of the community, throughout a wide circuit. Indeed, few men possessed a larger acquaintance than he did, and his loss, even at the ripe age to which he had attained, will be much felt.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Metropolitan Fellow.—In July, 1863, there were six candidates in the field for seats in the Council of the College of Surgeons.

A Provincial Surgeon.—The late Mr. Hodson, who practised for half-a-century at Lewes, Sussex, performed the operation of lithotomy, without losing a patient, thirty-five times consecutively.

A Dentist.—From inquiries made it is stated that the new Board will meet some time in the ensuing month for the examination of candidates. Write to the Secretary for the regulations.

J. H., M.D.—You can see a very large multilocular ovarian cyst, removed by Mr. Spencer Wells, which has just been mounted by Dr. Pettigrew, and is exhibited, with a great number of other interesting preparations, in the theatre of the College of Surgeons. They will remain on view a few days longer.

A Doctor on Strike.—We admit the intensity of the provocation, but believe more strongly than ever that the policy of refusing to attend in cases of accident or sudden illness is quite mistaken and suicidal. We may treat the subject as one of £ s. d. simply, or as one involving higher consideration. The first way of putting Professional conduct is a very short-sighted one. We complain that the public get as much as possible out of us, and pay us as little as they can. Why should they not, if Medical services are to be considered mere matter of barter? And how are the public ever to be got to know that Medical men deserve payment for skill, tenderness, and humanity unless those qualities be exhibited in actual life? For our own parts, we believe that a mere mechanical set of Medical men—fellows all brain and finger, with no heart—would never find things answer. No, we say; save life first, then put forward your claim; but don't sit and sulk whilst a fellow creature is perishing.

The trial of Travers v. Pott in the Court of Queen's Bench, in Dublin, seems to have been an attempt to drag Sir W. Wilde into the witness-box, and to subject him to cross-examination in matters relating to the late trial of Travers *versus* Wilde. We must say that we wonder how any legal practitioners of eminence can be found to bring such cases into court. The Lord Chief-Justice said, "It appears to me that it has been a case by which an attempt was made to have a re-hearing of a former case in which the same party was plaintiff." We are very glad that the plaintiff was again defeated. Now that time has passed by, and the excitement occasioned by the former trial may be supposed to have cooled down, we may take the opportunity of passing our judg-

ment on what we consider the unfair and uncharitable line taken against Sir W. Wilde by some of our contemporaries. The evidence against him would not have convicted a pickpocket. But we assert here, as we asserted before, that, even supposing the charges to have been true to the full extent of the plaintiff's self-immolating assertions, it would have been just the case to have been veiled in respectful silence. Charity hides faults. In this fault, if it were one, there may have been the fruits of misdirected enthusiasm, of an indiscreet attachment taking possession of a romantic mind; but there was nothing of that which gives baseness to seduction—nothing mean, grovelling, or low. We assert of the whole business that it is a scandal that such a thing was ever allowed to be revealed to the public; but that, even had the charge been as substantially true as we believe it to have been the contrary, there is nothing in it which need deter his Medical brethren from freely giving Sir W. Wilde all the honour and confidence which he has won by years of labour in the cause of humanity, science, and letters.

Health and Beauty.—Every man worthy of the name likes to see his wife well dressed. He also hates the idea of the slavery imposed on the poor milliners' girls, and even the most charming corsage and gracefully undulating skirt would lose somewhat of their beauty if he thought they were bedewed with tears from over-wearied eyes. Now, we have the privilege of a *répertoire* where Fashion and Health are worshipped at one altar; where oxygen and mirth, and good roast mutton, and wholesome baths for the poor girls take the place of frowsy steams, harsh taskmistresses, and scanty commons. Dressmaking is the highest of the arts and sciences; it aims at the decoration of woman, that last work of creation. But if dressmaking be an art or science, it must be exercised under the conditions necessary for success in all other intellectual pursuits. A dress can neither be designed nor executed to perfection by a creature out of health. Half the misfits, the ill-assorted colours, the baggy abortions of costume which one sees make youth look aged, and age hideous, can only proceed from brains ill nourished, and fed with badly aërated blood. If, for the future, good taste should reign, and graceful forms be clad in robes to match, we shall accept it with gratitude as one of the brightest fruits of the sanitary movement, and shall see in every perfectly dressed woman one blessed result of Dr. Lankester's sanitary arrangements.

"The London Dressmaking Company has recently opened a house of business at No. 18, Clifford-street, Bond-street. They have already twenty young women at work, and hope, from the orders received, to be able to double the number before the end of the season. In this hope they have taken the adjoining house, and will be able before long to accommodate about fifty persons without undue crowding.

"The sanitary arrangements have been superintended by Dr. Lankester, Coroner for Middlesex, and Medical Officer of Health for the parish of St. James's.

"The following are the principal rules of the house:—No workwoman shall be required to work for more than ten hours daily; work-hours, from a-quarter past eight o'clock to half-past seven o'clock, allowing an hour and a-quarter for dinner and tea. Breakfast at a-quarter to eight o'clock; supper at nine o'clock. No more persons shall sleep in one room than is deemed consistent with the laws of health,—*i.e.*, allowing not less than 400 cubic feet of air for each person. The work-rooms shall be arranged on the same sanitary principles. The diet shall be wholesome, the food sufficient, and well cooked. The house shall be open to inspection at all hours by three members of the Visiting Committee, who, on finding any infraction of the rules, shall report the same to the General Committee. The out-door workers shall board in the house, and be lodged in a Dressmakers' Home, or other respectable lodging. No article of dress shall be sent out of the house without the bill accompanying it, and all bills shall be payable at three months at farthest, after which time 5 per cent. shall be charged. No work shall be undertaken which would entail work beyond hours; when the pressure of work is great, out-workers shall be employed. No work shall be done on Sundays on any pretence whatever. The inmates will be expected to attend daily prayers in the house, and divine service on Sundays. The establishment shall be placed under the inspection of the Medical Officer of Health of the District. The accounts shall be audited quarterly, and a report published annually.

"An excellent manager and efficient staff have been appointed, the heads of each department being chosen from the best houses in London and Paris; and in order to secure good taste, several ladies of distinction have consented to give their supervision to the show-rooms."

The affair is affiliated to the Ladies' Sanitary Association.

The Finsbury Election.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The Committee of Mr. W. Phillips are desirous of enlisting in his favour the earnest support of the Medical Practitioners of this borough. Their interests are his, for he is convinced that the efforts of the Parliament now to be elected will, under the existing aspect of affairs, be mainly directed to the revision of questions appertaining to our domestic habits; and for the development of this great object the aid of the Medical Profession will, above all others, be required. Yet this great and intelligent body are scantily represented in the councils of the nation: all other learned professions whose interests are linked with the interests of the State can plead their cause, advance their aims, and give the commonwealth the advantage of their counsel. The Medical Profession are precluded by the urgency and uncertainty of their calling from rendering this service to their country, and the body politic suffers accordingly. It has long been Mr. Phillips's conviction that, if little able to dedicate themselves to Parliamentary duties, the benefit of their counsel might be assured to the community through the instrumentality of others, and he anxiously desiderates the honour of being the first to assume the advocacy of Medical measures, as of weighty moment to the general public, if the election for Finsbury should go in his favour.

The great social questions of the day can receive no solution unless aided by the intelligence of that Profession which alone is truly conversant with the habits and requirements of the bulk of the people. The friend of the poor as of the rich, the Medical man enjoys the confidence of those whose distresses he may be said to share. Educated to a degree above those around him in all that science can contribute to solve the difficulties before us, his voice is scarcely heard, his influence little perceived in an assembly of men, however talented, but habituated only to the field, the camp, the law court, or the church, few of whom are young enough to have made acquaintance with the vast strides which science has made of late, especially in hygiene.

Cognate with this development of Medicine as a State science is the requirement of due honour for its professors, and Mr. Phillips desires to demand a faithful inquiry into the social status of the Medical officers of our army and navy and the Poor-law Surgeon.

Mr. Phillips, in the event of his success, will be at all times desirous to be informed of all matters of Professional moment requiring recognition in Parliament, and upon this ground ventures to solicit the aid of all members of the Profession to advance his return to the House of Commons, in which he will be as much their representative as that of the borough of Finsbury.

I am, &c. E. Cousins.

COMMUNICATIONS have been received from—

Mr. Edwin Arnold; Mr. R. C. Powles; Apothecaries' Hall; A Subscriber; N. E.; Mr. Charles Hawkins; Dr. M. T. Sadler; Royal Institution; Mr. R. Griffin; Dr. Reginald Harrison; Dr. A. Wood; Dr. C. L. Robertson; Dr. H. Barker.

BOOKS RECEIVED.

The Ninth Annual Report of the State of the United Lunatic Asylum for the Borough and County of Nottingham.

The Annual Report of the Dorset County Lunatic Asylum. 1864.

Report of the Derbyshire General Infirmary.

The Sixth Annual Report of the Sussex County Lunatic Asylum. 1864.

The Student's Book of Cutaneous Medicine and Diseases of the Skin Part 2. By Erasmus Wilson, F.R.S. John Churchill and Sons. 1865.

Annual Report of the Surrey Lunatic Asylum.

The Report of the Cheshire Lunatic Asylum.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 1, 1865.

BIRTHS.

Births of Boys, 1004; Girls, 965; Total, 1969.
Average of 10 corresponding weeks, 1855-64, 1788·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	747	708	1455
Average of the ten years 1855-64	595·1	534·8	1129·9
Average corrected to increased population..	..	..	1242
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	403,388	2	7	5	1	3	7	27
North ..	618,210	3	3	13	5	16	23	48
Central ..	378,058	1	1	6	1	9	7	21
East ..	571,158	..	2	11	1	12	13	55
South ..	773,175	2	6	12	1	8	13	33
Total ..	2,803,989	8	19	47	9	48	63	184

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·701 in.
Mean temperature	59·5
Highest point of thermometer	77·0
Lowest point of thermometer	47·0
Mean dew-point temperature	59·3
General direction of wind	Variable.
Whole amount of rain in the week	1·41 in.

APPOINTMENTS FOR THE WEEK.

July 8. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

10. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

11. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

12. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

14. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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BY HER MAJESTY'S ROYAL LETTERS PATENT
AND BY SPECIAL APPOINTMENT TO HER MAJESTY
AND THE ROYAL FAMILY
THE EMPRESSES OF RUSSIA & FRANCE &c. &c.

JOHN WARD

5 & 6, LEICESTER-SQUARE, LONDON.

No. 12, Ward's Patent Albert Lounging Chair, the most simple and luxurious extant, is fitted for the Drawing Room, Boudoir, Cabin, or Camp; is made in Wood, Iron, or Brass, and folds into a small compass for shipment. From 4½ Guineas.

No. 17, a Four-wheel Victoria Pleasure-ground Chair, mounted in a very light Iron-framed Carriage, upon C and patent India-rubber Springs, is either drawn by Hand or Animal, and is the most elegant and easiest Chair made.

No. 16, a ditto, upon three wheels, mounted same as four wheels, on C and India-rubber Springs.

No. 19, a Bath Chair, with Leather Head, and Folding German Shutter.

No. 18, a Sofa Britska Spinal Carriage, with the inside Tray made to take out and in, on which an Invalid may be taken from her room to the carriage.

No. 8, Ward's Improved Operating Dentist Chair, suitable for a Child or Adult.

Nos. 10, 10, sketch of Earl's General Invalid Couch or Bed, made with or without a Convenience; it adjusts the back seat and legs to any given position by means of machinery, and is recommended by the Faculty as being the most complete Bed ever made for confirmed Invalids, or for Fractured Limbs.

No. 11 is Ward's Patent Reclining Chair, with Shifting Elbows for more easily getting on and off the Chair when the leg-rest is drawn out, as shown in the drawing.

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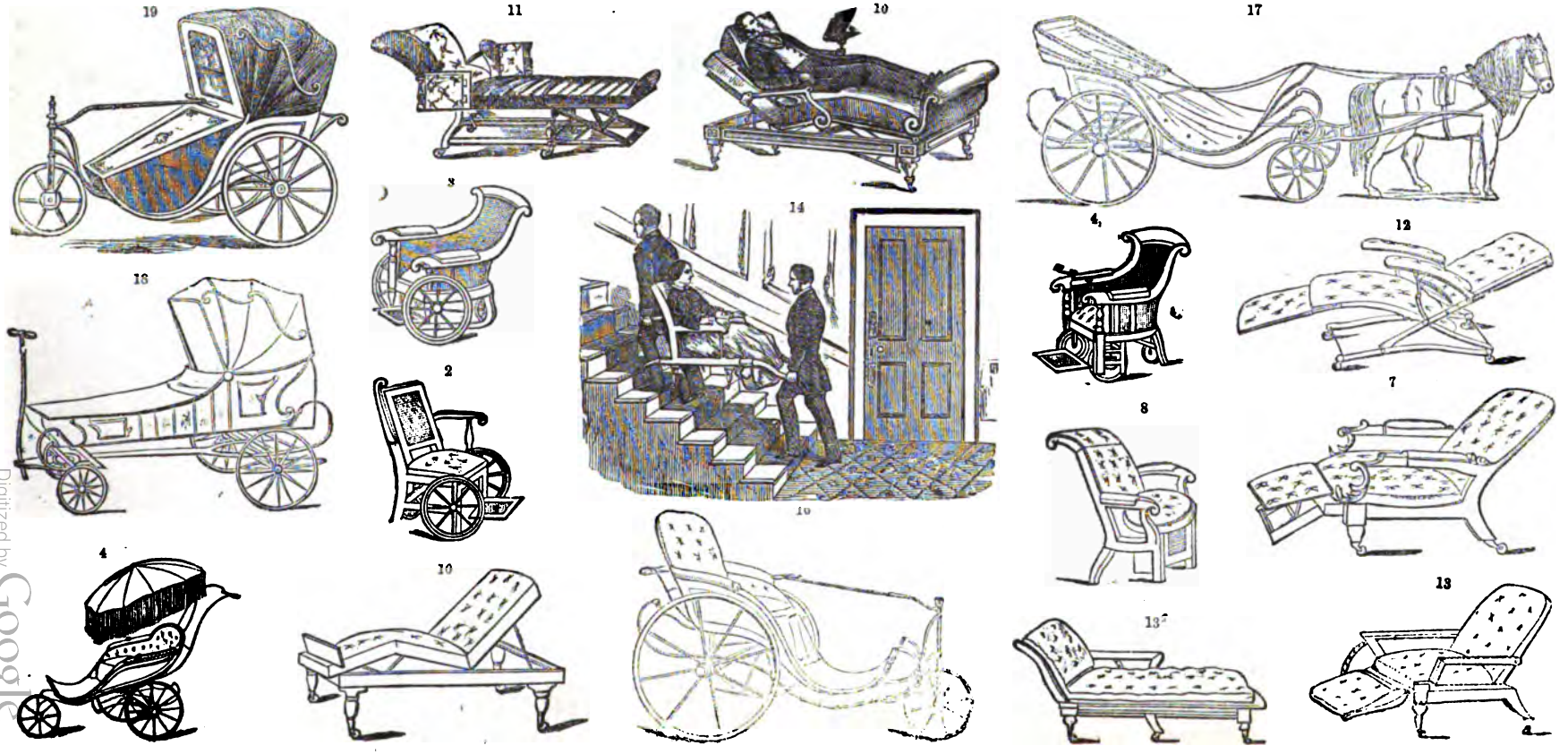
Nos. 13, 13, is a Couch-Chair or Bed invented by Dr. Hester, and may be placed in any position by the Invalid without the assistance of a second person.

Nos. 2, 3, and 4, are all Self-Propelling Chairs, upon the best and most scientific principles; either may be used by a child eight years of age with perfect ease.

No. 24, Ward's Improved Child's Perambulator, with Patent Parasol. A variety always on hand.

No. 14 is the simplest and best-constructed Chair for **carrying invalids up and down stairs, the lower handles for level ground, the upper ones for ascending** or descending a staircase: the sketch conveys the **exact idea: it is also made** portable for travelling. Several other kinds are always in stock, upon various principles.

N.B.—The largest Assortment in the World of INVALID CHAIRS, CARRIAGES, CRUTCHES, and BEDS always on hand, for Sale or Hire. **Established more than a Century.**



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ORIGINAL LECTURES.

LUMLEIAN LECTURES
ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.
Physician to St. Mary's Hospital and Lecturer on Medicine.

Lecture I.

(Continued from page 4.)

In the preceding remarks I have chiefly had regard to paresis of the cord; the cerebral hemispheres seem, however, even more prone to suffer in this way. This is, perhaps, not surprising when we remember that they are evidently that part of our material frame through which all mental operations are conducted, and which bear the chief strain of the toils and anxieties of life. That mysterious and subtle agent we term influenzal miasm affords us not infrequently the opportunity of observing remarkable examples of cerebral paresis. I have recorded in my work on Functional Nervous Disorders several which came under my own observation. At present I prefer to cite some records of the experience of others. Dr. Arbuthnot, describing the epidemic of 1732, says, "there was during the whole season a great run of hysterical, hypochondriacal, and nervous distempers; in short, all the symptoms of relaxation. These symptoms were so high in some as to produce a sort of fatuity or madness, in which for some hours together they would be seized with a wandering of their senses, mistaking their common affairs; at the same time they had not any great degree of fever to confine them to their beds." Dr. Falconer says of the epidemic of 1803, "Vertigo, and that to a considerable degree, was in some persons one of the first signs of the disease, and in several instances very alarming and distressful. I saw a lady affected to such a degree as not to be able to raise her head from the pillow without losing all sense, and to whom all objects appeared thrice multiplied. Those who were affected with vertigo, even to a less degree than in the case above described, were nevertheless unable to read a letter or a few lines in a book. This vertigo was evidently dependent on an enfeebled state of brain; it was absent in two of the worst cases of pulmonary inflammation." In Dr. Streeter's report of the epidemic in 1836 it is stated "there was delirium occasionally; in some cases the speech was affected, so that the patient was unable to articulate; in a few cases there was coma at the outset, which soon went off." Dr. Hastings also saw one instance in which apoplectic symptoms occurred, but without subsequent paralysis. Mr. Ceely observed that in a few old and feeble persons the primary effect on the sensorium resembled a sudden apoplectic seizure, from which by sinapisms and diffusible stimulants they slowly recovered, with fever and the usual affection of the mucous membrane of the air passages; one of these cases, however, proved fatal in four days from its commencement. Mr. Fox states that in a few cases there was sudden insensibility, continuing from one to two hours. There can be, I think, no question that the morbid phenomena above described were the result of the direct prostrating action of the poison on the encephalon, and were not dependent on congestion or effusion, or any alteration in the blood-supply. Their brief duration, their irregularity and inconsequence, the juvantia, and the nervous type of the prevalent disorders, all go to establish this point. It seems tolerably certain that the debility which is so marked a feature of all influenzal attacks, and which in ordinary cases affects in a moderate degree the brain, the cord, and the nerves, in some instances becomes, as it were, concentrated on the superior nervous centres, and renders them more or less completely paretic. The action of the miasm on the brain is so evidently identical with its action on the vaso-motor nerves, causing as it does most marked dilatation of vessels and quasi-inflammatory phenomena in the mucous membrane, that I think there can be no question that the paralytic effects it produces on the centres are not owing to any anæmiating spasm of the small arteries. Few things in pathology are, I think, more remarkable and interesting than the working of this strange widely-diffused miasm. Of its real nature we know nothing; we know only that it is not a mere gas or ponderable matter carried by atmospheric currents, that it has a special action upon the nervous system, and that it has a certain but obscure relation of affinity to that most wide-spread of all diseases—malarious fever and its associated neuralgiæ. While, however, the latter and all the epidemic disorders have, more or less distinctly, some material source from whence they originate, this mysterious infliction seems independent of any. It comes sometimes with a wide sweep, prostrating its hundreds or thousands daily; while at others it smites a single victim here and there; but in neither case can we form any conception whence or how it has had its being. The facts of the frequent sporadic occurrence of influenza and its especial prostrating action on the nervous system, seem to me to make it necessary to regard it as a very possible morbific element in investigating obscure cases of nerve disorder. The catarrhal symptoms, it should be remembered, are no necessary part of the disease, at least at its outset. A lady about whom I was recently consulted was attacked one morning before rising with intense giddiness and vomiting, but had no other symptom. By the aid of spoonfeeding with brandy and milk, she soon recovered sufficiently to take tonics, and regained her usual state.

The subject of the following history is a policeman, aged 24, of healthy aspect, a total abstainer for the last three or four years, and employed in his present vocation a year and eight months. He had had inflammation of the bowels two months ago, and had only resumed his duties rather more than a month. One of his comrades found him in the early morning, March 7th, probably about 5 a.m., in a state of total insensibility at the bottom of a street adjoining a canal. He had seen him at 4 a.m., when he appeared quite well. He was in a sitting posture, leaning backwards against some boards; there was but little appearance of any struggling having occurred. On admission into the hospital about 7 a.m., his pulse was very weak, his face was not pale, but he was very cold. At 10.45 a.m. he was still quite insensible, his breathing was quiet, pulse 68, soft and quick, pupils contracted and dilated alternately. A stimulant of chloric ether and spt. ammon. co. had been given. At 2.30 p.m. he was quite sensible; his feet were quite warm. Complains of pains across the forehead, deep-seated, not increased on pressure. States that he felt the attack coming on with a sensation of coldness in the back, and oppression across the upper part of chest, soon after which he became insensible. The next day his urine was thick and lateritious, sp. gr. 1031, acid, and contained apparently a fair amount of chlorides. He had had no sleep from a troublesome cough, sputa contained a considerable amount of blood. On the following day he complained of pain in the loins and ilio-cæcal region; there were no spots. Two days later he appeared quite convalescent, was up and dressed, appetite was good, but he had still morning cough, and expectorated at the same time mucus mixed with blood. No recurrence of disorder took place, and he left the hospital on March 19th. Examination with the laryngoscope on 22nd showed that the mucous membrane lining the upper part of the larynx was very much congested, which probably accounted for the blood in the sputa; his gums were also unduly vascular. Careful inquiry was made as to the existence of a tendency to syncope or epilepsy, but none could be discovered; no members of his family had had convulsions or fits. His heart and kidneys appeared free from any disease. He had passed some ascarides lumbricoides twenty months before, but no particular symptoms seem to have been produced by them. To ascertain whether any of these parasites were still present, a dose of santonine and a purge was given, but nothing abnormal was evacuated.

The above is certainly not the symptomatic picture of any of the forms of epilepsy; nor do I think the disorder can be regarded as the result of exposure to cold, for the insensibility did not steal on gradually, and he had not suffered materially up to within a short time of his being attacked. Moreover, he had been on duty in colder nights without suffering. On the other hand, he certainly exhibited subsequently some symptoms of rheumatism and catarrh, and the emanations from the canal may (as I have seen in other cases) have affected him injuriously. On the whole, the most probable view, I think, is that his cerebral hemispheres were suddenly smitten by some obscure prostrating influence analogous, if not identical, with that which gives rise to sporadic influenzal catarrh.

Paresis of the hemispherical and of other encephalic ganglia occasionally ensues as the result of simple exhaustion, without the action of any special miasm. Dr. Moorhead has recently recorded a highly interesting case of this kind, in which the paretic phenomena were very marked. The patient, a male, aged 62, was strictly temperate, but overtaxed his mental powers in the business of his avocation. Some time before he was taken severely ill he complained of difficulty of breath-

ing coming on in paroxysms without cough, of depression of spirits, and of failure of memory. The attack commenced with delirious excitement, considerable impairment of hearing, confusion of ideas, and inability to recognise the members of his family; subsequently, as he became worse, the pulse became very feeble and small, the dyspnœa very frequent and distressing; he was perfectly comatose, with occasional hiccough; his evacuations were passed in bed, and the power of swallowing was much impaired. On the fifth day he was much improved; and two days later the report is that he continues rational, but he labours under an impediment of speech, being unable to find suitable words to convey his meaning. He still had a feeling of uneasiness in the head, with irritability of temper. He seems to have recovered perfectly. There was no nausea or vomiting, or severe pain in the head; the pulse was not slow. The urine contained no albumen or tube casts, and the specific gravity was good—1023. Dr. Moorhead believes that the symptoms arose partly from anæmia of the brain, and partly from undue waste of brain-tissue accompanying long-continued mental exertion. He says, "Here was a man who for years had concentrated his faculties upon one subject, and allowed his thoughts to become so engrossed with it that he could find no pleasure save in its contemplation. As it is admitted by physiologists that every act of the intellect involves the disintegration of brain tissue, it is easily intelligible how such absorbing attention operated in breaking down the nerve vesicles to a greater degree than was compensated by repair, and so deranging the nutrition of that portion of the cerebrum which is the centre of intellectual action." The treatment was eminently stimulating and supporting; for a few days, when the coma was profound, ʒiss. of brandy was administered in beef-tea every two hours, while gr.x. of ammon. carb. were given every four hours. The grand object was to stimulate the capillary circulation, a blister to the neck and sinapisms to the legs were applied with the same intention. Dr. Moorhead well points out that his patient had become gradually anæmic, and remarks how often do we see cases of extreme anæmia thus *gradually* induced in which the cerebral functions are comparatively unaffected. He grounds on this his view above cited that one motor of the disorder was exhaustion of the cerebral nerve cells. In this I quite concur, and, indeed, regard it as far more important than the anæmia. The latter could not, especially in an aged person, be removed in the few days which sufficed for the removal of the urgent symptoms. On the other hand, the results of the treatment seem to make it clearly apparent that simple loss of power, functional paresis, was the essence of the malady. Cases of the same kind, though less severe, are not, I think, unfrequent, and it is evidently of the greatest importance to appreciate the import of the phenomena correctly, and not to be misled into supposing that they indicate congestion or effusion, those great scapegoats of cerebral pathology, when they simply imply exhaustion.

The attacks of paralysis which occur in some instances of heart disease may be noticed here as depending in considerable part on cerebral debility. No doubt that a deficient supply of arterial blood is concerned to some extent in producing the paretic condition or the exhaustion which gives rise to it; but that this cannot be the sole or principal factor of the morbid state is shown, I think, by the cases in which the motor and intellectual faculties continue intact, although the circulation has almost ceased. A man of midage came recently under my notice, who, about six hours before his death, had no radial pulse, but nevertheless showed some notable muscular power, and retained the full use of his mental faculties. At the post-mortem, no arterial obstruction was found to account for the pulselessness. In fact, a vigorous brain can continue to function, for a time at least, with a much less supply of blood than a weak one can. The blood stream, as I have endeavoured to show in my work, not only ministers nutrition to the tissues to maintain their several endowments, but also acts as a continuous stimulant, the withdrawal of which produces very speedily, as we know from Kussmaul's and Tenner's experiments, most serious disorder of the cerebral neurine. The observations just cited show conclusively that the brains of some individuals endure for a much longer period than others suspension of the flow of arterial blood before convulsions ensue. In various morbid conditions the *quality* of the cerebral neurine requires to be carefully considered, as well as the amount of the blood supply. Of this we have good examples in cases of delirium tremens. The following case recorded by Dr. Fleming (Stokes's work on "Heart and Aorta," p. 206) is a good instance of cerebral paresis. A gentleman, aged 44, enjoyed excellent health till he had suddenly his first attack of cardiac distress, consisting of dyspnœa, palpitation, and precordial oppression. He led a sedentary life, being confined to his desk except on Sundays. A loud bellows murmur attended the second sound of the heart. The attacks of cardiac distress became frequent, and were produced by bodily, or even mental exertion. But the most important feature in the case was the frequent occurrence of marked cerebral symptoms, very similar to those observed in fatty degeneration of the heart. These attacks generally came on at night or during sleep, the symptoms being that the respiration would become suddenly stertorous, with some convulsion of the face, when the patient would awake perfectly paralysed at the left side. Jaundice also attended these attacks, and it was most remarkable that both the hemiplegia and the jaundice would subside in a very short time. The full power of the muscles would return within a few hours after the attack, and on the following day scarce a trace of jaundice could be seen. It was found that these attacks were only to be treated by the use of stimulants. During one of them—owing to a different course having been adopted in the absence of Dr. Fleming—the patient was brought into the most extreme state of collapse. The stimulants had been withheld, and the head blistered; but even under these circumstances so decided was the effect of stimulants that the patient, who in the morning was completely hemiplegic, was within six hours perfectly restored to the use of his limbs. After death, the left ventricle was found dilated and hypertrophied, and the mitral orifice much enlarged. As the attacks mostly occurred at night when the patient would be in the recumbent position, it is the less likely that they depended on sudden failure of the heart's action; and if they had, this would not account for the continuance of the hemiplegia. Nor do I think they can be ascribed to the occurrence of anæmiating arterial spasm, such as we may believe to give rise to the epileptic paroxysm in some cases; for there is no history of the latter disorder, or of any stupor or coma succeeding the attacks. The benefit derived from stimulants is not very consonant with the view of arterial spasm, and it is certain that if such had existed at the commencement, it would not have persisted for hours after the attack, as the palsy did. Moreover, though there are some reasons for admitting the occurrence of arterial spasm at the outset of the epileptic attack, as the pallor of the face and the sudden unconsciousness, I think it behoves us to be sober in our application of this view, and not assume the convenient existence of an arterial spasm in small localities when there is evidence of its absence in large adjacent districts. How can we assume in the present instance that the arteries of one corpus striatum were spasmodically contracted when it is certain that those of the adjacent hemisphere were unaffected? Of course, merely to call the disorder epileptic without having any precise idea as to the nature of the morbid action explains nothing.

(To be continued.)

MEDICAL DEFENCE ASSOCIATION. — (From a Correspondent.)—It has long been felt by the members of the Profession generally that it would be a desirable thing to have some association in existence which should be able to render efficient and timely help to any Medical man who might suddenly find himself exposed to a vexatious or vindictive charge laid against him by some designing or hysterical person. At such a trying moment pecuniary support is often as essential as the sympathy of his brethren. A few members of the Profession have recently met for the purpose of promoting the formation of such a society as that indicated by the title, and which shall have for its principal object the defence of Medical Practitioners against actions of a class which has unfortunately become very frequent lately. The names of Adams, Bowen, Horton, Goss, Semple, Fraser, Andrews, Waters, and others need scarcely be mentioned to show that no man, whatever his Professional and social position may be, is entirely free from the possible annoyance of charges which are as easily made as they are difficult to refute. The adjourned meeting of the provisional Committee will be held on Friday, July 21, at 14, Southampton-buildings, Holborn, and we have been requested to state that they will be glad to receive the names of any gentlemen willing to aid them in the furtherance of the object which they have in view.

BERLIN.—The *Hufelandische Gesellschaft* has lately made Dr. Eastlake one of its corresponding members.

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ORIGINAL COMMUNICATIONS.

CASE OF EPILEPSY (PETIT MAL) CURED CHIEFLY BY MEANS OF ICE.

By JOHN CHAPMAN, M.D., M.R.C.P.

In the Number of this Journal for July 18, 1863, a report was published of six cases of epilepsy which I had treated successfully chiefly by means of ice applied along the spine. As two years have now elapsed since that report was written, and as each of the six cases referred to was mentioned within the compass of a few lines, I think it desirable now to publish the particulars of each case, its nature, the treatment adopted, and, so far as I have been able to learn it, the permanent result of that treatment. The following is one of the cases in question (No. 6):—

June 10, 1863.—S. G., male, aged 14, had, nine months ago, rheumatic fever, during which his nervous system was especially affected. He lost his power of speech so decidedly as to be half an hour bringing out a word; the capacity of uttering sound at all was also greatly impaired. He continued in this state about three weeks. His voice is still somewhat feeble. Shortly after recovering from the fever he went up Ludgate-hill to school, and, passing by the Old Bailey, saw a woman (Mrs. Wilson) hung, was frightened, and on returning home his right leg was drawn up, the foot being powerfully flexed, as [in *talipes equinus*. This condition lasted four or five weeks. The leg is still weak, and becomes stiff after the patient has been sitting at the piano or lying down a considerable time. About three months ago he was first observed to have "a wild staring and twitching of the eyes," which lasted a second or two, and recurred several times a day. Each attack now begins by a sudden spasmodic shriek, something like the bark of a dog. He has been attended privately by two eminent Physicians in succession, but without deriving any benefit, and has since been a patient at the Hospital for the Paralysed and Epileptic during six weeks. When he began to attend at the Hospital he had many little fits daily. Large doses of bromide of potassium were prescribed, and at the end of three weeks the attacks ceased entirely during a few days. They then recurred, and have since continued at the rate of about twelve a day. During the fits consciousness is quite lost. The feet and hands are habitually cold; the nose is very irritable, and considerably inflamed; back of neck very hot; pulse 96; bowels irregular.

I ordered the spinal ice-bag to be applied along the cervical, dorsal, and lumbar vertebræ, until the ice should melt, five times each twenty-four hours, and the following medicine:—Potassii bromidii, ammonii bromidii, ā ā, gr. iij., ter die. I also requested that the mind should be regularly exercised, and that dumb-bells should be used several times a day.

17th.—Had only three or four fits on the 11th inst., and these were without any cry; has had no fit, and has shown no indication of a fit since. The feet and hands have become quite warm—the feet "burning hot in the evening." The irritation and inflammation about the nose have wholly disappeared; bowels open daily; pulse 80; voice still somewhat feeble. To enclose ice-bag in a merino stocking, and then to continue it as before; to rub the throat vigorously several times every day, and to double the dose of the medicine already prescribed.

24th.—Has had no fit; feels quite well, except that his feet are uncomfortably hot. To enclose the ice-bag in a worsted stocking, and to continue in all other respects the same.

July 1.—Has had no fit. After having a cold bath during twenty minutes seven days ago, he became languid, and has continued so, but feels much better this morning. He has been "over sleepy"; his nose has bled three times—the last time very much; is pale; pulse 72; the tongue is slightly furred; bowels regular. To apply only two bags of ice daily, each being enclosed in thick worsted, and, instead of the medicine already prescribed, to take acidi sulphurici diluti, ♏ v.; quinæ disulphatis, gr. ¾ b. d.

8th.—Has had no fit; is no longer languid or "over-sleepy"; the nose has not bled again; pulse 88; bowels regular; feels well in all respects. To continue as before.

September 10.—He went into the country at the end of August. Before he went I ordered him to apply cold spring water in the bag without covering it with wollen twice a day during a fortnight; then to leave it off, but to continue to sponge himself all over with cold water each morning. He did so, and left off the medicine a fortnight ago. He has had no fit, feels and looks extremely well, and his father says he never saw him in better spirits in his life. The hands and feet continue quite warm; pulse 84; the tongue is a little furred; bowels open daily. To squeeze a stream of cold water from a sponge down his back each morning, and to take infusi. calumbæ, ℥ss.; ammonii bromidii, gr. ij.; potassæ bicarbonatis, gr. v., bis die.

October 17.—Reports himself still quite well, the bowels, however, being sometimes slightly confined. Ordered an alterative aperient pill to be taken occasionally.

July 1, 1865.—I have seen this patient at various times since last date. During the two years which have elapsed since I began to treat him he has never had a fit, and continues well.

Somerset-street, Portman-square, W.

ON THE

RESULTS OF TEMPORARY METALLIC COMPRESSION OF ARTERIES.

By R. LAWSON TAIT,

Honorary President of the Hunterian Medical Society, Edinburgh.

It is stated by Professor O. Weber, of Bonn, in a paper contributed by him to a "Handbook of General and Special Surgery," recently published, that the effects of acupressure on arteries is exactly the reverse of what Professor Simpson holds it to be; in fact, to quote his own words, "if sufficient force be exerted with the needles to stop the bleeding, gangrene (gangrän) of the constricted textures will take place within twenty-four hours, and that the strong metallic needles produce much more irritation than the friends of acupressure give out." This, he says, he found in the lower animals; so, with the intention of confirming his statement if correct—or, on the other hand, if wrong, of confirming the views of Professor Simpson—I undertook a series of experiments on the lower animals. These experiments were performed on twenty-eight arteries of cats and dogs in a healthy condition, but; as many of the experiments were repetitions, for the sake of accuracy, it will be quite sufficient to narrate only one example of each experiment and its result.

1. The skin over one of the femoral arteries of a large cat was divided transversely, and a needle passed under artery and vein in their continuity with a loop of wire placed above, as in the third method of acupressure. The cat was killed in six hours, and the parts carefully examined. Not the slightest change was observable in the coats of either artery or vein, but a conical clot, about $\frac{3}{16}$ths of an inch in length, lay loose in the artery on the proximate side of the needle. There was no clot in the distal side of the artery, nor in any part of the vein.

2. A Scotch terrier had both femoral arteries and veins compressed in the same manner, and was killed in eight hours. Precisely similar appearances observed as in No. 1.

3. One femoral artery and vein of a cat were similarly compressed, and the animal killed in twelve hours. The conical clot was not present in the artery, as the needle had been passed under it immediately below the origin of the profunda; the inner coat was slightly roughened, and the tint was a deeper pink where the pressure had been exerted.

4. One femoral and one axillary artery of a large retriever were compressed along with the veins as above. The animal was the subject of another experiment performed by Dr. A. Gamgee, which was the cause of his death during the night; so that the interval between the application of the needles and his death could not be accurately ascertained; but it was between twelve and eighteen hours. Well marked conical clots, about $\frac{1}{8}$ths of an inch in length, were found in both arteries, but there was not the slightest alteration in the coats. I had a coloured drawing made of the arteries in this case, as typically illustrative of the first step towards occlusion of a vessel, an engraving from which is represented in Fig. 1.

5. A small dog had the axillary vessels on both sides compressed, and was killed eighteen hours after. A conical clot was found in one artery, but not in the other. The walls of both were slightly adherent, and distinctly roughened at the point of pressure by exuded lymph.

6. One femoral artery of a large cat was acupressed, and the animal killed in twenty-four hours. The opposed walls of the artery were quite adherent; the clot was present, but loose. The walls of the vein were also adherent.

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7. Both femoral arteries of a bull-dog were acupressed, and the animal killed in thirty-six hours. The opposed walls were firmly adherent; the clot present, and attached by the lymph to the adherent surfaces. Both veins were quite occluded. The appearance of the artery is represented in Fig. 2.

Fig. 1.

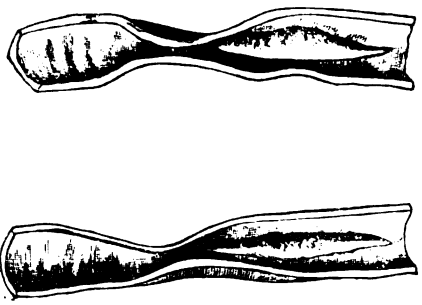
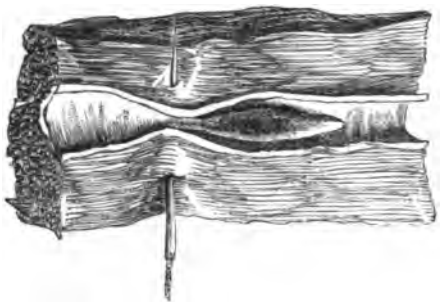


Fig. 2.



8. The femoral artery, vein, and nerve of the left side of a terrier were completely divided by a transverse incision, and the bleeding arrested on both sides by needles employed in the 3rd method. The needles were removed in eighteen hours without the recurrence of hæmorrhage. In half-an-hour more the animal was killed, and the parts carefully dissected. A conical clot was found in the proximate part of the artery, and the walls there were adherent; the walls of the vein at the same point were adherent, but the vessel empty. On the distal side of the needles the artery was empty, but the walls were adherent at the point of pressure; this was likewise the case with the vein, but in addition it was filled by a clot nearly an inch long, which I judged from its appearance to have formed after death.

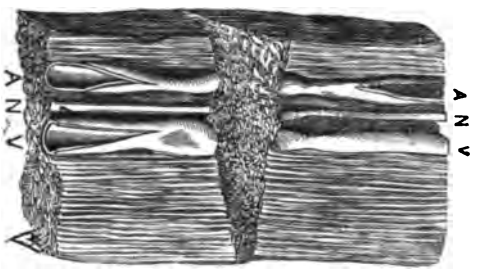
9. The same experiment as detailed in No. 8 was performed on a bull-dog, and the needles removed in thirty-six hours, by which time the wound was quite closed. The dog was killed about 150 hours after the operation, and on examination it was found that the artery on the proximate side of the wound was narrowed by about one-half of its diameter for nearly an inch from the point of pressure; that it was filled for the same distance by firm clot, which was almost deprived of its colouring matter, and this clot throughout its extent was adherent to the inner coat. The vein on this side was likewise much contracted, but was quite pervious from the point of pressure.

On the distal side of the wound the artery was quite contracted and almost impervious down to a collateral branch, and contained no clot; at the point of pressure it was firmly occluded by lymph. Unfortunately I could not trace the collateral circulation, as it had been destroyed in removing the parts. The vein on this side was plugged up by yellow lymph for nearly half an inch from the point of division; below the lymph it was quite empty. In the wound the vessels were so agglutinated to one another and to the neighbouring textures, and the sheath so full of lymph that no distinct definition of their extremities could be made. In the cut ends of the nerve, which had been included in the acupressure needles, nothing could be observed beyond a slight flask-shaped swelling. An engraving of this case is given in Fig. 3.

Similar appearances were found in three other experiments, under like conditions, and I may mention that the most careful examination under a dissecting microscope could detect in none of the four cases the least injury to any of the coats.

10. The same experiment as in Nos. 8 and 9 was made on a strong bull-dog. In this case I unfortunately made use of needles which had been too highly tempered, and in about three hours after the operation the dog broke them through muscular action. Of course bleeding at once occurred, and Dr. Gamgee, in whose laboratory the experiment was made, had to secure the bleeding points by ligature. The dog fell a victim to some toxicological investigation soon after, but I did not get the opportunity of examining the state of matters. Of course, such an accident as occurred in this experiment could not happen in the human subject, where perfect muscular quiet is induced.

Fig. 3.



11. An acupressure needle was passed under the femoral artery, vein, and nerve of a dog, and allowed to remain as long as it would. When it came away, on the ninth day, hæmorrhage occurred, and the bleeding point was secured by ligature. When the dog was killed a few hours afterwards, it was found that the source of hæmorrhage had been the proximate end of the artery; and that the coats were markedly injured where the ligature had been applied. With the exception that the wound was open, the other appearances were much the same as in Experiment 9. This experiment I performed to see whether a metallic needle would cut its way out if left alone in the lower animals. This it did, and hæmorrhage, the result of the ulceration, occurred. But this was entirely owing to the disquiet of the dog. Could he have been induced to keep his leg quite quiet, I think the needle would have stayed in for weeks without disturbance.

12. The femoral vessels of both sides of a sheep-dog were divided, and the hæmorrhage checked by needles used in the Aberdeen method. At the end of twenty-four hours the needles were found to be very firm when touched, and, although they were removed with the greatest care while the dog was under chloroform, hæmorrhage occurred, which necessitated their re-introduction. They were again removed forty-eight hours after their original introduction with a good result. The animal was killed in a fortnight, and the appearances observed were but an advance upon those of Experiment 9, the vessels being reduced in calibre to nearly a quarter of their size, and in this case I could dissect a complete collateral circulation.

From this and one other similar experiment, I think that the Aberdeen method of acupressure is quite as effectual as any other, and that it is more expeditious; but that large vessels take longer to become safely occluded under it than under the third method.

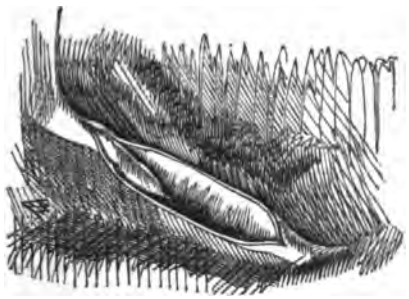
Besides these experiments, I performed eleven more, mere repetitions of some of the above, none of which deserve special mention save two, the results in the rest being much the same as detailed above. In those two, however, there happened what convinced me that none of the present forms of acupressure could be safely applied to arteries in their continuity, as in cases where it is wished to cure an aneurism.

It happened in one of my earliest experiments that I had pushed a needle, as I thought, under both artery and vein of a dog's leg. There it remained for eighteen hours, and then was removed, as I intended allowing the dog to live for some time after. But, to my astonishment, the dog fell dead in about a minute, and when I examined the body I found that the needle had included scarcely half of the vein, that it had pierced it, that a clot had formed about the needle, which had been set loose on its removal, and got impacted in the pulmonary circulation. The same thing happened in another experiment, where the needle had been in nearly thirty-six hours.

Since the performance of these experiments I have had the opportunity of confirming the results observed by the examination of some vessels from the human subject, which was kindly allowed me by Professor Simpson. They were the vessels of three ovarian pedicles and two stumps, and the appearances in every instance agreed with the experiment under corresponding conditions. In all of the vessels I examined clots were present, and in none could I discern

injury to the coats. Fig. 4 represents an artery from an ovarian pedicle, dissected by Dr. Heron Watson, and which is merely an advance on the condition seen in Fig. 2.

Fig. 4.



From these observations, then, I have no hesitation in saying that the statement of Professor Weber already quoted is quite mistaken. He further states that the pain and irritation caused by the needles is much greater than that caused by the ligature. In answer to this I have only to appeal to those who have seen acupressure employed in this country to decide this question; for my own part, I can say that, although I have used acupressure frequently during the last four years, and often had charge of important cases where acupressure had been used by others, I have never failed to observe the reverse. Again, the same author says, "Although, according to the experiments in question (his own) the nerves which were compressed seem to have borne pressure well, yet the irritation which the needles exert on the nerves is by no means a matter of indifference (*gleichgultig*), and the question remains whether tetanus may not occur more frequently than when the ligature is employed." In answer to this, I say that I have not yet heard of any case where tetanus has happened after acupressure; and in my experiments, where the nerves were almost invariably included in the pressure, no such evil result ever followed. John Hunter says that he frequently tied nerves along with arteries, and does not mention tetanus as a result. Pouteau records cases where nerves had been included in the ligatures along with the arteries, but makes no mention of tetanus as resulting from such a condition. Surely, if tetanus were to be caused by temporary metallic compression, it would be still more likely to be caused by the strangulation of a nerve in a ligature.

Professor Weber next claims an advantage on the part of the ligature in respect that, by the tearing of the two inner coats, the vasa vasorum of the cellular sheath come into close contact with the clot (Thrombus), and that their growth into the clot is most important to the speedy and lasting closure of the vessel. This theory I much doubt; indeed, I have seen nothing and can find no authority in support of it. What I think is much more probable, though I cannot say that I have demonstrated it, is, that entirely new vessels are formed in the organisable lymph, just as they are in the lymph of an adherent pleura or in the adhesions of an ovarian tumour; at any rate, I have seen vessels close as firmly and securely under acupressure, where the vasa vasorum had no opportunity of so employing themselves, as vessels ever closed under a ligature.

But the curious thing is, that Professor Weber in the very next sentence that he writes, ruins this advantage for the ligature by insisting that acupressure invariably cuts the middle and internal coats just as the ligature does; and soon after says that acupressure has an advantage over the ligature in *not cutting atheromatous vessels*, and quotes two cases of Foucher's where the ligature was useless on account of the state of the vessels, and where acupressure had to be employed and was successful: on post-mortem examination of one case no change could be detected in the walls of the vessels. Now if the coats of vessels in a healthy state are cut by acupressure, surely it will also cut them when diseased; indeed, it seems to me that those statements go far to contradict one another.

There is another remark to the effect that secondary hæmorrhage occurs more frequently with acupressure than with the ligature; but it is merely a statement, without any proof adduced in its support.

Having now detailed my experiments, and mentioned the general conclusions, I will next proceed to detail more particularly the process of obliteration, and to make some remarks on that process.

* (To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

CASE OF FRACTURED SKULL AND BROKEN NECK—PARAPLEGIA—DEATH—AUTOPSY.

(Under the care of Mr. HULKE.)

A man, aged 24, who had just before fallen from the roof of an omnibus, was admitted into Clayton Ward September 4, 1864, at 9 p.m. There was a small scalp wound and a puffy swelling at the occiput; but no fracture could be felt here. He was partially insensible; his pulse was slow and laboured; and his pupils did not act. His respiration was abdominal, and he passed a motion unconsciously under him while being undressed.

Next morning at 9 a.m. he was sensible, and complained of great pain in his head and neck. He was paraplegic; his sphincter ani was relaxed; his pulse was small; and his respiration stertorous. At 2 p.m. the stertor had ceased. Coarse crepitation was audible all over the chest. His complexion was dusky. There was complete absence of sensation below a horizontal line drawn across the chest under the clavicles, and complete loss of motion in both legs, trunk, and left arm. He retained slight power over the right arm, which was, however, completely anæsthetic. At 5 p.m., respiration 56; pulse 106, full. At 9 p.m., respiration 44; pulse 120, full, compressible, tapping; skin pungent. He breathed entirely with the diaphragm. During inspiration the sternum and intercostal spaces sank; the sterno-cleido-mastoid, and the right scalene muscles became tight, while the left scalene remained flaccid. He was delirious. His face was very dusky. Death took place at 2 a.m. on the 6th.

At the post-mortem examination, blood was found extravasated beneath the scalp, over the parietal suture and middle line of the forehead, and there was a linear fracture through both tables parallel to the parietal suture from the vertex through the median line of the frontal bone. Blood was also extravasated beneath the skin, and among the muscles from the seventh cervical vertebra to the occiput. The fifth and sixth cervical vertebræ were slightly separable from each other; and the right transverse and lower articulating processes were broken from the body of the fourth vertebra. No displacement was perceptible on running the finger down the front of the spine. The dura mater did not present any trace of injury, nor the cord till it was divided, when, opposite the injured vertebræ, it was found to be very soft, of a creamy consistence, and infiltrated with extravasated blood. The infiltration principally affected the grey matter, and chiefly that in the right half of the cord.

STOCKPORT INFIRMARY.

FRACTURE OF THE BODY OF SECOND LUMBAR VERTEBRA—PARAPLEGIA—LOSS OF ANTERIOR SURFACE OF BLADDER THROUGH ULCERATION—DEATH.

(Under the care of Mr. J. T. PEARSON.)

For the notes of the following case we are indebted to Mr. J. Peeke Richards, House-Surgeon:—

Joseph H., aged 30, was admitted into the Infirmary on February 10, 1865, with a severe injury to his back, caused by falling off the roof of a house which was about to be pulled down. A bystander who saw the accident says that the man, having alighted on his feet, rebounded some distance, and then fell on the pavement, his back arching very much backwards.

On admission, he complained of extreme pain in the loins, and whilst being placed in bed he distinctly moved his legs, but from that time up to his decease he never moved them. On examination a depression was found below the first lumbar vertebra, which for the first few days, owing to the swelling of the adjacent parts, appeared deeper than it really was. The ordinary symptoms of paraplegia supervened, his bladder at first giving him great trouble and necessitating the frequent use of the catheter; but after a time his urine, which became exceedingly purulent and ammoniacal, dribbled from him. Paralysis of motion was complete; but not so as to sensation,

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for although he complained of numbness in his feet, there was a slight degree of hyperæsthesia in his thighs and upper part of his legs. He gradually sank, and died on April 5, nine weeks after the receipt of the injury; but five days before this occurred his urine suddenly ceased to flow, and at the same time a considerable alvine discharge came on, having all the appearance of urine. He remained sensible nearly up to his death, no symptoms of renal coma coming on.

Autopsy.—The coats of the bladder were in an exceedingly softened and decomposed condition, the whole of the anterior surface of that viscus having completely sloughed away, leaving a large and irregular opening, the edges of which had become firmly adherent to the peritoneum lining the abdominal walls and back of symphysis pubis. An opening also existed between the posterior surface of the bladder and middle portion of the rectum, through which the urine had passed for the few days prior to death. There was no peritonitis. The ureters were moderately dilated, but the kidneys, although much congested, were otherwise healthy. With regard to the spine, the body of the second lumbar vertebra was found fractured completely across, the fracture extending obliquely from below upwards, and from right to left. The lower fragment of this vertebra and the vertebra below were pushed forwards on a plane anterior to the portion of the spine above the fracture. The membranes and the different branches forming the cauda equina were free from laceration, but the upper and anterior portion of the cauda was much softened and reddened, and lightly stretched over the upper and projecting portion of the fractured vertebra.

LIVERPOOL SOUTHERN HOSPITAL.

CASES OF COMPOUND FRACTURE OF THE SKULL.

[Reported by Dr. GULSTON WOLLASTON.]

DURING the first six months of this year twenty-two cases of compound fracture of the skull have been treated in this Hospital. Of this number five have been trephined, four of which recovered. In two, depressed bone was removed without the use of the trephine—one (a hopeless case) dying soon after admission, the other making a good recovery. In the remaining fifteen cases symptoms were treated as they arose—thirteen recovered, two are still under treatment, and will, it is hoped, shortly be discharged cured.

It will be very interesting to trace the future history of those who recovered from the immediate injuries, as sometimes patients become subject to epileptiform fits several months after injuries to the head.

Compound Fracture of Parietal Bone—Depression—Trephining—Recovery.

(Under the care of Mr. HIGGINSON.)

P. M., aged 28, an Irishman of dissipated habits, was admitted on January 13. He had fallen from the fifth storey of a warehouse, and had alighted on the top of his head. On admission he was found to be totally insensible, pupils dilated, breathing stertorous. A large ragged wound existed over the upper portion of the left parietal bone, rendering visible a very depressed and comminuted fracture. As the fractured pieces could not be removed readily, the trephine was at once applied, and all the fragments removed. The dura mater was uninjured. In the course of a few hours he became conscious. With the exception of a severe attack of erysipelas, everything went on well, and he was discharged cured on March 22.

The treatment consisted in the administration of small doses of calomel and saline draughts, the salines being changed for tinctore of the muriate of iron on the appearance of the erysipelas. Water dressing locally.

Fracture of Temporal Bone—Trephining—Death—Autopsy.

(Under the care of Dr. NOTTINGHAM.)

P. P., aged 28, admitted May 25. He had been struck on the head with the pointed end of an iron "dog." He walked to the Hospital without assistance.

There was found, on admission, a small punctured wound over the right ear, and on introducing the finger through the substance of the temporal muscle, a perfectly round hole, barely admitting the tip of the little finger, could be felt in the bone. He complained only of a little giddiness, and thought so lightly of the matter that he was with difficulty prevailed upon to stop in the Hospital. He was put to bed at once, and cold lotions applied to the head. In the course of half an hour he became violently convulsed, the right side being slightly the one more affected. This passed off in the course of ten or fifteen minutes, leaving him in a heavy, half-drowsy condition. In this state he was seen by Dr. Nottingham, who determined to trephine him at once. The wound in the soft parts was enlarged, and a small tibia trephine applied, and three small pieces of loose bone removed. The dura mater was torn, but there was no escape of cerebral matter. Five grains of calomel were administered, and water dressing applied lightly to the wound. Under the use of saline aperients and occasional doses of calomel, he went on without a bad symptom for five days. On the night of the fifth day, however, he became violently convulsed, and died in the course of a few minutes.

Post-mortem.—Head only examined. There was a perfectly round hole in the temporal bone; no splintering of inner table; dura mater torn; brain lacerated for about an inch in depth; right hemisphere much softened; membranes inflamed.

Compound Fracture of Frontal—No Depression—Recovery.

(Under the care of Dr. NOTTINGHAM.)

P. H., aged 34, admitted February 11. He had been struck on the forehead by a pig of iron. The finger-nail could be passed into a fissure in the upper and anterior portion of the frontal bone, through a lacerated wound about two inches long in the soft parts. He had no symptoms whatever.

On the 19th he was discharged for irregularity, but attended for a week as an out-patient, by which time the wound had firmly healed. He has since remained quite well. The only treatment pursued was calomel and colocynth purges, with saline draughts, and light poultices to the wound.

Fracture without Depression—Subsequent Cerebral Disturbance—No Surgical Treatment—Recovery.

(Under the care of Dr. NOTTINGHAM.)

J. P., aged 15, a sailor boy, admitted March 24. He states that five days ago he fell from the topsail yard of his ship on to the deck, and in the descent struck his head against some portion of the rigging. As he did not feel very much hurt, with the exception of a cut on his head, he treated the matter lightly. This morning, after passing a very restless night, he awoke with intense pain in the head, chiefly referred to the right side. There is a sloughy wound over about the centre of the left parietal bone; the periosteum entirely removed, and a fissure extending upwards and forwards is plainly visible. He complains of great headache; there is intolerance of light and sound, and much general disturbance. Pupils natural; pulse 110; tongue much furred; no sickness; bowels confined. He was ordered a calomel and colocynth purge, cold lotions to the head, and an effervescing mixture. The symptoms continued pretty much the same for six days, when they began gradually to subside.

He was made an out-patient, at his own request, on April 10, and attended for a month, when a thin piece of bone, about the size of a florin, exfoliated and was removed, when the wound rapidly healed.

Depressed Fracture of Parietal—Trephining—Recovery.

(Under the care of Dr. NOTTINGHAM.)

E. E., aged 13, a rivet lad, fell into the hold of an iron ship, a distance of thirty feet, on March 1. On admission he was quite sensible, and complained only of the right knee, which on examination was found to be slightly contused. A small wound on the vertex, barely admitting the finger, communicated with a most extensive comminuted fracture of the parietal bone. A small trephine was applied, and a large quantity of bone removed, the dura mater being intact. The entire absence of insensibility and the necessarily free division of the soft parts rendered the administration of chloroform necessary. On the fourth day erysipelas of the whole thigh and leg set in, the head remaining free. This was treated in the ordinary manner with iron and stimulants, and soon subsided—not, however, without considerable sloughing of the subcutaneous areolar tissue. As regards the head, not a bad symptom arose, and in six weeks the part was thoroughly healed.

Compound Depressed Fracture of the Frontal Bone—Escape of Brain—Trephining—Recovery.

(Under the care of Mr. HIGGINSON.)

J. D., aged 16, a rigger, was admitted April 6, suffering from an extensive fracture of the frontal bone, extending from near the centre of the bone into the roof of the orbit. The depression was very considerable, and symptoms of concussion were present in a marked degree. The wound was considerably enlarged, and by the aid of a small trephine the loose pieces of bone were removed. One of these was

formed by a piece of the orbital process of the frontal bone, and from the part corresponding to this some cerebral matter escaped. In front, some blood was found effused under the dura mater, which was slit up to allow of its escape. The cleanly cut part of the wound was then brought together with sutures, and the whole covered with water dressing.

The after treatment consisted in keeping the patient on low diet, and the occasional administration of aperients. A few doses of calomel were also given, but not sufficient to produce its specific effect.

Not a bad symptom followed. The portion of the wound which had been stitched healed by primary union, and the remainder was firmly closed in about three weeks. There was no disposition to hernia.

Depressed Fracture of Temporal Bone in the Substance of the Muscle—Trephining—Recovery.

(Under the care of Dr. NOTTINGHAM.)

B. T., aged 36, was admitted May 28. She stated that a few minutes previously a man threw a plate at her, from which he was eating some fish. She was quite sensible, and walked to the Hospital. There was a lacerated wound over the left ear, communicating with a depressed fracture of the temporal bone—in fact, a portion of the bone was tightly wedged under the parietal bone, and exerting very considerable pressure on the brain. As it was quite impossible to introduce an elevator, a small portion of both bones was removed with a trephine, and the mass of the temporal raised to its proper position. In order to effect this, it was necessary to cut across nearly the whole of the temporal muscle. The dura mater was uninjured, but there was considerable hæmorrhage from within the skull. No dressings were applied for some time, but the bleeding allowed to go on, care being taken, however, that there was a free exit.

Water dressing was applied, a turpentine and castor oil injection administered, and low diet ordered. For forty-eight hours she remained quite easy, but at the end of this time she began to complain of great pain in the head; the eyes were red and ferrety; pulse 120; great thirst and febrile excitement, and some slight delirium, with numbness of the right arm and right side of the neck. There was no vomiting or muscular twitching. The wound was suppurating freely. She was ordered to have a calomel and colocynth purge, and to be got quickly under the influence of mercury, and a poultice of tea-leaves to be applied to the wound. As soon as the specific action of this remedy showed itself, the symptoms began to subside.

The wound is now (June 23) all but closed, and she will be discharged in a day or two. Although the temporal muscle was divided, the motion of the jaw was only very slightly impaired, and that only for three or four days.

OBITUARY.

DEATH OF DR. DANIELL, THE AFRICAN TRAVELLER.

William Freeman Daniell, M.D., F.L.S., late Staff-Surgeon to Her Majesty's Forces in Jamaica, from which island he arrived in England last September with a constitution thoroughly broken up by climate, died June 26, at Southampton, aged 47 years, and was buried at Kensal-green July 3. Dr. Daniell was well known to the scientific world by his indefatigable labours and researches on the climate and productions of the pestilential coast of Western Africa and other parts of the globe. He served the whole of his time as Assistant-Surgeon at our settlement on the African coast, and obtained his promotion to the rank of Staff-Surgeon in 1853, since which he has twice been employed in the West Indies. He accompanied the "Expeditionary Force" to China in 1860, where his love of his favourite pursuit—botany—led him to make some additions to the flora of that interesting region, more especially of a fine new species of Tartary oak which may at some future day furnish timber for a dockyard at Hong-Kong, should our present ironclads not altogether supersede the demand for that invaluable wood in the construction of Britain's best bulwarks. Dr. Daniell was a Fellow of the Royal College of Surgeons, and was also a Fellow of the Geographical, Linnean, and Pharmaceutical Societies, to which he was a contributor of numerous valuable and scientific papers. He was well acquainted with the native languages of many of the African tribes, he had some knowledge of Arabic, and in 1849 published a volume on the "Medical Topography and Native Diseases of the Gulf of Guinea."

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Medical Times and Gazette.

SATURDAY, JULY 15.

THE GLASGOW POISONING CASE.

The announcement that Edward William Pritchard has confessed that he is the murderer of his wife has added nothing to the strong conviction of the fact which the evidence given on his trial had forced upon the public mind. We shall spare our readers and spare ourselves the most distasteful task of directing attention to any of the moral and social aspects of this miserable story, and confine our remarks to two or three points in the Medical and scientific evidence which we think are worthy of notice. The sorrow and indignation that every member of the Medical Profession must feel at the fact that scientific skill and knowledge have been made subservient to such a crime are only relieved by the recollection that in the present case the outraged science of Medicine has vindicated itself by tracing with incontestable accuracy the means by which the murder was perpetrated, and by becoming the chief agent in procuring the conviction of the criminal.

The evidence of the Medical witnesses and experts generally deserves, we think, high praise. It was lucid, decided, and, in most instances, singularly free from theoretical or debateable admixture. Its combined weight was so crushing that there was not the slightest attempt on the part of the defence to rebut it. Not a single person could doubt, after the conclusion of Professor Penny's admirably clear and thoroughly exhaustive chemical testimony, that the cause of the death, in the cases of both Mrs. Pritchard and Mrs. Taylor, was the administration of poison. It remained only to point out the poisoner. Whilst, however, we thus give well-merited praise to the Medical and scientific testimony as a whole, we confess that our satisfaction is not unqualified. The one grave blot on the Medical evidence is, we are bound to assert, the extraordinary position assumed by Dr. Paterson. This gentleman, it will be remembered, was called in on the night of Mrs. Taylor's death. He saw that lady in bed, and by her side he saw Mrs. Pritchard. He stated in his evidence "that he only glanced at her"—"that he did not put a question to her"—"that he did not examine her at that time as a patient"—but yet that he formed the conviction that she was under the influence of antimony. He said that on the 2nd of March he again saw Mrs. Pritchard, that his conviction was then confirmed that she was being poisoned with antimony, that he prescribed for her under that conviction, and that he took no further steps to rescue her from her impending death. He did not call on her again until he was summoned to her bedside four or five hours before she expired, neither did he take any measures to see that his prescriptions were being carried out, and he mentioned his suspicions to no one. He gave as a reason for this extraordinary supineness, "the etiquette of the Profession." We assert that we do not believe that there is another Medical man in the United Kingdom who would have taken a similar

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view of his duty under such circumstances. Medical etiquette is not based on any arbitrary rule of conduct. It has for its foundation a system of ethics, the basis of which is the imperative duty of saving human life, and in every case its rules, if fairly interpreted, have no other object than the welfare of the individual patient. It would be charitable to believe that Dr. Paterson, with the hope of gaining a little ephemeral *éclât*, had allowed himself to be tempted into making a statement which was not really true. We should be glad to think that he had overstated his powers of diagnosis and his acquaintance with the symptomatology of antimonial poisoning. Better far for him could he have said with Dr. Gairdner that the case had baffled his sagacity, and that he was at a loss to account for the symptoms. But he states that his conviction was clear. It appears to have been so decided that he took no measures to verify it. We hear nothing of his examining the urine or other excreta for the presence of antimony. He must, therefore, remain under the stigma affixed to him by Lord Justice Clerk, who, in his summing-up, said :—

"I care not for Professional etiquette or Professional rule. There is a rule of life and a consideration that is far higher than these—and that is the duty that every citizen of this country, that every right-minded man, owes to his neighbour to prevent the destruction of human life in this world; and in that duty I cannot say but Dr. Paterson failed."

We regret deeply that it has been our painful duty thus to criticise the conduct of a Medical man of high standing and position. We have no personal feeling in the matter. Until his name appeared in connection with this trial we had never heard of Dr. Paterson. But our duty to our Profession and its laws requires that we should vindicate them from conduct which, if allowed to pass unchallenged, would utterly annihilate all respect for our calling, and all its claim to public confidence.

As a purely Medico-legal study, this case of Mrs. Pritchard is of the greatest interest. Here we have a person undergoing a slow process of poisoning by repeated doses of antimony for many weeks, who ultimately died from the poison, in whose body after death a quantity of the metal represented by ten grains of tartar emetic was found, and yet the post-mortem appearances of irritant poisoning—with the exception of a little punctiform redness here and there in the alimentary canal—were absolutely wanting. The last administration of antimony could not have taken place a very long time before death, for a quantity equivalent to six grains of tartar emetic was found in the contents of the intestines. Unlike some of the recent poisoning cases in England, the chemical evidence here was everything; the pathological was simply negative. This surely affords a lesson to toxicologists which they must not be allowed to forget. We have been taught to associate with antimonial poisoning general inflammatory redness of the alimentary canal, the appearance of tartar emetic pustules on the skin and mucous membranes, scarlatina-like rash on the body, and general congestion of the soft vascular organs, especially of the lungs. Magendie used to assert that antimony has the specific power of producing congestive pneumonia. All these signs were absent. It appears from the evidence that the redness in the stomach and intestines was far from being general, the skin and mucous membranes were unaffected with pustulation or ulceration, and one lung was entirely healthy, whilst in the other there was not only no congestion, but old disease of long standing had taken on no fresh action, as might have been expected had the lungs been in a condition of long-continued hyperæmia. The examination of the various articles taken from Pritchard's house renders it pretty certain that he subjected his victim to small doses; but, on the other hand, the abundance of antimony discovered in the body after death, and the amount found passing from the body at the time of death, render it certain that in the aggregate a very large quantity of antimony was administered.

The chemical evidence, taken as a whole, was unexceptionable and conclusive. We have already expressed our admiration of Dr. Penny's evidence. It was most scientific and exhaustive. Following the plan, which, we believe, was originally suggested by Fresenius and Von Babo, of destroying the organic matter by boiling with chlorate of potash and hydrochloric acid, he was enabled to precipitate the whole of the metals in the form of sulphides. It was thus that he was able, in the case of the contents of the intestines, to supplement and correct Dr. Maclagan's process by filtration with a solution of tartaric acid and the subsequent application of Reinsch's test. Dr. Penny's process enabled him to discover the presence of mercury and to extract a much larger amount of antimony than could otherwise have been accomplished. By a repetition of Dr. Penny's proceeding with chlorate of potash and hydrochloric acid, Dr. Maclagan confirmed Dr. Penny's results. Dr. Penny's experiments also with the contents of the bottle of Battley's Solution reflect great credit on his acumen, and are as satisfactory as experiments of the kind can ever be. Professor Maclagan's testimony was also high creditable to the high position which he occupies in the University of Edinburgh. But we confess that we do not share that gentleman's confidence in the appearances produced by Reinsch's test. We have worked too often with that test not to know that it is open to fallacies, and that, as Professor Penny stated, the presence of fatty matter in a solution will produce an appearance closely resembling that of antimony. Besides, former well-known trials have thrown doubts upon the reliability of Reinsch's process under all circumstances, which at least, we think, should prevent any Medical jurist trusting to it solely. In the present case, as we have said, the experiments of one expert supplemented and confirmed those of the other, and presented together conclusions so irrefragable, that any attempt to shake them would have been utterly useless.

The conductors of the prisoner's cause throughout seemed weighed down with a conviction of his guilt. As a specimen of legal skill, the defence certainly reflected but little credit on the bar of Scotland. Little was made of several points which might have been urged in the prisoner's favour—such, for instance, as that other inmates of the house, including the prisoner himself, had suffered from sickness after certain meals. But we strongly believe that a moral conviction of the prisoner's guilt had seized on, and paralysed the efforts of, his legal advisers. We cannot regret that a more elaborate defence was not attempted. It might only have buoyed up the miserable criminal with false hopes, and could not have assisted the discovery of truth.

PHOTOGRAPHS OF EMINENT MEDICAL MEN.(a)

We are glad to receive the first number of what promises to be a very interesting collection of photographic portraits of Medical men. Now that every drawing-room table groans with *cartes de visite* of relatives and friends, and of personages who have attained celebrity in every walk of life, from royalty downwards, we should be indeed an unnatural and cold-blooded set did we not wish to possess some of these mementoes of those members of our own Profession whom we have been wont to look up to as public teachers or private friends. Equally natural is it that we should like to know something of their history; where they were born and of what family; what advantages they enjoyed as to education; what gave them their bent towards Medicine; what was the peculiar scope of their early studies; and what they have since contributed towards our stock of knowledge. All this will be found

(a) Photographs of Eminent Medical Men of all Countries; with Brief Analytical Notices of their Works. Edited by T. Herbert Barker, M.D., F.R.S. Edin., Fellow of the Royal College of Surgeons of England. The Photographic Portraits from Life by Ernest Edwards, B.A. Cantab. No. I. July, 1865. London: Churchill and Sons, and Ernest Edwards, 29, Baker-street, Portman-sq., W.

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in the series before us. When we say that Dr. T. Herbert Barker is the editor, we have said enough to show that the work will bear the marks of scholarship, and of the feelings of a refined gentleman and Physician. It begins with short memoirs of Dr. Watson, of Richard Owen, and of Sir Charles Hastings. We have just enough about each of them to gratify reasonable curiosity as to private history, and a critical summary and enumeration of their works, which is of great value in itself. And we may give one instance. Dr. Watson's character as a Physician and his admirable lectures are things of popular use and notoriety day by day now. Owen's works on "Philosophical Anatomy" are also a living and growing series (although, perhaps, not every one knows how good a Practitioner he was first of all). Sir Charles Hastings is well known as a successful Physician, and as the originator of a powerful Medical Association. But very few Practitioners knew of Sir Charles in the capacity in which he stands in the eye of one who wishes to construct a philosophical view of the history of modern Medicine. He was like a man in the "forlorn hope." If we may compare Nature to a citadel surrounded by labyrinthine defences, and students of Nature to a besieging army, swarming around it, eager to pour into every nook and corner that seems to give access to the hidden secrets within, but often losing their way, following paths which are no paths, and which lead to some impassable *cul de sac*; so when some new discovery or some fresh means of exploration seems to promise a solution of some of the great problems of life, away rush the gallant votaries of science; and if, as too often happens, they only succeed in adding another book to the rolls of defunct literature, yet the philosophical historian will do justice to the name who attempted to fill a gap, though all he did has been obliterated by his successors. At the time when galvanism, of recent discovery, seemed to hold out a hope of explaining the real nature of nerve force, and when first the microscope was made really available for pathological researches, Sir Charles Hastings, in conjunction with an elder Practitioner, Dr. Wilson Philip, was in the van of the advanced physiologists and pathologists of that day; and his Treatise on Inflammation will always be referred to as an eminent contribution to science, and as one of the stepping-stones by which we have reached our present position.

We shall be glad if Dr. Barker's memoir reveals to the Professional mind the fact that the President of the British Medical Association is not merely a clever politician, but one of the very princes of modern physiology and pathology; equally so that his voice and example are emphatically in favour of *humanity* as the brightest jewel in the Medical character. It is not by the precept or example of such a man that we hear of Medical "strikes"—of aid withheld from poor wretches in their agony because of no fee forthcoming. We suppose that there never was a time when a heavier cloud hung over the Medical Profession than the present. The most awful crime of one of our members seems to be a standing reproach to us all. But this bit of exceptional villainy will not work us half the mischief that the notion would that "No money, no mercy" is to be our motto for the future. On this point we have a right to appeal to yourself, Sir Charles Hastings! Speak out, and tell us, the British Medical Association, whether Mammon is to be our God! Are we to stop our ears when a moneyless wretch asks us to save a dying wife? If your sentiments (as we doubt not) be indeed those which Dr. Barker quotes, why not enforce them in your Association?

We must not, however, be tempted to dwell further on this most painful part of Medical morals, except to say that, deeply as we deplore the insults and robberies which are perpetrated on our Profession, *we must not retaliate*. Now, let us say that the likenesses before us are of handy size, and do everything but speak. Certainly Mr. Ernest Edwards seems to deduct ten years a-piece from the ages given in Dr. Barker's memoirs, *as those* of the three eminent "sitters."

THE WEEK.

THE MOORFIELDS OPHTHALMIC HOSPITAL.

We are requested to state that Professor Donders will be present at the ophthalmoscopic demonstration at Moorfields, on Friday evening, July 21. The Surgical staff invite the presence of any Medical men who may incline to attend. The demonstration commences at 7.30.

FROM ABROAD.—HOMŒOPATHY IN THE FRENCH SENATE—EPIDEMIC OF SMALL-POX IN BERLIN—DIMINUTION OF RESPIRATORY ACTIVITY.

The homœopathic movement in the French Senate has proved a mere bottle of smoke, for on the bringing up of the report a discussion took place, but no substantive motion was carried, the passing to the order of the day being determined upon. This speaks well for the good sense of the Senate, but what the arguments pro or con. were which were employed we have no means of knowing, these having been reported only in the political journals, which have not fallen in our way. The lamentable state of restriction under which the Medical press labours is, however, well exhibited on the present occasion: for, notwithstanding the great interest which a report on the discussion and comments upon the opinions expressed would have had for its readers, not a word of the matter is allowed to be reproduced in a non-political journal, and mere congratulation upon the result is all that is permitted. Certainly this is a deplorable state of things, which we heartily desire to see our *confrères* emancipated from; but surely some among ourselves are using our opportunities somewhat too unadvisedly when we employ our antagonism to homœopathy as an electioneering agent, and represent it as a disqualification on the part of representatives, who, in all other respects, may be what is desired, and whose errors are those of ignorance, and not, as alleged, of incapacity.

An amusing anecdote showing how the effects of the imagination may be confounded with those of homœopathy is related by M. Latour. A highly-distinguished French Physician was the subject of severe angina pectoris, which gave rise to frightful suffering, and for which he had in vain consulted every man of eminence. At last, besieged by the importunities of his friends, he consented to a visit from—not the high-priest of homœopathy, for he had died, but from his wife. The lady came, consoled, encouraged, and prescribed for him. Next day M. Latour called upon him, and to his great surprise found him up, free from pain, and smiling. "I have passed such an excellent night," exclaimed the patient, "and have not had an instant's suffering since yesterday, after the visit of Madame Hahnemann. She is indeed an amiable woman, possessed of powerful energy, for her very presence assuages pain. I took not a drop of what she prescribed, but had I swallowed a single globule the coincidence of the cessation of pain would certainly have puzzled me." The intermission was but a brief one, the patient, indeed, dying at no remote period.

An interesting official return on the epidemic of small-pox which prevailed in Berlin during 1864 is given in a recent number of the *Berlin Med. Wochenschrift*. Even in 1863 the number of cases amounted to 1270, of which 223 proved fatal; and during the first half of 1864 the epidemic kept extending, the number of cases rapidly diminishing after this period; so that by the end of the year the affection could be scarcely said to present itself in an epidemic form. The entire number of cases during 1864 amounted to 3319 (1590 males and 1720 females), 617 of which (313 males and 304 females), or 18 per cent., proved fatal. Up to 10 years of age, there were 854 cases and 356 deaths; between 10 and 20, 320 cases and 10 deaths; from 20 to 40, 1472 cases and 112 deaths; from 40 to 60, 625 cases and 125 deaths; from 60 to 80, 47 cases and 14 deaths; and above 80, 1 case, being a recovery.

In relation to vaccination, the returns, derived from the

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statements of Medical Practitioners or of the relatives of the patients, give the following results:—1. Of the 3319 patients, 976 were children, or below 15 years of age, and 2343 were adults, or above 15 years of age. 2. Of the fatal cases 360, or 36 per cent., occurred in the children, and 257, or 10 per cent., in the adults. 3. Of the vaccinated, 413 were children, and of these 63, or 15 per cent., died; and 2306 were adults, of whom 247, or 10 per cent., died—*i.e.*, a total of 2719 cases, with 310 deaths, or 11 per cent. 4. Among the unvaccinated there occurred 563 cases in children, with a mortality of 297, or 52 per cent.; and 37 in adults, with a mortality of 10, or 27 per cent.—*i.e.*, a total of 600 cases, with 307 deaths, or 51 per cent. 5. Among the re-vaccinated, there occurred 168 cases, with 16 deaths, or 9 per cent. As might be expected, some of the above figures excited much surprise, seeing that so many children professedly vaccinated had contracted the disease, often with fatal results. The Medical officers of the police undertook the investigation of every reported case, and came to the conclusion that these children had either not been vaccinated at all or had been vaccinated imperfectly, or only a few days prior to the outbreak of the variola; and they also came to the conclusion that successful vaccination invariably afforded protection against fatal small-pox during the period of childhood. Such protection continuing during the first ten years of life, and to the twentieth year, cases of small-pox are of rare occurrence. After this latter period the number of cases, as well as the mortality, are on the increase; so that the proper period for re-vaccination is sometime between the tenth and twentieth year. Its great efficacy is amply proved by the prolonged experience of the Prussian army, and by the few cases of variola following it observed during the present epidemic—most of these, too, occurring in old persons.

M. Edward Robin has brought a curious speculation before the Academie des Sciences,—viz., the possibility of diminishing the activity of respiration without diminishing the quantity of air entering the circulation. This he professes to accomplish by the administration of large quantities of coffee, or anti-putrid substances (as tar water or even an "arsenical alimentation," etc.) which by their combinations with proteic matters give rise to compounds which are not destructible by oxygen in the moist state. In this way the rapidity of consumption is diminished without injury to the animal economy, and the matters in circulation resisting for a long period the action of oxygen diminish the necessity of reparation. They produce a condition similar to that in which are the inhabitants of warm countries, who are so remarkable for the little aliment they require, and the abstinence they can endure; or the still more remarkable conditions in these respects of animals of variable temperature. This method, the author considers, is capable of the following applications:—1. As a means of diminishing the urgency of respiration so as to render anæsthesia less dangerous. 2. The production of artificial hybernation in mammalia. 3. The induction of fattening without the supply of fat or its materials. 4. The adjustment of alimentation in hot countries, so as to avoid the effects due to difficulty of respiration in the ascent of mountains, descent of mines, &c. 5. The diminution of the inconveniences of insufficient nutriment. 6. The diminution of the danger of Surgical operations.

Western Medical and Surgical Society.—The following is the list of officers for the twentieth session, 1865-1866, of this Society:—*President:* Mr. G. Pollock. *Vice-Presidents:* Dr. Baines, Mr. P. Hewett, Dr. Marcet, Mr. T. Dickson. *Council:* Mr. Keen, Dr. Martyn, Mr. Brodhurst, Dr. Way, Mr. Vasey, Dr. Davies, Mr. Traer, Mr. Knight, Dr. Daniell, Dr. Blandford, Mr. T. Holmes, and Mr. J. Lane. *Treasurer:* Dr. Baines. *Hon. Librarian:* Dr. Godwin. *Auditors:* Mr. Keen, Dr. Fyffe. *Hon. Secretaries:* Mr. W. Milner and Mr. Charles Hunter.

THE TRIAL OF EDWARD WILLIAM PRITCHARD.

SECOND DAY CONTINUED.

Dr. James Paterson, formerly Professor of Midwifery in the Andersonian Medical School, was then examined by the Solicitor-General. He said:—I remember being called to Dr. Pritchard's house on Friday, February 24 last. That was the first time I ever crossed his threshold. I was called between half-past 10 and a quarter to 11. Dr. Pritchard conducted me into his consulting-room on the first floor, and there he told me that his mother-in-law, while in the act of writing a letter, had suddenly been taken ill, and had fallen off her chair upon the floor. I think he said it would be about an hour or half an hour before I came that this happened. I asked if he could assign any reason or cause for the suddenness of the attack. He said his mother-in-law and Mrs. Pritchard had been partaking of some bitter beer, as I understood, for supper, soon after which they both became sick and vomited, and both complained that the beer was much more bitter to the taste than usual. He said they could not have taken more than a third of the pint each, because there was still some remaining in the bottle. I said I could not think it possible that either Allsopp's or Bass's beer would produce such an effect, and that the attack must depend on some other cause. I asked him with regard to the previous state of his mother-in-law's health, and particularly as to her social habits, when, by a particular insinuation, he led me to understand that she was in the habit of taking "a drop" occasionally. He stated also that Mrs. Pritchard had been very poorly a long time past with gastric fever, and that some days before he had telegraphed for his mother-in-law to come and attend to her in her illness. I then went upstairs to the bedroom, and on entering I observed Mrs. Taylor lying on the edge of the bed next to me. She was lying on her right side. All her clothes were on, and she had all the appearance of a sudden seizure. Mrs. Pritchard, with her nightdress on, with nothing on her head, and with her hair much dishevelled, was in the same bed, underneath the clothes, and sitting up immediately beyond her mother. On examining Mrs. Taylor my impression was that she had previously been in very good health. She seemed to me to be rather above the ordinary size, good-looking, well-formed, and altogether, I should say, a very superior-looking person. There was not the slightest appearance of her being in the habit of drinking spirits or intoxicating liquors. On examining her face it was rather pale, but the expression was calm and placid. The eyelids were partially closed; the lips were rather livid; the breathing was slow and laborious. The skin was cool, and covered with a clammy perspiration. The pulse was almost imperceptible, and she seemed to be perfectly unconscious. On my opening up her eyelids I found both pupils very much contracted. From these symptoms, and judging from her general appearance, my conviction was that she was under the influence of opium or some other powerful narcotic, and I at once pronounced my opinion that she was dying. On my doing so, Dr. Pritchard, in an under tone, said something, apparently unwilling that the expression of my opinion should be heard by the ladies. We then retired a little from the bedside, and I then said distinctly that she was dying. Dr. Pritchard said she had frequently had attacks before of a similar kind, but never one so severe. I said nothing we could do would have the slightest effect, but as a last resource we might try mustard poultices to the soles of the feet, the calves of the legs, and the inside of the thighs; and as quickly as possible administer a strong turpentine injection. Dr. Pritchard at once proceeded to prepare an enema, and he said he had a little before given her one in which he had administered a glass of brandy. Mrs. Taylor lay apparently comatose or unconscious, but on her being roused a little, and the head and shoulders slightly elevated, a degree of consciousness came on, and the pulse became perceptible at the wrist. I directed Pritchard's attention to the pulse at the wrist as showing a slight reaction, and he clapped Mrs. Taylor on the shoulder and said, "You are getting better, darling." A slight fit of retching now came on, and she put up a small quantity of a frothy kind of mucus, immediately after which the coma returned. The breathing became more oppressed, more laboured, and evacuations were passed involuntarily. I then concluded that the case was utterly hopeless, but Pritchard administered the enema in my presence. I

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afterwards left the room and went downstairs, accompanied by Pritchard, and we entered the consulting-room. I repeated my opinion that she was in a state of narcotism. Pritchard then stated that the old lady was in the habit of regularly using Battley's Sedative Solution, that she had a few days before purchased not less than a half-pound bottle of the medicine, and that he had no doubt but that it was very likely that she might have taken a good "swig" of it. That was his expression. There was little more said at the time. I know Battley's Solution, but I very seldom have used it. While attending to Mrs. Taylor in the bedroom I was very much struck at the same time with the appearance of Mrs. Pritchard. She seemed exceedingly weak and exhausted. Her features were sharp or thin, with a high hectic flush on her cheeks, and her voice was very weak and peculiar—in fact, very much resembling the voice of a person verging into the collapsed stage of cholera. The expression of her countenance conveyed to me the idea of a kind of silly or semi-imbecile person at the time. At first I was inclined to attribute her appearance to the recent severe attack of gastric fever, which I was told by the prisoner she had had, and her symptoms aggravated of course by the great consternation and grief not unnaturally caused by the sudden and alarming condition of her mother. At the same time, I must say I could not banish from my mind the conviction that her symptoms betokened that she was under the depressing influence of antimony. I never put a single question to Mrs. Pritchard. The impression was created entirely by her appearance. A little before 1 o'clock next morning my door bell was rung, and there was a girl asking for me to come directly to Mrs. Taylor. I refused to go, because I was certain that I could be of no service, and as I was very much fatigued with the previous day's work. But I sent my compliments to Dr. Pritchard, saying that if he really thought I could be of use he was to send back word, and I would then visit him. My house is only a short distance from his, in the same street—195 yards. No message came back, and I did not rise. On the 3rd of March I received through the post-office a schedule from the Registrar, in which I was requested to tell him the cause of Mrs. Taylor's death, and the duration of her disease. I refused to do so, and sent the schedule back to the Registrar on the Saturday, with a note accompanying it, and directing his attention to the circumstance. I accidentally met the prisoner in Sauchiehall-street on the Wednesday after Mrs. Taylor's death. He said I had been very correct in my opinion with regard to his mother-in-law; and added that he would feel obliged if I would visit Mrs. Pritchard next day. On Thursday, the 2nd of March, about 11 in the forenoon, I saw Mrs. Pritchard in bed. She was still very weak and prostrate. In a very earnest manner she asked me if I really thought that her mother was dying when I saw her. I said, "Most decidedly," and that I had told Pritchard so. She then clasped her hands, looked up, and feebly exclaimed "Good God, is it possible?" and burst into a flood of tears. I asked her with regard to the previous state of her mother's health. She told me her mother's health was generally very good, but she suffered occasionally from what she called neuralgic headache, and for the relief of those attacks she took a little of Battley's Sedative Solution. I understood that she was not in the habit of taking it. I then questioned her with regard to herself. She told me that for a considerable time past she had suffered very much from sickness, retching, and vomiting, with severe pains in the stomach and throughout the bowels, accompanied with purging, great heat and uneasiness about the mouth and throat, and a constant urgent thirst. I examined her tongue. It was very foul, and of a lightish brown colour. Her features were still very sharp and deeply flushed. Her pulse was weak, contracted, and very rapid. Her skin was moist, but defective in animal heat, and altogether she presented an appearance of great general prostration. Her eyes were watery, but clear and intelligent. I prescribed for her small quantities, at short intervals, of champagne and brandy to recruit her strength; small pieces of ice occasionally to relieve the thirst and irritability of the stomach. If she tired of these, I said she should have recourse to granulated citrate of magnesia as a cooling effervescing drink, and have a sinapism or mustard poultice applied over the pit of the stomach. I also recommended small quantities, at short intervals, of easily digested nutritous food, such as beef-tea, calf-foot jelly, chicken soup, arrow-root, and so on. I then wrote a prescription for twelve grains of calomel, twenty-four of blue or grey powder, twelve of powdered ipecacuanha, and six grains of aromatic powder, the whole to be carefully mixed up and divided into six equal parts—one powder to be taken every day. That prescription was with the view of relieving the biliary disturbance and soothing the mucous lining of the alimentary canal. Dr. Pritchard called on me about eight o'clock on the evening of the 17th of March, and requested me to visit Mrs. Pritchard. When I saw her I was much struck by her terribly altered appearance. She seemed quite conscious, for she caught my hand, and I could see a half smile of recognition on her countenance. She began to mutter something about vomiting. Dr. Pritchard was standing behind, and he volunteered to say she had not been vomiting, and that she was only raving. She complained of great thirst. There was a peculiarly wild expression in her face. The eyes were of a fiery red, sunk in the head; her cheeks were hollow, sharp, and pinched, and still much flushed. Her pulse was very weak and exceedingly rapid. Her tongue was of a darkish brown colour, very foul—very foul. She immediately began to grasp, as if to catch some imaginary object about the bedclothes. Pritchard said she had not slept for four or five days or nights. I then said we must endeavour to do something to relieve her, and if possible procure some refreshing sleep. We left the bedroom and went down-stairs. I then prescribed 30 drops of solution of morphia, 30 drops of ipecacuanha wine, 5 or 10 drops of chlorodyne, and an ounce of cinnamon water. A dose was to be repeated in four hours if the first did not procure sleep. The prescription was written to my dictation by Dr. Pritchard. About 1 next morning my bell was loudly rung, and a young woman requested me to come to Mrs. Pritchard immediately, as she had become much worse. I proceeded to dress, but in less than three minutes my door-bell was again rung, and the servant girl said I need not come, as Mrs. Pritchard was dead.

In cross-examination, witness stated that it was his impression on seeing Mrs. Pritchard that she was poisoned, or being poisoned, with antimony. He did not go back to see her, because she was not his patient. He had nothing to do with her. It was not his duty to do so.

You saw a person being poisoned with antimony, and you did not think it was your duty to interfere?—I did the best I could to prevent her being further injured by apprising the Registrar of the fact.

Did you tell Dr. Pritchard?—I did not.

You were surely under an obligation to go back again when you saw a person being poisoned by antimony?—I took what steps I could to prevent any further administration of the drug. I refused to certify the death of Mrs. Taylor, and if there had been a *post mortem* examination of Mrs. Taylor's body I believe that the drugging with antimony would have gone no further at that time. I observed that she was suffering under the same symptoms as those formerly observed when I was called in on March 2. I still believed her to be suffering under antimony, and prescribed for her accordingly. I saw her alone, but did not mention antimony to her in the slightest. The treatment I prescribed for her, provided she got nothing else, was quite sufficient to have brought her very soon round, taking it for granted that my prescriptions were carefully walked up to, or rather my advice. It was Dr. Pritchard who asked me to visit his wife on the occasion. I did not mention to him what I thought. It would not have been a very safe matter to have done. I I did not go back, because it was none of my business. I did not consider it my duty. She had her husband, who was a Medical man. I had discharged my duty.

By prescribing certain things, and not going to see that your prescription was followed?—In the case of a consultation the consultant has no right to go back.

The dignity of your Profession, then, prevented you?—The etiquette of the Profession.

In re-examination, witness, being asked why it would not have been safe to communicate his suspicions to Dr. Pritchard, said he would rather not answer that question. The letter to the Registrar had been destroyed, but he could give it *verbatim*, as he had paid great attention to it.

After consultation, it was agreed to call the Registrar at this stage.

James Struthers, Registrar of the Blytheswood district in Glasgow, was then examined, and stated that Mr. Taylor intimated the death of Mrs. Taylor to him. Dr. Paterson was said to have been the Medical atttendant, but he returned the schedule sent to him. Dr. Pritchard then sent a certificate. He also sent a certificate of his wife's death.

Dr. James Paterson was then recalled, and gave the following as the letter he had written to the Registrar:—

"Dear Sir,—I am surprised that I am called on to certif-

the cause of death in this case. I only saw the person for a few minutes, and a very short period before her death. She seemed to be under some narcotic; but Dr. Pritchard, who was present from the first moment of the illness till death occurred, and which had been in his own house, may certify the cause. The death was certainly sudden, unexpected, and to me mysterious."

I rendered emphatic the words "the cause of death" by having them underlined.

The Lord Justice Clerk: In answer to a question from the prisoner's counsel, I think you said your impression, when you first saw Mrs. Pritchard, and afterwards when you saw her on March 2, was that she was being poisoned with antimony. Do you mean you believe some person was engaged in administering antimony for the purpose of procuring her death?—Yes; but to me unknown. Was that your meaning?—That was what I meant.

Dr. James Moffat Cowan, Edinburgh: I am a cousin of Mrs. Pritchard, and saw her on February 11, not exactly as a Medical man, but as an old friend. While I was sitting in the dining-room with the children in the evening Dr. Pritchard came down from the bedroom and told me that Mrs. Pritchard had been vomiting again, and he requested me to accompany him to the bedroom and see her, which I did. I went up to the bedroom and saw her. She at the time complained of feeling a desire for food, and yet could not retain it, and I proposed to administer beef-tea injections. It was Mrs. Pritchard who desired that her mother should go through to Glasgow and wait upon her. It was, however, my proposal. I suggested it. I saw Mrs. Taylor herself, and she went next day.

Cross-examined: Dr. and Mrs. Pritchard lived exceedingly happily together, down to the last moment; at least, that was the case the last time I saw her. He was Mrs. Taylor's idol. Mrs. Taylor was of very temperate habits.

Margaret Dickson, for four years in the service of Mr. Michael Taylor, deponed to the usual good health and temperate habits of Mrs. Taylor.

Michael Taylor deponed: The late Mrs. Taylor was my wife. Before she went to visit my daughter, Mrs. Pritchard, in February last, she was in middling health. She was subject to violent perspirations, and also complained of violent headaches. She took Battley's Solution for the perspirations. She had taken that for five or six years. She was of perfectly temperate habits in every respect. Sometimes I observed a great inclination on her part to sleep after she had taken the medicine. My daughter was on a visit to me from the end of November till Christmas. She complained of sickness, more or less, all the time she was with me. She was much better when she went away from my house than when she came. I was telegraphed to that my wife was dangerously ill, and that she was dead. I received the two telegrams together. I went through to Glasgow by the first train. Dr. Pritchard told me my wife died of apoplexy. She never had any fits.

Cross-examined by Mr. Clark: I am frequently in Glasgow—one week in every month. The prisoner and his wife appeared to be living very happily together. She appeared to be very fond of him, and he of her. I generally stopped three days at the hotel, and generally spent Saturday and Sunday at their house.

The Court then adjourned till next day.

THE THIRD DAY.

Alexander M'Call, Superintendent of Police, and John Murray, Sheriff-Officer, were called to prove the identity of certain bottles, letters, prescriptions, and packets which were found in Pritchard's house at the time of his apprehension.

John Campbell, the manager of the Western Branch of the Glasgow Apothecaries' Company, proved that Dr. Pritchard had purchased the following drugs from the Company:—1864, Sept. 19: 10 grs. strychnine; Nov. 4: ½ oz. tinct. conii; Nov. 16: 1 oz. laudanum, 1 oz. tartar emetic; Nov. 24: 1 oz. tincture of aconite; Dec. 6: 1 oz. Fleming's tincture of aconite; Dec. 9: 1 oz tinct. conii. 1865, Feb. 4: 1 oz. tinct. conii; Feb. 7: 1 oz. tartarised antimony, 1 oz. tincture of aconite; Feb. 9: 1 oz. tincture of aconite; Feb. 11: 2 oz. tincture of digitalis; Feb. 18: 2 oz. tinct. conii. The witness said that he carried on a very large dispensing business; that he had never sold as much as an ounce of tartar emetic to a Medical man before, and that he was struck with the large quantity ordered by Pritchard. He stated that 2 oz. of tartar emetic would probably be as much as he should use in trade in twelve months. He also stated that an ounce of tincture of aconite was an unusual quantity to sell to one individual. He added that one or two ounces of Fleming's tincture would cover the whole of their business for a twelvemonth. Another article that the prisoner had purchased was chloroform, which he had bought in very large amount—from July 13 to December 9, 1864, he had been supplied with 132 oz., a quantity larger than they sold to all their Medical customers put together.

John Currie, chemist, of Glasgow, proved having furnished the prisoner with the following drugs:—1865, February 18: 2 oz. solution of morphia, 1 oz. Fleming's tincture of aconite; March 8: solution of atropine, 1 drachm, with 2 grs. in a drachm; March 9: solution of atropine, 1 drachm, with 2 grs. in a drachm; March 13: half-an-ounce of Fleming's tincture of aconite; March 14; solution of atropine, 1 drachm, with 2 grs. to drachm; March 16: solution of atropine, 1 drachm, with 5 grs. to drachm.

The next witness examined was Dr. Douglas Maclagan, Professor of Medical Jurisprudence in the University of Edinburgh. He stated that on the 21st of March last he had made a post-mortem examination of the body of Mrs. Pritchard, in conjunction with Dr. Littlejohn, and had drawn up the following report, which he read;—

Edinburgh, March 21, 1865.

We, the undersigned, in virtue of a warrant of the Sheriff of Lanarkshire, of yesterday's date, concurred in, of this date, by the Sheriff Substitute of Edinburgh, at No. 1, Lauder-road, Grange, examined a body identified in our presence as that of Mary Jane Taylor, or Pritchard, by the following witnesses:—Mary Rayner, or Taylor, sister-in-law of the deceased; Michael Taylor, father of the deceased; Catherine Lattimer, servant; and Margaret Dickson, servant.

The body appeared to be that of a healthy woman, of about the age stated on the coffin-plate—thirty-nine years. It was free from putrescency. There was moderate *post-mortem* lividity and *rigor mortis*. Nothing was observed externally, except a yellow stain on the right side of the abdomen, looking like the remains of a sinapism. The expression was placid. The pupils of the eyes natural.

Head.—The vessels of the scalp were not loaded with blood. The veins on the surface of the brain were moderately full, especially at the posterior part. There was considerable effusion of serum under the arachnoid membrane on the top of the brain, but not at the base. The brain itself was healthy, both as regards vascularity and consistence. The ventricles contained only a small quantity of serum.

Organs of Respiration and Circulation.—The windpipe was healthy. The right lung was quite healthy. The left lung was slightly adherent to the walls of the chest at its apex, where there was a firm mass of old tubercular deposit, of the size of a hazel nut, of cheesy consistence, and unaccompanied by any traces of recent morbid action. There was a small amount of serum in the pericardium. The heart contained a little fluid blood in both cavities; rather more in the right than in the left ventricle. In the right ventricle there was a small fibrous clot. The heart and its valves were healthy.

Organs of Digestion.—The gums and mucous membrane of the mouth were exsanguine; the lips dry; the pharynx and gullet perfectly healthy. The walls of the abdomen were loaded with fat, and so were the omentum and mesentery. The viscera presented no morbid appearance externally. The liver was natural; the gall-bladder full of bile. The spleen was healthy. The kidneys slightly congested. The stomach contained about three drachms of pinkish-grey, ropy fluid, with some small masses of tenacious mucus mixed with it. The mucous membrane was generally healthy, but on the posterior wall, near to the cardia, there was a patch of punctiform redness over a space of two inches square. The small intestines were lined with light grey mucus. The colon and rectum contained some yellow feculent matter, which nowhere was of solid consistence. The ileum, for about three inches of its length, at a part beginning about three inches above its termination in the colon, was closely contracted on itself. The mucous membrane of the rectum, throughout a good part of its extent, presented a superficial dark discolouration, as if some black pigment were embedded in its substance. There was slight ramiform injection of the greater part of the mucous membrane of the rectum. There were several small patches of the same appearance at various points throughout the colon, and a few spots of similar vascular injection in the small intestines.

Urinary and Genital Apparatus.—The urinary bladder contained about eight ounces of brownish-yellow urine; the womb and its appendages presented no morbid appearance beyond a slight ulceration of the cervix uteri.

We have to report that this body presented no appearance of recent morbid action beyond a certain amount of irritation of the alimentary canal, and nothing at all capable of accounting for death. We have therefore secured the alimentary canal and its contents, the heart and some of the blood, the liver, the spleen, the left kidney, and the urine, in order that these may be submitted to chemical analysis.

(Signed) Douglas Maclagan.
Henry D. Littlejohn.

Dr. Maclagan then read his chemical report on the case of Mrs. Pritchard, certain portions of which, referring to what was done during Dr. Maclagan's absence, were substantiated by Dr. Arthur Gamgee, his assistant, and by Dr. Littlejohn. The report was as follows:—

Edinburgh, April 11, 1865.

I have subjected to chemical examination the various organs and contents of organs removed by Dr. Littlejohn and myself from the body of Mrs. Mary Jane Taylor, or Pritchard, at the post-mortem examination, on 21st March, and I have to report the following as the results which I obtained.

It having been stated to me that antimony was suspected in this case, immediately on returning from the post-mortem examination I made a trial experiment, in the presence of Dr. Littlejohn and my assistant,

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Dr. Arthur Gamgee, with three drachms of the urine, and obtained from this unmistakeable evidence of the presence of antimony. Being obliged, in consequence of the death of a relative, to go to London, and having by the above experiment ascertained that my researches must be directed towards the discovery of antimony, I requested Dr. Gamgee, in conjunction with Dr. Littlejohn, to carry on the following preliminary process in my absence. The whole contents of the intestines were evaporated to dryness on a water bath, so as to obtain a solid residue; one-half of this residue was digested with water acidulated with tartaric acid, and filtered, by which a solution measuring two ounces and five drachms was obtained, in which any antimony present in the intestines would be found. One ounce of this fluid was subjected to a stream of sulphuretted hydrogen gas, and the orange-yellow precipitate which formed was collected on a filter and washed. This precipitate, and the remainder of the tartaric acid solution, were reserved for my examination on my return to Edinburgh, on the 24th March. I then subjected these materials to the following examination. The orange-yellow precipitate was boiled in a tube with pure hydrochloric acid, and the solution thus obtained was mixed with water, when a white precipitate formed. The fluid containing this precipitate was again subjected to a stream of sulphuretted hydrogen gas, and again gave a deposit of an orange-yellow colour.

One fluid drachm of the tartaric acid solution was treated by Reinsch's method, and another fluid drachm was treated by Marsh's process. By each of these well-known methods, and thus operating upon a quantity of fluid corresponding to a forty-second part of the contents of the intestines, I obtained unequivocal evidence of the presence of antimony. By digesting a small quantity of the dried residue of the intestinal contents with distilled water, filtering and subjecting the filtrate to Reinsch's process, I readily ascertained that the antimony was here present in the form of a compound soluble in water. There are only two preparations of antimony occurring in commerce which are soluble in water; the one of these, the chloride, is a strongly acid, dark brown, corrosive fluid, totally unsuited for internal administration; the other is what is known scientifically as tartarised antimony, and popularly as tartar emetic, a colourless substance, possessed of comparatively little taste, and in daily use as a medicinal agent. I have no doubt, and shall assume in the following statements, that the antimony found in Mrs. Pritchard's body was taken in this form.

The remainder of the acid solution, amounting to one ounce and three drachms, was subjected to a process intended to determine the quantity of antimony present in the contents of the intestines; but though the presence of this metal was determined with the greatest facility, I found that the amount yielded by the materials which I used was too small to enable me to weigh it with accuracy. I also made an experiment with the contents of the intestines, directed towards the discovery of vegetable poisons. It is sufficient on this subject to say that the result was entirely negative.

I then subjected to analysis the following fluids and solids removed from the body of Mrs. Pritchard:—

1. *Contents of Stomach.*—These amounted to little more than half-an-ounce, and were free from all odour of any poisonous drug. They were subjected, in the first place, to what is known as "Stas's process" for the separation of vegetable poisons, but not a trace of any of these was detected. The whole residues of this operation were preserved and subjected to examination for antimony, but none was found.

2. *The Urine.*—The presence of antimony having been already ascertained in this secretion, the remainder, amounting to seven ounces, was employed to determine its quantity. The process followed here was a well-known one, by which the antimony is obtained in the form of sulphuret, after destroying the organic matter by means of hydrochloric acid and chlorate of potash. The quantity of sulphuret was readily weighed and found to be rather more than one-tenth of a grain (0·1078 grain). This corresponds to nearly one-fourth of a grain (·218 grain) of tartar emetic.

3. *The Bile.*—A little more than half-an-ounce of this fluid was obtained from the gall-bladder. By Reinsch's process, fifty minims readily gave an antimonial deposit. The remainder of the bile, amounting to four drachms, was used to determine the amount of antimony in it, and it yielded sulphuret of antimony corresponding to more than one-tenth of a grain (0.122 grain of tartar emetic.

4. *The Blood.*—The total quantity was six and a half ounces. One ounce was subjected to Reinsch's process, and readily gave evidence of the presence of antimony.

5. *The Liver.*—The weight of this organ was found to be thirty-six ounces, a portion weighing less than four ounces (1460 grains) was subjected to Reinsch's process, and a sufficient amount of antimony was found to coat rather more than four square inches of copper foil. Although the existence in the liver of an abundance of antimony was, to my mind, satisfactorily established by the appearance of the coated copper foil, I deemed it right to employ a portion of the product thus obtained for confirming, by another test, the presence of antimony in the body of Mrs. Pritchard. For this purpose a piece of the copper foil, one inch long and half an inch broad, was boiled in a dilute solution of pure caustic potash, the copper foil being from time to time freely exposed to the air. The coating disappeared from the copper, and a solution was obtained, which, when acidulated with hydrochloric acid, and subjected to a stream of sulphuretted hydrogen gas, gave an orange precipitate, which again was dissolved in strong hydrochloric acid. This acid solution gave, on being mixed with water, a white turbidity, which again was turned orange by sulphuretted hydrogen. Another portion of the coated foil, measuring half an inch square, was heated in a fine glass tube, with a view to ascertaining the presence or absence of arsenic, which occasionally exists as an impurity in compounds of antimony. No arsenic, however, was found, nor had any been observed in the previous trial of the contents of the intestines by Marsh's process. Finding antimony thus abundantly in the liver, I made an experiment to determine its actual quantity in that organ. For this purpose I operated upon one thousand grains, by the process described above for determining the presence of antimony, and obtained an amount of antimony in the state of sulphuret (0·1234 grains) corresponding to a quarter of a grain (0·25 grain) of tartar emetic; the amount contained in the whole being almost exactly four grains (3·93 grains).

I next examined the remainder of the solid organs removed from the body of Mrs. Pritchard, and have to state that I have found more or less antimony in the whole of them. I operated in no instance upon more than 350 grains, in every case following Reinsch's process. I thus obtained the evidence of the presence of antimony in the spleen, kidney, muscular substance of the heart, coats of the stomach, coats of the rectum, brain, and uterus.

On the 29th of March I received from the hands of John Murray, Sheriff-Officer, Glasgow, two parcels of clothes, with sealed labels attached to them, with a view to my examining some stains upon them. One of these labels bore "Police Office, Glasgow, Central District, 23rd March, 1865. Found in the house of Dr. Pritchard, 131, Sauchiehall-street, and referred to in the case of himself. (Signed) A. M'Call Audley Thomson." The label was signed by John Murray in my presence, and initialed by me. On the back of the label was the following list of the articles attached to it:—"One nightdress, 1 chemise, 1 nightcap, 3 handkerchiefs, 1 knitted woollen semet, a pair of worsted stockings, 1 woollen polka." The other label was similarly dated and signed, the list on the back being—"2 sheets, 2 pillow-cases, 2 towels, 1 toilet cover." I examined such of the stains on these articles as appeared of importance, confining my experiments to a search for antimony; and I have to state that, whilst with many of the stains the result was entirely negative, I found antimony on the following:—1st. On the chemise, from a stain obviously of discharge from the bowels, and which had been marked by me A. 2nd. On one of the sheets distinguished by me as No. I. in a stain marked by me B. 3rd. On the other sheet distinguished by me as No. II. in a stain obviously of urine, marked by me A. 4th. On a toilet cover, in a stain of a reddish colour, looking like a wine stain.

It is hardly necessary to state that the materials employed in all these chemical operations had been ascertained to be entirely free from all metallic impurity.

From the experiments, the details of which are given above, I have been led to the following conclusions:—

1st. That Mrs. Pritchard had taken a large quantity of antimony in the form of tartar emetic.

2nd. That, having regard to the absence in her case of any morbid appearances sufficient to account for death, and to the presence in it of a large quantity of a substance known to be capable of destroying life, her death must be ascribed to the action of antimony.

3rd. That it is most unlikely that this poison was taken in a single large dose. Had this been the case, I should have expected to have found some more decided evidence of irritant action in the mouth, throat, or alimentary canal.

4th. That from the extent to which the whole organs and fluids of the body were impregnated with it, it must have been taken in repeated doses, the aggregate of which must have amounted to a large quantity.

5th. That, from the large amount found in the liver, from its ready detection in the blood, and from its being found passing so copiously out of the body by the bile and urine, it is probable that some of the poison had been taken at no greater interval than a period of a few days previous to death.

6th. That I am inclined to believe that it had not been administered, at all events in any great quantity, within a few hours of her death. Had this been the case, I would have expected to have found at least some traces of it in the contents of the stomach, and more in the contents of the intestines; whereas none was found in the former, and the amount found in the latter seems to be amply accounted for by the bile impregnated with the poison discharged into them from the liver.

7th. That the period over which the administration had extended cannot be determined by mere chemical investigation, but must be deduced from the history of the case, with which I am unacquainted.

DOUGLAS MACLAGAN.

Dr. Maclagan then read the following report, giving the results of a post-mortem examination of the body of Mrs. Taylor, made by himself and Dr. Littlejohn:—

Edinburgh, March 30, 1865.

In virtue of a warrant of the Sheriff of Lanarkshire, dated March 28 1865, and concurred in on March 29 by the Sheriff Substitute of Mid Lothian, we this day, at the Grange Cemetery, examined the body of Mrs. Jane Taylor, who was buried there at the beginning of the present month. The coffin was exhumed in our presence, and was found to bear on the plate, "Jane Taylor, died 25th February, 1865, aged 71 years." A portion of the earth from above the coffin was secured for chemical examination. The coffin, and subsequently the features of the deceased, were identified in our presence by the following witnesses:—Mr. Michael Taylor, Dr. W. M. Taylor, Margaret Dickson, James Thomson, John Moffatt, David Glen, and Robert Grant. The coffin was entire. The following were the appearances observed by us in the body of Mrs. Taylor:—

Externally, it presented the appearance of great freshness. There was some red *post mortem* colouration of the shoulders and back. The abdomen was slightly green over a space of not more than four inches by three. There was a little mouldiness on the face, but there was no putrefactive disfigurement of the countenance. The expression was placid, and a little florid colour was visible on the cheeks.

Head.—The scalp was not congested. The dura mater was firmly adherent to the skull at several points, especially at the frontal bone, and in the right temporal fossa, at which places the inner table of the skull exhibited rough elevations and depressions, to which the dura mater was attached. These were of old standing. A small quantity of fluid blood, which had exuded from a vein torn in removing the skull cap, was found in the upper part of the posterior lobe of the left hemisphere. It was entirely a *post-mortem* occurrence. The blood was at once washed away by a little water poured gently upon it, and the brain and membrane beneath it were found quite in a natural state. There was a small amount of sub-arachnoid effusion, obviously also a *post-mortem* phenomenon, as it was found only at the back part of the brain, and was unaccompanied by any appearance of inflammatory action. The blood-vessels of the brain were not congested. The ventricles contained less than a teaspoonful of clear serum. The brain throughout was remarkably fresh. Every part of it was most carefully scrutinised, but at all points it was found perfectly healthy, both externally and internally, equally as regards consistence, colour, and structure. There was a trifling amount of atheromatous deposit on the coats of the vessels at the base of the brain, but much less than might have been expected in a person of seventy-one years of age.

Organs of Respiration and Circulation.—The mucous membrane of the trachea was little, if at all, altered by putrefaction, being only slightly reddened and lined by a little colourless mucus. The lungs were remarkably healthy, there being no trace of anything noteworthy about them, except some old adhesions of the left pleura. The pericardium was healthy, and contained no serum. The heart was large, and weighed sixteen ounces. It had a considerable layer of fat over the surface, was slightly dilated, particularly on the right side, but all its valves were quite healthy. There was about one ounce and a half of fluid blood, along with a fibrinous coagulum, in the right ventricle. The left ventricle was

almost empty. The venæ cavæ contained half-coagulated blood. The aorta was quite free from atheromatous deposit.

Organs of Digestion.—The gums and mucous membrane of the mouth, the pharynx, and gullet, were perfectly healthy. The walls of the abdomen were loaded with fat, and so were the omentum and mesentery. The stomach contained five ounces of turbid yellow fluid, and some small masses of undigested food. The mucous membrane was free from disease, and presented only some post-mortem blackening at several points, and a yellow colouration from contact with the contents. The intestines presented diffuse post-mortem redness externally at several points, but nowhere exhibited any distinct morbid appearances. A portion of the ileum, about four inches in length, and about three feet above the cæcum, was closely contracted upon itself. The small intestines contained only a lining of pinkish-grey mucus. There was a small amount of yellow fluid fæces in the cæcum and rectum. The large intestines elsewhere contained only a lining of pinkish-grey mucus. The mucous membrane of the intestines was everywhere perfectly healthy. The rectum at one or two points, especially close to the anus, presented slightly the appearance of a black pigment matter embedded in its mucous membrane. The other organs of the abdomen were healthy.

Urinary and Genital Apparatus.—The bladder was contracted, and contained only a little mucus. The uterus and its appendages were healthy.

We have to report that we have not been able to discover in the body of Mrs. Taylor any morbid appearance capable of accounting for her death, and are of opinion that the cause of her death cannot be determined without chemical analysis. We have, therefore, secured for this purpose the alimentary canal and its contents, the heart and some of the blood, the liver, the spleen, the kidneys, the bladder and uterus, and a portion of the brain, which have been left in the custody of Dr. Maclagan.

DOUGLAS MACLAGAN.
HENRY D. LITTLEJOHN.

Dr. Maclagan then proceeded to read his report of the chemical analysis in the case of Mrs. Taylor, which was as follows:—

Edinburgh, 13th April, 1865.

I have subjected to chemical examination the various organs and fluids removed by Dr. Littlejohn and myself from the body of Mrs. Jane Taylor at our post-mortem examination on 30th March, and have to report on them as follows:—

Contents of the Stomach.—These, which amounted to five ounces, were, in the first place, subjected to the process known as that of Stas for the detection of the active principles of vegetable poisons. The result, however, was that no trace of any of them was detected. A special test was also applied, with the view of discovering in the stomach meconic acid, one of the characteristic constituents of opium; but in this also I was unsuccessful. The residues of the above process were reserved to be tested for metallic poisons, and a preliminary trial, by Reinsch's method, having revealed in the contents of the stomach the presence of antimony, I subjected the whole to a process by which I was enabled to determine the amount of this metal. The process was as follows:—The materials were boiled with pure hydrochloric acid and copper foil so long as the latter continued to receive on its polished surface a deposit of antimony. The foil thus coated was boiled with a weak solution of pure potash, the foil being from time to time exposed to the air; and the antimony was thus dissolved. The fluid, after being acidulated with hydrochloric acid, was subjected to a current of sulphuretted hydrogen gas, and yielded an orange-coloured deposit of sulphuret of antimony. This was further purified by dissolving it in a weak solution of sulphide of sodium, from which it was again precipitated by hydrochloric acid and weighed. Assuming, for reasons to be afterwards given, that the antimony existed in the form of tartar emetic, the amount of this represented by the sulphuret which I obtained from the stomach was a little more than a quarter of a grain (0·279).

Contents of Intestines.—The whole contents were evaporated at a gentle heat on the water-bath, and a dry residue obtained, which weighed four hundred and thirty grains. Ten grains of this residue, on being subjected to Reinsch's process, yielded a characteristic deposit of antimony. To determine in what form this antimony existed, other ten grains were heated with distilled water, the solution filtered, and the fluid subjected to Reinsch's process. A chrracteristic antimonial deposit was obtained, thus proving that this metal was present in a soluble form. There are only two soluble forms of antimony met with in commerce. One of these, the chloride, is a dark-coloured, acid, corrosive fluid, totally unsuited for internal administration; the other is what is known scientifically as tartarised antimony, and popularly as tartar emetic, a colourless substance possessed of comparatively little taste, and in daily use as a medicinal agent. I have no doubt that it was in this last form that the antimony had been taken which I found in the alimentary canal of Mrs. Taylor. I endeavoured to determine, by the process formerly mentioned, the amount of antimony in the contents of the intestines, and for this purpose one hundred grains of the dried residue were boiled with hydrochloric acid and copper foil. The amount of foil coated was one and a-half square inches; but the deposit was too small to enable me with confidence to make it the subject of a quantitative determination.

A piece of the coated copper, half an inch square, was heated in a tube to ascertain the presence or absence of arsenic, which occasionally occurs as an impurity in tartar emetic; but none was found.

The Blood.—Of this, six and a half ounces were obtained at the post-mortem examination. One ounce was subjected to Reinsch's process, and a characteristic antimonial deposit was obtained.

The Liver.—This organ weighed two pounds six and a-half ounces. Two hundred and twenty grains were subjected to Reinsch's process, and two pieces of copper foil were coated with a characteristic deposit of antimony. One of these was made use of to confirm, though this was not necessary, the fact that the deposit on it was antimony. For this purpose, it was, by the process already described, converted into sulphuret, which again was dissolved in strong hydrochloric acid. The solution thus obtained became milky on the addition of water, and on being a second time exposed to sulphuretted hydrogen gas again yielded the orange-coloured sulphuret. These reactions are conclusive as to the deposit on the foil being antimony.

I determined the amount of antimony in the liver. For this purpose I operated upon a thousand grains by the method already described, and obtained a quantity of sulphuret, indicating that the liver contained rather more than one grain and a tenth (1·151 grains) of tartar emetic.

I also examined the other solid organs and tissues removed from Mrs. Taylor's body, in each case following Reinsch's method, and in each case obtaining on the copper a characteristic antimonial deposit. I thus found that there was more or less of antimony present in the muscular substance of the heart, the spleen, the kidney, the coats of the stomach, the coats of the rectum, the uterus, and the brain.

Lastly, as Mrs. Taylor's body had been exhumed, I thought it my duty to examine some of the earth in which it had been interred, although this was superfluous, from the fact that the soil of the cemetery was dry and the coffin entire. For this purpose I boiled eight ounces of the earth in water, filtered and concentrated the decoction, and subjected it to Reinsch's process; but it was found not to contain a trace of soluble antimony, and was therefore incapable of impregnating with this metal any body buried in it.

In cross-examination by Mr. R. A. Clark, in reference to the trial test of the urine obtained from Mrs. Pritchard's body, Dr. Maclagan stated that he did not consider a case thoroughly worked out by the employment of Reinsch's process alone, although, as a trial experiment, the result was to his mind quite unmistakeable. It was better, he added, to carry assurance to the minds of other people by adding a further corroborative test. Reinsch's process consists in producing upon the copper foil a certain coloured deposit; the copper may then be tested in other ways, but that is not an essential part of Reinsch's process. After the preparatory work done by Drs. Gamgee and Littlejohn, the whole of the rest of the experiments were conducted by himself. He did not find a sufficient quantity of antimony in the portion of the fluid prepared by Drs. Gamgee and Littlejohn, which he examined, to enable him to weigh it satisfactorily. He did not hand any of that solution to Dr. Penny, but he gave him some of the dried residue. He was informed by Drs. Gamgee and Littlejohn that they had followed his directions in the preparation of the solution. In the liver of Mrs. Pritchard he had found ·1234 grains of sulphuret of antimony to the thousand grains, corresponding to a quarter of a grain of tartar emetic to the thousand grains.

Examined by the Solicitor-General, Dr. Maclagan deposed that he had delivered to Dr. Penny from the body of Mrs. Pritchard (1) a portion of the rectum, (2) the pyloric half of the stomach, (3) about half a kidney, (4) a portion (half) of the spleen, (5) a portion of the heart, (6) a portion of the brain, (7) 255 or 225 grains of dried contents of intestines, also a portion of liver and a portion of blood. All these were given either in jars or in bottles. Of Mrs. Taylor's body he delivered (1) a portion of liver, (2) a portion of heart, (3) one kidney, (4) 100 grains of dried contents of intestines, (5) about one-half of the stomach, (6) a portion of the rectum, (7) a portion of the blood. Dr. Maclagan stated that he was requested subsequently to make an examination of a part of the residue of the contents of the intestines of Mrs. Pritchard. He did that last week. What he operated upon were the remains after the process that had been conducted by Drs. Gamgee and Littlejohn in his absence, and which had remained locked up. It was the solid residue that had remained after the tartaric acid fluid had been filtered through. In this he determined the presence of mercury, and found a considerable quantity of antimony remaining in it. The following was the account he gave of the process he adopted:—"I got a clear fluid by operating upon that residue with chlorate of potash and hydrochloric acid, and then passing sulphuretted hydrogen. I got a precipitate of a dirty orange colour, which was collected, washed, and boiled in strong hydrochloric acid. The yellow colour disappeared, and the precipitate became black. The hydrochloric solution was then mixed with water and tartaric acid, and (on subjecting it to sulphuretted hydrogen) it gave an orange precipitate, which, when collected and weighed, amounted to 0·082, equal on the whole to 1·265 grains of sulphuret of antimony;" that was rather more than a grain and a quarter in the whole that remained of the solid residue. It was more antimony than was found in the contents of the intestines after the precipitate obtained by Drs. Littlejohn and Gamgee. They "treated the solid residue of one-half of the contents of the intestines in my absence. They filtered the clear tartaric acid, and the result is given in my first report. The solid matter of that not dissolved by the tartaric acid was kept on the filter. It was that that was operated upon, and therefore it was the solid residue of the one-half of the contents of the intestines, minus, of course, what had been dissolved by the tartaric acid." The quantity of antimony extracted from this residue was equal to 2·56 grains—rather more than two and a-half grains of tartar emetic. The precipitate becoming black indicated the presence of sulphuret of mercury. The quantity of mercury found was 0·0500 grains—the twentieth of a grain. I made a corroborative experiment along with that I have just narrated on a little fresh portion of the dried contents of the intestines, in order to estimate the

total quantity of tartar emetic contained in the whole of the intestines. "I took fifty grains of matter that had never been operated upon by any person before—what had been got by simply evaporating to dryness. I worked by the process of chlorate of potash as before, and I got 0·138 of sulphuret of antimony, corresponding to 0·280 of tartar emetic. The weight of the whole dried contents of the intestines was 1020 grains, so that the whole tartar emetic in the whole of the contents of the intestines would be 5·712 grains.

In cross-examination by Mr. Clark, Dr. Maclagan stated that he also found 300 parts of a grain of sulphuret of mercury in the fifty grains of residue. In his experiments on Mrs. Pritchard's body, contained in his report, Reinsch's process was followed up by testing the antimony by boiling the copper in solution of potash in the case of the contents of the intestines, and in the case of the liver, but in all the other experiments he rested satisfied with obtaining the deposit on the copper. He did not carry the experiment farther than obtaining the deposit on the copper in the case of the bed-clothes. In Mrs. Taylor's case he only carried out the experiments beyond the obtaining the deposit on the copper in the cases of the contents of the intestines and of the liver.

Dr. Frederick Penny, Professor of Chemistry in the Andersonian University of Glasgow, was then examined. After deposing that he had received from Professor Maclagan the things mentioned in the witness-box by the latter, he proceeded to read the following report of his analysis in the case of the death of Mrs. Pritchard:—

Andersonian, Glasgow, May 9, 1865.

On Monday, April 10 last, I received from Dr. Douglas Maclagan, at his laboratory in Edinburgh, the following articles, all of which were certified to have been taken from the body of Mrs. Pritchard:—

No. 1. Pyloric half of stomach. } These four articles were contained in a stoneware jar.
„ 2. Nearly half of kidney. }
„ 3. Portion of rectum. }
„ 4. Portion of spleen. }
„ 5. Portion of liver, in a glass jar.
„ 6. Portion of brain, in a glass jar.
„ 7. Portion of heart, in a glass bottle.
„ 8. Portion of blood, in a glass bottle.
„ 9. 225 grains of dried contents of intestines, in a glass bottle.

The several vessels containing these articles were securely closed and duly labelled. I brought them direct to Glasgow on the day referred to, and in accordance with instructions from the Crown agent, Edinburgh, I have, at my own laboratory, carefully analysed and chemically examined each and all of the said articles for the purpose of ascertaining whether they contained any poisonous substance.

Dried Contents of Intestines.—The investigation was commenced with the contents of the intestines. From the information which I received, my attention was particularly directed to the detection of antimony; but deeming it desirable to search for the presence of other metallic poisons, I subjected a portion of the said contents to the usual course of qualitative analysis for the detection of various metals of a poisonous nature. The results of this exhaustive examination gave distinct indications of the presence of antimony and mercury.

For the purpose of establishing unequivocally the presence of these metals, and at the same time of estimating their quantities respectively, the following experiments were then carried out.

A known quantity of the said contents was dissolved, with the usual precautions, in hydrochloric acid, with the addition of chlorate of potash, and the solution being properly diluted with water, was subjected to the action of sulphuretted hydrogen gas. An abundant black precipitate was obtained, which by proper treatment was separated into sulphide of antimony and sulphide of mercury.

The sulphide of antimony, which was obtained of a fine orange-red colour, was washed, dried, and weighed. Its weight corresponded to a quantity of metallic antimony equal to 2·1 grains in one thousand parts of the dried contents of the intestines. The same sulphide was found to be readily soluble in sulphide of ammonium, and also in hydrochloric acid; and the acid solution, when poured into water, gave a white precipitate, and when boiled with copper ribbon deposited a violet-coloured coating on the surface of the copper. The coated copper, on being heated in a glass tube, gave no distinct crystalline sublimate. All these results are eminently characteristic of sulphide of antimony when thus treated.

The sulphide of mercury was black; it was dissolved in nitric and hydrochloric acids, and, the solution being appropriately prepared, was treated with chloride of tin. A precipitate of metallic mercury was obtained, which, after being suitably washed and dried, was found to correspond to three grains in one thousand grains of the dried contents. A portion of this precipitate, on being heated in a dry glass tube, gave a sublimate of mercury in brilliant and mirror-like globules. Another portion was dissolved in nitric and hydrochloric acids, and the solution, after the removal of the excess of acid, was tested with caustic potash, ammonia, and iodide of potassium, and with other re-agents and methods for the detection of mercury. In every case the peculiar reaction of that metal was satisfactorily produced.

In order to corroborate the results of the foregoing experiments, another portion of the said contents of the intestines was subjected to Reinsch's process, and this was supplemented by Marsh's process. By the former process copper foil was coated with a deposit which presented the peculiar violet colour and the general appearance of metallic antimony; and by continuing the process till the copper foil ceased to be coated and the liquid was exhausted of separable matter, pieces of the copper foil were obtained with a grey coating, which, on being rubbed, became silvery and lustrous, like metallic mercury when similarly deposited. The coated copper was then digested in an aqueous solution of pure potash, and after being well washed and dried, it was cautiously heated in a small tube. A sublimate of metallic mercury in minute lustrous globules was obtained, and this sublimate, when dissolved in the proper acids, yielded with the well-known tests the chemical reactions of metallic mercury.

The potash solution from the coated copper was then treated in the usual manner for the separation of antimony in the form of the orange-red sulphide, which, when collected and weighed, was found to correspond very closely with the proportion obtained by the process previously described. The sulphide of antimony was soluble in sulphide of ammonium and in hydrochloric acid. The solution in hydrochloric acid gave a white precipitate when poured into water; and on being subjected to Marsh's process deposited on a porcelain slab the characteristic stains of metallic antimony. In another experiment, a portion of the said contents was distilled with concentrated hydrochloric acid, and antimony was detected in the distillate.

With a view of ascertaining whether the antimony and mercury existed in a form soluble in water in the said contents of the intestines, a portion of these was macerated in distilled water, and the solution carefully tested for both metals. The presence of antimony was distinctly detected, but no mercury.

The said contents were also examined by Stas's method for aconite, morphia, and other organic poisons, but not the slightest evidence of the presence of such poisons was obtained.

Stomach.—The stomach was analysed by the same methods as those applied to the dried contents of the intestines.

It yielded antimony in appreciable proportions, but no mercury. The quantity of antimony obtained was equal to ·05 of a grain in one thousand parts. The stomach was also minutely examined for morphia and aconite, but not a trace of these substances was obtained.

Liver.—The liver was found to contain antimony, but no mercury. The proportion of antimony amounted to one-tenth of a grain in one thousand grains.

Spleen.—The spleen yielded antimony in about the same proportion as that found in the liver, and it also contained mercury in well-marked quantity.

Kidney.—The kidney yielded about the same proportion of antimony as the liver, and it was also found to contain an extremely minute trace of mercury.

Heart.—The heart yielded antimony in a proportion rather larger than that found in the liver. It also contained mercury in smaller quantity than the spleen.

Brain.—The brain contained antimony in less quantity than the liver, but it yielded no mercury.

Blood.—The blood contained a small quantity of antimony, and also a faint trace of mercury.

Rectum.—The rectum yielded antimony, but in less quantity than the liver. It afforded no indications of mercury.

Having deliberately considered the results of my experiments upon the articles subjected to analysis, I have arrived at the following conclusions:—

1st. That all the parts of the body examined by me contained antimony.

2nd. That in the dried contents of the intestines the antimony was partly in a form soluble in water, and most likely in the state of tartar emetic or tartarised antimony. In the liver, kidney, and other viscera, the antimony was deposited in a state insoluble in water.

3rd. That the contents of the intestines contained the largest proportion of antimony, next the heart, then the liver, kidney, and spleen; less in the stomach, and the smallest quantity in the rectum, brain, and blood. Not knowing the total weight either of the contents of the intestines, or of the several organs here enumerated, I was unable to calculate the total quantity of antimony in these matters, either separately or conjoined.

4th. That the contents of the intestines, the spleen, the heart, the blood, and the kidney contained mercury; but that none of this metal was present in the liver, stomach, rectum, and brain. That in all these matters the mercury was in a state insoluble in water; and this result is quite consistent with the known property of mercury to form insoluble combinations with animal substances, even though it had been taken or administered in a soluble form during life

5th. That the largest quantity of mercury was contained in the contents of the intestines, next in the spleen and heart, and extremely minute traces in the blood and kidney.

6th. That the presence of antimony and mercury in the contents of the intestines indicates that these metals were being passed from the deceased up to the time of death.

7th. That no other metallic poison was contained in the matter examined.

8th. That no aconite, morphia, or other vegetable poison, discoverable by chemical processes, was contained either in the contents of the intestines or in the stomach.

9th. Not having detected any organic poison, either in the said contents of the intestines or in the stomach, it was not necessary to examine the other articles for such poisons, and more especially as the quantities of these matters received for analysis were too small to hold out any prospect of a successful result.

All this I certify on soul and conscience,

FREDERICK PENNY, Glasgow, May 9, 1865.

Dr. Penny then read his report of analyses in the case of the death of Mrs. Taylor:—

Andersonian, Glasgow, May 9, 1865.

On the same day and occasion that I received the articles in the case of the death of Mrs. Pritchard, Dr. Douglas Maclagan delivered to me the following articles, certified to have been taken from the body of Mrs. Taylor:—

No. 1. Portion of liver in stoneware jar.
„ 2. Portion of stomach in glass bottle.
„ 3. Portion of heart in glass bottle.
„ 4. One kidney in glass bottle.
„ 5. Portion of rectum in glass bottle.
„ 6. Portion of blood in glass bottle.
„ 7. 100 grains of dried contents of intestines.

The vessels containing these articles were securely closed and duly labelled, and were on the day referred to brought by me direct to Glasgow.

I have subjected all the articles above enumerated to a course of analysis and chemical examination similar to that applied to the articles in the case of Mrs. Pritchard.

The following are the results obtained:—

Liver.—In the liver the presence of antimony was unequivocally detected, and in quantitative estimation gave ·047 of a grain in 1000 grains of this organ. A careful analysis was also made for the presence of mercury, but not the slightest trace was detected.

Stomach.—The stomach yielded about the same proportion of antimony as that found in the liver. No mercury was detected. The stomach was also minutely examined by Stas's process for aconite and morphia, but not a trace of these poisonous alkaloids was obtained.

Heart.—The heart was found to contain antimony in less proportion than the liver. It yielded no mercury.

Kidney.—The kidney yielded about the same quantity of antimony as the heart. It gave a marked quantity of mercury.

Rectum.—The rectum gave antimony, but no mercury.

Blood.—In the blood antimony was detected in rather larger proportion than in the heart. No mercury was detected.

Dried Contents of Intestines.—In the dried contents of the intestines, antimony was found to the extent of ·583 parts in 1000 parts by weight. It was partly present in a form soluble in water. No mercury was detected. The said contents were also carefully analysed for aconite and morphia, but no evidence of the presence of these poisons was obtained.

From a careful consideration of the results of the analysis and examination of the above-named articles, I am clearly of opinion that they are conclusive in showing:—

1st. That all the articles subjected to analysis contained antimony.

2nd. That the dried contents of the intestines contained the largest proportion of antimony; next the liver and stomach; then the blood; and in less quantity in the heart, kidney, and rectum.

3rd. That part of the antimony in the contents of the intestines is in a form soluble in water.

4th. That the kidney was the only article in which mercury was detected.

5th. That neither the stomach nor the contents of the intestines contained aconite or morphia in quantity sufficient to be detected by known chemical processes.

6th. That the articles subjected to analysis contained no other metallic poison than antimony and mercury, as reported above.

To the truth of this report I hereby certify, on soul and conscience,

Glasgow, 9th May, 1865. FREDERICK PENNY.

Dr. Penny then read his report of analysis of certain articles referred to in the case of Dr. Pritchard delivered to him by the superintendent of police:—

Andersonian, Glasgow, 17th May, 1865.

On Thursday, the 13th of April last, Alexander M'Call, superintendent of police, delivered to me, at laboratory, the following productions, having sealed labels attached, referring to the case of Dr. Pritchard:—

A glass bottle labelled "Battley's Sedative Solution" (B).

A bundle of seven small paper packages (C).

A quart wine bottle containing ginger wine (D).

A small glass vial, containing a white powder (E).

Three small vials, two corks, and one stopper, securely tied together (F).

Six small vials and six corks, attached with string (I).

On the same day and occasion John Murray delivered to me a paper package, having labels attached, marked A, and containing tapioca.

On Friday, April 21 last, Alexander M'Call delivered to me a small glass vial, with label attached marked (G), and also a piece of cheese marked (H).

On Thursday, the 11th instant, John Murray delivered to me a paper package, with label attached, marked K, and containing tapioca.

In accordance with instructions received from John Gummell, Esq., Procurator Fiscal, I have made a careful analysis and chemical examination of the contents of the several productions above enumerated. My experiments and investigations gave the following results, which for the facility of reference are reported in alphabetical order:—

This paper package (A) contained 2560 grains of tapioca. The presence of antimony, in the form of tartarised antimony, was unequivocally detected. Its amount was found to be equal to 4·62 grains in the pound of tapioca. Not a trace of mercury was detected.

This bottle (B), containing one ounce and five drachms of a dark-brown liquid, having the odour and general appearance of Battley's solution of opium. It was found to contain an appreciable quantity of antimony in a soluble form. The amount was equal to 1·5 grain per fluid ounce of the liquid. It contained no mercury.

(I am at present engaged in examining it for other substances.)

The seven paper packages (C) comprised in this production were marked No. 1 to No. 7 inclusive.

No. 1 contained a small lump of crystallised nitrate of silver, weighing 16·5 grains. It contained no antimony.

No. 2 contained 132 grains of cummin seed in powder. Neither antimony nor mercury was found in it.

No. 3 contained 143 grains of sugar of lead. Nothing extraneous was detected.

No. 4. The contents of this package consisted of a mixture of mercury and chalk, weighing together 6·5 grains, and it was evidently the medicinal preparation called "Hydrargyrum c. Cretâ." No antimony was found in it.

No. 5 contained a lump of opium, weighing 110 grains.

No. 6 contained 13·5 grains of morphia, contaminated with a small quantity of nitrate of silver, which, from the appearance of the paper package, had manifestly enfiltered accidentally from without.

No. 7 contained 1350 grains of a white, gritty, crystalline powder, which was found to have all the physical and chemical properties of sugar of milk. It was carefully tested for mercury, antimony, and other substances, but the results were entirely negative.

This bottle (D) contained 18 fluid ounces of ginger wine. No antimony or mercury was detected.

This vial (E) contained 3·5 grains of a white powder, which was found by analysis to be tartarised antimony.

The three vials (F) included in this production were labelled respectively 1, 2, and 3.

No. 1 contained one ounce and three drachms of tincture of conium.

No. 2 contained five drops of the same tincture.

No. 3 contained two and one-half drachms of the same preparation.

This vial [G] contained nine drachms and a-half of a light yellow-coloured liquid, having the taste and odour of cinnamon, and consisting of a mixture of medicinal substances. It contained no antimony and no mercury.

This cheese [H] was tested for antimony and mercury, but no evidence of the presence of these metals was obtained.

This production [I] included six small vials, which were found to contain as follow:—

No. 1. Four drops of tincture of aconite.

No. 2. Twelve drops of the same tincture.

No. 3. Thirty drops of the tincture of conium.

No. 4. Fourteen drops of the tincture of conium.

No. 5. Empty.

No. 6. Nine drops of the tincture of digitalis.

This paper package [K] contained 1695 grains of tapioca. Not the least trace of either antimony or mercury was detected in this tapioca.

All this I certify on soul and conscience.

May 17, 1865. FREDERICK PENNY.

Dr. Penny then deposed that on the 15th of May he received some other articles from Mr. McCall, and read the following report of the analysis of them:—

Andersonian, Glasgow, 19th May, 1865.

This is to certify that I have subjected to careful analysis and chemical examination the following articles, which were delivered to me on the 15th inst. by Alexander McCall:—

No. 1. A brownish-coloured and turbid liquid, measuring three fluid ounces, contained in a glass bottle labelled chloroform. It was tested for antimony and mercury, but not a trace of either metal was detected. It contained no aconite.

No. 2. A white crystalline powder, contained in a small cylindrical wooden box with screw cover. It weighed 15·5 grains, and was found to consist of a mixture of tartarised antimony and arsenious acid (that is, the common poison of arsenic) in nearly equal proportions by weight.

No. 3. About ten drops of colourless liquid, contained in a quart wine bottle. It was found to be an aqueous solution of corrosive sublimate.

No. 4 (A). A white powder, contained in a circular red pasteboard box. It weighed 5 grains, and was found to be calomel.

No. 4 (B). A white powder, weighing 35 grains, contained in a green pasteboard box. It was found to be tartarised antimony.

All the productions containing the articles subjected to analysis were securely closed, and had sealed labels attached.

FREDERICK PENNY, May 19, 1865.

Dr. Penny then deposed that he had since completed his examination of the bottle (B) containing a dark brown liquid, having the odour and general appearance of Battley's solution of opium; that, besides the appreciable quantity of antimony which he had found, he had looked for mercury and other metals, for aconite, and for conium, and that he had found aconite; that the chief methods of detecting aconite in another substance are by the taste of the extract obtained by evaporation, and by procuring its physiological action upon small animals: that he had evaporated a portion of this fluid to dryness, and the extract thus obtained was very carefully tasted, and that its effects were a tingling and benumbing sensation, characteristic of aconite. Another process was also carried out with the extract which remained after the evaporation. To a portion of the extract dissolved in water ammonia was added, and a precipitate was separated and examined in the same way, after being dissolved in diluted hydrochloric acid. The benumbing and tingling sensation produced by that precipitate was very slight. But the ammoniacal liquid, after the separation of the precipitate, was treated with hydrochloric acid and evaporated, and the sensation produced by this residue was very strong and distinct. With a view to ascertain the character of aconite when mixed with Battley, Dr. Penny stated that he had purposely mixed known quantities of Fleming's tincture of aconite with Battley's Solution, treating the mixtures in the same way. He took mixtures from 5 per cent. to 40 per cent. The results were precisely similar, but when the proportion was equal to 10 per cent., the sensation was by no means so strong. The addition of Fleming's tincture of aconite to genuine Battley, to the extent of 10 per cent. of the mixture, gave a sensation very much stronger than the liquid in this bottle. But the sensations produced in the two cases were the same in kind. Dr. Penny drew the conclusion that in the solution (B) there was more than 5 per cent., but less than 10 per cent. of tincture of aconite. He also had obtained some specimen's of Battley's Solution at several establishments in Glasgow and London. He had examined all these samples, and he found that in no case were such sensations produced by the extract obtained as described. Neither had he found any trace of antimony in the purchased specimens of Battley. Dr. Penny deposed that he had also made twenty-five experiments upon rabbits with the liquid contained in bottle (B); with genuine Battley's Solution; and with various mixtures of the latter. The fluids were injected under the skin of the back, between the skin and muscles. Genuine Battley's Solution did not kill the rabbits with a dose equal to fifty grains, but forty grain drops of the contents of the bottle (B) killed. He had made in all about ten experiments with genuine Battley, mixed with Fleming's Tincture in different proportions. He related the result of two sets of experiments. In one set he injected a mixture of Battley into three young rabbits, and in a second into full-grown rabbits. In the first set of experiments upon young rabbits he injected ten grains of genuine Battley's Solution; in the second experiment with a young rabbit he injected ten grains of this Battley (the fluid contained in bottle B); and in the third experiment he injected

a mixture composed of nine grains of genuine Battley and one grain of Fleming's tincture of aconite. With the old rabbits he proceeded in a similar manner, using forty grains instead of ten grains, as with the young rabbits—first with genuine Battley; and second with the mixture (B); and third with genuine Battley mixed with aconite. The symptoms manifested by the rabbits, both old and young, subjected to the action of genuine Battley, were simple in character and few in number, and were not materially altered by variation of dose. The animal soon assumed a prone position, resting on belly and chest, and the head invariably resting on the ground. The fore legs were either sprawling or gathered under the body, the hind legs always extended sideways; the eyes remained open, and the pupils were natural and not contracted; the breathing was invariably gentle; no cries were uttered, and no convulsions or spasms of the body were apparent. There was a complete condition of inanity, and with the exception of the open state of the eyes the animal seemed to be in a state of profound sleep. There was no indication of spasmodic movement; but when aroused or urged to motion, the movements were performed in a crawling, tortoise-like manner. In this state the animal remained for several hours, and then gradually recovered. The effects produced by the mixture of genuine Battley with aconite were as follows, and presented a striking contrast to the symptoms resulting from pure Battley:—Very soon after the injection, the animal became restless and uneasy, and then began to crouch, resting on its flank, with the hind legs extended laterally, and keeping its head erect. It next assumed a sitting posture in an attitude of watchful expectancy, and commenced to twitch its lips and move its jaws as if chewing. Suddenly it staggers, rolls over, and quickly regains its feet. Saliva begins to flow from the mouth, and soon after piteous and peculiar choking cries are emitted. The head is retracted, and the breathing is painfully laborious. Convulsions now set in, followed by intervals during which the limbs are quite relaxed, and the animal lies helpless on its side. Frantic leaps are now frequently taken, accompanied by movements of a paralytic character. A state of utter prostration also occurs, variable in duration; and then a strong convulsion comes on, during which, or immediately after, the animal expires, the limbs becoming instantly relaxed. Then as to the results produced by this Battley (the contents of the bottle B), the symptoms exhibited by the rabbits subjected to this liquid corresponded in every important respect with the effects produced by the above mixture, and were so clearly similar that it was impossible to detect any essential difference in them. In the case of the small rabbits, the experiments were made at the same time, but, without knowing beforehand, it would not have been possible to distinguish the animal under the influence of this Battley (the contents of bottle B) from the one under the influence of the mixture of Battley and aconite. These results left no doubt on Prof. Penny's mind—joined with the taste and sensation—that that Battley (the contents of bottle B) contained aconite. All the other experiments, which were numerous and varied, confirmed these results.

Dr. Penny stated that he believed that the whole quantity of tincture of aconite in the contents of the bottle (B) was between 5 and 10 per cent.

In cross-examination by Mr. Clark, Prof. Penny stated that if he pursued Reinsch's test for the detection of antimony, and obtained, in the course of that process, a deposit upon copper-foil, that deposit would not be conclusive to his mind of the presence of antimony, for the reason that other matters, as, for instance, oily matters, especially animal oils, were liable to give a deposit similar in appearance to the eye to the violet colour produced by antimony.

In re-examination by the Solicitor-General, Dr. Penny deposed that he had chemically examined specimens of Battley's solution, purchased at Murdoch Brothers (the establishment where Mary McLeod had bought the Battley's solution for Mrs. Taylor), and that they contained neither antimony nor aconite, and that they differed in no respect from genuine Battley purchased elsewhere. Also, that he had sent some of the contents (about a drachm) of the bottle (B) to Professor Maclagan, and that he (Dr. Penny) had been present at experiments made by Professor Maclagan in the University of Edinburgh, in the presence of Drs. Christison, Littlejohn, and Gamgee, upon rabbits; that these experiments were made with the mixture in the bottle, with genuine Battley, and with Battley to which aconite had been added; that the experiments were precisely similar to his own, and were made with the same result, except that death was more speedy from a larger dose being given, and that these experiments confirmed his opinion of the presence of aconite in the bottle. In the contents of the bottle (B) he had discovered the ordinary constituents of opium—in fact, that, as far as he could observe, the mixture differed only from genuine Battley in the presence of antimony and aconite. Dr. Penny finally deposed that, having heard the account of the post-mortem examination of Mrs. Pritchard, and the evidence of the symptoms exhibited by her during her illness, there was nothing in the post-mortem appearances to account for her death, and that the symptoms corresponded with those produced from tartar emetic. He said he spoke as a chemist only, and not as a Medical man, but one who had studied the action of poisons. With regard to the mercury he had detected, he said the evidence he had heard as to Dr. Paterson's prescription, which contained calomel and hydrargyrum cum creta, assuming the powders to have been administered to Mrs. Pritchard, would account for the mercury found. He said he was not qualified to give an opinion whether the external application of antimony would account for any of the results of his chemical analysis. With regard to Mrs. Taylor's death, he said that the vomiting he had heard spoken of in evidence would suggest the operation of antimony. He was not prepared to speak to the other symptoms. He reiterated the opinions expressed in his reports. Cross-examined by Mr. Clark, Dr. Penny said that aconite had not a bitter taste; and that, as far as he had tasted it, antimony has not a burning taste, but that after a time it has a metallic taste. What the taste might be when it goes down the throat in sufficient quantity to poison he did not know.

Dr. Douglas Maclagan was then recalled, and examined by the Solicitor-General. He said that the evidence he had since heard confirmed the opinion he had formed from his chemical and post-mortem examination. He said the symptoms exhibited indicated the administration of antimony at an early period of Mrs. Pritchard's illness. These symptoms were sickness and vomiting, muscular depression, irritation of the bowels, and cramp of the extremities. He thought that the administration of antimony was going on from time to time, from the commencement of the illness after Christmas until the time of her death. He knew of no natural disease to which the symptoms could be due. The post-mortem appearances indicated no natural disease whatever. The chemical examination accounted for her illness. If antimony had been applied to Mrs. Pritchard's neck in October last, when she was affected with an enlargement of a gland, if it had been rubbed in to the extent of producing pustules, he did not think that it would have produced any of the constitutional effects of antimony, and it would not account for the finding of antimony in the stomach and other organs. Neither, if years ago Mrs. Pritchard had taken antimony internally on account of inflammation of the eyelids, would it account for the symptoms of her illness. The powders prescribed by Dr. Paterson would account for the mercury detected by his analysis. He did not think that that mercury had anything to do with the cause of death. It was a safe and common prescription. The whole history confirmed the opinion he had formed by his examination and analysis. There was nothing in her illness which would indicate to any Medical man that Mrs. Pritchard had been the subject of gastric fever.

Dr. Maclagan then said that from the evidence he had heard respecting the case of Mrs. Taylor he was inclined to think that there was more than antimony used in it. He thought some powerful depressing poison, such as aconite, had been taken besides antimony. Aconite is a sedative rather than a narcotic; it does not affect the brain as a narcotic: its effects are to lower the circulation especially, and produce a paralyzed condition of the muscles. Its fatal result, he believed, was generally due to its effect on the heart as a muscular organ. He thought that, in the case of Mrs. Taylor, her being found with her head fallen on her neck, and being hardly observed to breathe, and her pulse almost if not absolutely imperceptible, and the dosing, torpid state in which she was, were symptoms such as would have resulted from aconite. Aconite, like most poisons, varies a little in the symptoms which it produces in individuals. The series of experiments he had made upon rabbits corroborated what Dr. Penny had said about the result of his experiments. It would depend on the quantity of the mixture (B) taken whether the aconite and antimony found in it would account for the symptoms under which Mrs. Taylor laboured on the

evening of the 24th, and the morning of the 25th February. What would represent over five or ten grains of the tincture of aconite contained in it would do it. He said over five, because that has been indicated as a safe quantity of Fleming's tincture to be given, though he (Prof. Maclagan) did not think it safe.

Assuming aconite to have been taken, he might not expect to have found it upon the chemical analysis which he made These organic poisons are very often not found, though they are known to have been taken. He referred to the whole class of alkaloids. Antimony passes pretty rapidly out of the system by vomiting and purging and by the urine. In that way the patient is weakened, and ultimately destroyed. The administration of opium might make the tendency to vomit less, and would interfere with the effects of antimony on the bowels, but its depressing effects on the muscular tissue would remain. He had never seen a patient labouring under the effects of opium, aconite, and antimony at the same time; but he thought that the symptoms exhibited by Mrs. Taylor were such as would result from such a combination, because the symptoms of aconite being the most powerful would probably predominate. The post-mortem appearances were not such as indicated apoplexy. In apoplexy a post-mortem examination does not invariably indicate the disease, but Dr. Maclagan had not met with any such case in his own practice. The symptoms presented by Mrs. Taylor during life did not indicate apoplexy. Taking the symptoms and the post-mortem examination together, apoplexy was satisfactorily excluded in his judgment. If he had seen what Dr. Paterson described, he would not have concluded that it was apoplexy, and he did not think that any other medical man would. He had tasted the mixture (B), and it had produced benumbing and tingling sensations. Irrespective of the experiments on rabbits, he would certainly have inferred that aconite was present. Battley's solution was said by those who prepare it to be one-third stronger than laudanum, but Dr. Maclagan had not found it so. The medium dose of laudanum would be twenty-five drops. He should give a patient a little less of Battley than of laudanum —about twenty drops or so.

On cross-examination by Mr. A. R. Clark, Dr. Maclagan said that he saw no precise indications of poisoning by opium in Mrs. Taylor's case. He could not say that she had not taken any. He thought aconite was the leading feature in the final part of the case. He did not know that her symptoms were inconsistent with her having had opium, but they were not consistent with poisoning by opium with the ordinary symptoms. If she had been under the influence of opium, he should have expected to have found the pulse slow and full, and the breathing laborious and stertorous. Dr. Maclagan was here reminded that Dr. Paterson had used the expression, that her breathing was laborious. He said that, although this indicated some narcotic poison, it did not much modify his opinion, because of the condition of the pulse, which showed the action of aconite upon the heart. He was then reminded that Dr. Paterson had used the word "coma." He said that indicated opium, but that "coma" was used by many persons to describe insensibility. He had spoken of her being in a torpid condition, which he thought was connected with the weakened state of the circulation, not from fulness of the brain. Aconite can be detected by chemical analysis, not by chemical tests. A person may be poisoned with opium, and yet no traces of it may remain in the stomach; and although he had made many experiments, Dr. Maclagan had not been able to find any traces of it in the system. Mineral poisons as antimony are more easily detected. He was not quite sure that he would be prepared to say that a person cannot be poisoned with antimony without the antimony being capable of being detected in the system. He could only reason analogically; and he was not prepared to give in to that statement broadly, because he knew that a person may be poisoned with arsenic without its being detected. He did not know of any case in which there was poisoning by antimony without the antimony being found. The expectation is that it would be found. Contraction of the pupils occurs in poisoning by aconite as well as by opium; but cases of aconite poisoning vary a good deal in this respect, probably from the symptoms being observed at different stages. The fatal symptoms might be accounted for in Mrs. Taylor's case by anything over five grains of Fleming's Tincture. If Dr. Penny's estimate be correct that the mixture (B) contained 5 to 10—say 7 per cent.—she would have required to take about 100 drops of the mixture, speaking of a single dose. One hundred drops of Battley's solution would not be an unusual quantity for a person who had been in the habit of taking opium for a considerable time. Many opium eaters would not thank you for 100 drops.

The next witness was Dr. Henry Duncan Littlejohn, Surgeon of the Edinburgh Police. After confirming the principal conclusions of the last witnesses, and stating that he believed in Mrs. Pritchard's case antimony administered in small doses and continuously was the cause of death; and that in that of Mrs. Taylor that it appeared to him that she might possibly have died from a dose of antimony administered shortly before death, or else from some of the sedative narcotic poisons,—he stated that he had heard the evidence of one of the servants describing the sensations she felt on taking a bit of cheese on one occasion—a hot taste in the mouth, a burning sensation in the throat, and sickness lasting a considerable time; that these symptoms were consistent with antimonial poisoning, because from actual experiment he had proved that in large quantities antimony produced a burning sensation in the throat. He had tried it in pretty large quantities, and a burning sensation in the throat was its secondary effect. The effects described by another servant, which followed some egg-flip she had swallowed, pointed also to some substance resembling antimony. But other emetics would also account for them. Tartar emetic might be readily beaten up with egg-flip. It might be given on sugar by dusting it on the surface; the sugar, being porous, would take it up. A sufficient dose to keep up the illness might be given on a lump of sugar.

In cross-examination by Mr. Clark, Dr. Littlejohn said he thought it was quite possible, if two pieces of sugar, dusted with tartar emetic, were put into a cup of egg-flip, that a teaspoonful of the egg-flip so poisoned might produce the effects mentioned, because egg-flip being a thick, mucous substance, it would sustain, mechanically, a considerable quantity. He had made no experiments with direct reference to the question.

At this stage of the proceedings Dr. Paterson was recalled. He said, from the evidence he had heard, his opinion had been confirmed, as far as regards poisoning by antimony. He had seen much of its internal and external use in thirty years' experience. He had seen two cases of children who had been poisoned by having it accidentally administered to them by their parents. The symptoms of Mrs. Pritchard were such as would be produced in chronic poisoning by small and repeated doses. Her appearance and symptoms when he saw her in February accorded with it. With regard to Mrs. Taylor's death, his impression was that her death was caused by opium; but there might have been some other narcotic combined with it unknown to him. Aconite would contribute to the effect, and hurry the termination. The symptoms he saw might be accounted for by such a combination. He had not the slightest suspicion of antimony in any shape or form when he saw Mrs. Taylor. The narcotic effect was such when he saw her that he did not believe he could recognise the effect of antimony.

In cross-examination, he said when he saw Mrs. Taylor the breathing was oppressed; he had in his previous examination used the word *coma*, signifying insensibility, especially under opium. It struck him that Mrs. Taylor died from the effects of opium. After having heard all the evidence, he believed her death was caused by a combination of antimony and opium. A less dose of opium would have a greater effect, seeing that the body was previously under the influence of antimony. The effect would be more rapid and more likely to be fatal if 5 per cent. of Fleming's tincture of aconite were combined with the opium.

Mr. Hugh Orr, Agent for the City of Glasgow Bank—the Charing-cross Branch, Glasgow—was then called. He said that Dr. Pritchard kept an account at the branch. It was overdrawn £62 11s. 11d. on 20th March last. It was overdrawn on 9th January to the extent of £114. That was being gradually reduced till 20th March. It had been brought down to £62.

Mr. Michael Balmain, Assistant-Manager of the Clydesdale Banking Company, Glasgow, proved that Dr. Pritchard had an account at the bank. On 20th March his account was overdrawn £131 12s. 4d. He was 2s. 4d. overdrawn in the beginning of November, and between that and December he overdrew the balance in three different sums.

Mr. William Finlay, Secretary to the Scottish Equitable Life Assurance Society, Edinburgh, proved that Dr.

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Pritchard's life was insured in the office in two policies for £1500. He had got several advances on these policies, amounting to £255 in all. The last was on 13th May, 1864, —£35. The one policy was dated in July 1851, and the other in December 1851.

Mr. D. J. Macbrair, W.S., an assumed trustee of the late David Cowan, of Portsmouth, stated that Mr. Cowan was a brother of Mrs. Taylor. The trust funds under Cowan's will amounted to £3000. They were held for Mrs. Taylor's behoof, exclusive of her husband's *jus mariti*. The whole sum was at Mrs. Taylor's disposal. It was invested in railway debentures, and she got the interest. She was entitled to the capital when she pleased. She applied for a portion of the capital about two months before June 1864. She said she was desirous to give £500 of the money to Dr. Pritchard, her son-in-law, as he had either purchased or was going to purchase a house. She got up that £500 in June 1864. The money was paid to herself. At a meeting after Mrs. Taylor's funeral, Dr. Pritchard subscribed a minute, of which the following is part:—"Dr. Pritchard further stated that the £500 above-mentioned had been given to him by the deceased in July last, subject to no condition; but he expressed his willingness to have it secured over the property, which it was applied in part purchase of, for the benefit of Mrs. Pritchard and family." That took place after the trustees had rather urged it on Dr. Pritchard. Mrs. Taylor left a will dated 5th September, 1855. It provides that the trustees "shall pay one-third part thereof to my son Michael Waistel Taylor, presently in Penrith, and they shall invest in such way and manner, and in such securities or security of such kind as to them shall seem best, the other two-third parts, and pay the interest or annual produce thereof to my daughter Mary Jane Taylor or Pritchard, spouse of Edward William Pritchard, surgeon in Hunmanby, and that upon her own receipt as alimentary to her, and exclusive of the *jus mariti* and right of administration of her husband; and, in the event of her predeceasing her husband, the said interest or annual produce to be paid to him for the benefit of such of the children of my said daughter who may be under twenty-one years of age, and, upon their attaining that age, for his own use as he may consider proper." The witness had no means of knowing if Dr. Pritchard knew the contents of that will. It was produced at the meeting at which he was present after Mrs. Taylor's funeral.

Mrs. Taylor showed great anxiety to accommodate the prisoner with the £500. At the meeting after her death, Dr. Cowan said he understood Dr. Pritchard was to give a bond over the house. Dr. Pritchard said he had not so understood; but he showed no unwillingness to do so. The witness thought he (Dr. Pritchard) behaved extremely well.

Mr. D. T. Alexander, a writer in Glasgow, stated that he acted as agent of the prisoner in purchasing a dwelling-house at Whitsuntide, 1864. The agreed on price was £2000. £1600 was borrowed on security of the house, and £400 was paid by Dr. Pritchard. The witness understood he had got it from his mother-in-law. The transaction was settled on 9th July, 1864. The cash was paid then.

Archibald Campbell Wells, salesman to Burton and Henderson, of Glasgow, proved that on February 13th, 3lbs. of sugar and ½lb. of tapioca had been supplied to Pritchard.

John McMillan, assistant to Murdoch Brothers, chemists, of Glasgow, proved the sale of 5 oz. of Battley's solution to Mary McLeod, in February. The bottle shown him was like the one he filled in every respect.

Mr. R. B. Barron, of the firm of Barron, Harvey, & Co., proved that they supplied Murdoch Brothers with Battley's solution. It was obtained from Battley and Watts.

Mr. W. M. Watts stated that he was a partner in the firm of Battley and Watts, and proprietor of the receipt for manufacturing Battley's solution. It is a watery solution of opium and contains no antimony or aconite. He declined to tell the ingredients of it.

Dr. Penny was recalled. He was shown a prescription read by Dr. Paterson on the preceding day. It was, chlorodyne ɱx.; solution of morphia ɱxix.; ipecacuanha wine ɱxxx.; cinnamon water fl. oz. j. That prescription could not have been made up from anything furnished him by the Inspector of Police.

The clerk then read the following declarations which had been emitted by the prisoner:—

No. I.

At Glasgow, the twenty-second day of March, Eighteen hundred and sixty-five years.

In presence of Sir Archibald Alison, Baronet, advocate, Sheriff of Lanarkshire.

Compeared a prisoner, who, being judicially admonished and examined, declares and says,—My name is Edward William Pritchard. I am a native of Southsea, Hampshire, forty years of age, a doctor of medicine, member of the Royal College of Surgeons in London, and I reside at No. 131, Sauchiehall-street, Glasgow; and the charge of having caused the death of his wife, Mary Jane Taylor or Pritchard, by feloniously administering poison to her, having been read over to him, declares:—I have always attended my wife in all her ailments of every kind, during the whole period of our married lives, now fifteen years, and some of these illnesses were very severe, but I never saw her so ill as she was on this occasion which terminated fatally. As far as my judgment goes, her last illness was gastric fever, which commenced about the beginning of the present year.

I gave my wife no medicines during her illness, excepting wine, champagne, and brandy to support her strength; and I gave her no medicine myself at all,—I trusted to nature to right itself with the assistance of these restoratives. During the last six weeks her power of sleeping entirely went away. In order to procure sleep I gave her at the commencement of her sleeplessness, a small quantity of chloroform, but it entirely disagreed with her, and I discontinued it. I then called in Dr. Gairdner, Professor of Medicine in the University, and he visited and saw her several times, and he continued to attend her till her old Medical friend, who had attended her before our marriage, Dr. James Moffat Cowan, returned, and he came from Edinburgh to see her.

I then wrote to her mother to come to nurse her, and she arrived about the 11th of February last, and her arrival had a beneficial effect upon Mrs. Pritchard for some time, but still the sleeplessness continued, and shortly after her mother's death, which happened on the 25th February, she relapsed and became much worse, and very apprehensive about herself, and she suggested to me the adoption of a medicine with which her mother was very familiar, Battley's solution of opium, but I declined to give her any without first consulting with Dr. James Paterson, who lived close by. I saw him and consulted him, but he did not see Mrs. Pritchard on that occasion, and he did not approve of using the solution of opium. He prescribed granulated citrate of magnesia, calomel, mercury, and chalk, and I acted upon his advice and administered the medicine, and it seemed to have a beneficial effect.

Some time after, finding her sleeplessness still continued, I, at her own suggestion, applied a solution of atropine to the external parts around the eye, and it had a little effect for some time, but the effects soon ceased. After her mother's death she became rapidly worse, indeed I ascribed her decease to the agitation consequent on her mother's decease. At the time of the last event she was strongly impressed with the idea that she herself would die at the same time as her mother, and in fact she did die on a subsequent day at exactly the same hour.

On the night preceding her death she was apprehensive that unless she got sleep she should not get through the night. I went for Dr. Paterson, who came immediately, and sat for a considerable time by the bedside, and afterwards dictated a prescription, which was made up at the Glasgow Apothecary Company's shop at Elmbank Street. The prescription will be found in my desk at home. It was for two draughts, one to be given four hours after the first if it did not succeed.

She got the first draught, as prescribed by Dr. Paterson, about ten o'clock, but she said after drinking that it was not half strong enough, and asked if she might have some of her mother's medicine.

I refused to give it her, and said I dare not do it.

I gave her a glass of port wine and sat carefully watching for a short time. I then went down stairs and had supper, and after being absent for some time, returned to see whether she had got sleep. I found her awake, and she wished me to give her something to make her sleep. I refused, and she then asked me to come to bed, as I must be tired with the weary nights of watching. It was then about twelve o'clock. I tried to persuade her that I should remain up to watch her till past the time that her mother had died, but to please her I got into bed, and almost immediately I fell asleep from the state of exhaustion I was in. I was awoke by her pulling at my beard, and found my wife struggling to get into bed.

She appeared to have got out of bed. She said, "Edward, I am faint." I assisted her into bed and asked her how long I had been asleep, but she answered, "Don't speak—look! do you see my mother?" I said, "No! it is only a vision, only imagination," and asked if she had any pain. She said she felt cold, and that I need try no more skill, that I had failed this time, and that she was going to her mother. I got alarmed, and rang the bell violently, and the youngest servant came. I desired her to make a mustard plaster as quickly as she could, and on that my wife turned round and said, "Edward, I'm in my senses; mustard plasters will do no good," and almost immediately she fell back in my arms and died. The servant came with a mustard plaster, and found her in that position.

I did not give her any other medicine at that time except a little brandy applied to her lips.

During the whole course of her illness I never gave her any antimony, nor any medicine in which there was any preparation of antimony. Antimony is a poison, but it is used occasionally to subdue inflammation, and I applied it to her neck in October last, when she was plagued with a swelling of a gland in the neck. I rubbed it in externally on that occasion, and I have never given her any antimony since.

On that occasion I recommended change of air, and I gave her a little bottle of antimony with her for the same purpose of rubbing in behind the ear. She went to Edinburgh at that time, and she returned to Glasgow very much better, and I have never seen the bottle of antimony since she got it away with her.

There was a considerable quantity of antimony in my repositories at the time of my wife's last illness, as I used it extensively in my practice, and the antimony was kept in a cupboard, of which I have the key, but which was not always locked. I did not see any of it brought out, or lying about during her illness.

The cupboard where the antimony was is in the consulting-room on the ground flat, and she was so weak on the day of her death—Saturday—and on the Friday preceding, that I do not think she had strength to have gone to that cupboard herself. My wife took the antimony internally on one occasion when she had a tendency to inflammation of the eyelids. This was years ago, and I never knew her to use it internally except on this occasion. I never administered antimony internally to her on any occasion—nor any other substance calculated to injure or destroy life. All which I declare to be truth.

(Signed) EDWARD WILLIAM PRITCHARD.
A. ALISON.
JNO. GEMMEL.
P. MORTON.
BERNARD M'LAUCHLIN.

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No. II.

At Glasgow, and within the North Prison there, on the twenty-first day of April, eighteen hundred and sixty-five years.

In presence of Sir Archibald Alison, Bart., Advocate, Sheriff of Lanarkshire.

Compeared EDWARD WILLIAM PRITCHARD, presently a prisoner in the prison of Glasgow, and the previous declaration emitted by him upon the twenty-second day of March last, in presence of the said Sheriff, which is now docqueted and subscribed as relative hereto, having been read over to him, and he being again judiciously admonished and examined, declares and says—I am entirely innocent of the charge referred to in said previous declaration, and I wish to add that to what is contained therein—As far as my memory goes, the declaration now read conveys correctly what I then said, and I adhere to the whole statements therein contained.—And the charge of having, on several or one or more occasions, between the tenth and twenty-fifth days of February, 1865, within his dwelling-house in Sauchiehall-street, Glasgow, wickedly and feloniously administered, or caused to be administered, to Jane Cowan or Taylor, now deceased, several or one or more doses of tartarised antimony, or other poison unknown, in some article or articles of drink or food, or in some other manner unknown, in consequence whereof the said Jane Cowan or Taylor died, and was thus murdered by him, having been read over to him, and he being judicially admonished and examined by the Sheriff examinator, declares—I elect to make a voluntary statement in reference to the said last-mentioned charge, and I now declare I was no way accessory to Mrs. Taylor's death—I never administered poison to her—I did and do believe that she died from paralysis and apoplexy—I have no further statement to make, and by the advice of my agent will make none, with the exception that I am entirely innocent of the charge preferred against me.—Being asked by the Procurator-Fiscal whether he ever administered or caused to be administered tartarised antimony to the said Jane Cowan or Taylor declares—My agent recommended me to say nothing farther, and I decline to answer the question put, and as I act under my agent's advice, it is unnecessary to put any further questions. All which I declare to be truth.

(Signed) EDWARD WILLIAM PRITCHARD.
A. ALISON.
JNO. GEMMEL.
ROB. WILSON.
BERNARD M'LAUCHLIN.

The Solicitor-General stated that this closed the case for the prosecution.

FOURTH DAY.

The evidence for the defence was opened on the assembling of the Court.

Dr. Michael W. Taylor, Penrith, brother of Mrs. Pritchard and son of Mrs. Taylor, related a conversation between his sister and himself when he was in Glasgow after the death of their mother. He said: My sister told me Dr. Gairdner had visited her some time before, but she did not think she would like him to see her again. I urged her to do so, as Dr. Gairdner was a personal friend of my own, and I was sure would pay her every attention. She, however, had some prejudice against Dr. Gairdner, and was not desirous, as I understood, that his visits should be repeated. She expressed herself to me that she would rather not see him again, but somebody else. She gave me to understand that such an intimation had been made to him to that effect at her request. I strongly urged upon my sister to have a nurse, as there seemed to me to be no competent person about the house to fill the duty. There seemed to me to be no one but a young girl and a servant that had only very recently come into the house. She made objections to the suggestion on the ground that it would create some confusion in the house, and that she did not like strangers about her. There were only two children in our family.

John Simpson, druggist, of Duncan, Flockhart, and Co., Edinburgh, spoke to frequent purchases of Battley's Solution having been made from them in Dr. Pritchard's name by a person in Mr. Taylor's employment. In their retail trade they dispensed not less than 80 oz. of Fleming's tincture of aconite in one year. Witness had frequently made up mixtures containing half an ounce. He would not consider it unusual for a Medical man to purchase an ounce at a time. In reply to the Court, he said the mixture with aconite he spoke of was principally used for heart disease, and that one or two drops of tincture of aconite were a dose.

Thomas Fairgrieve, dispensing chemist, Edinburgh, also deponed to Mr. Taylor having made frequent purchases of Battley's Solution from him. Sold not less than 60 oz. of tincture of aconite in one year. It was generally made up as a liniment, and in that form he had made up prescriptions containing two fluid ounces of it. In cross-examination witness said it was not common to sell it unmixed to Medical men, though he had done so. He did not think he had ever sold it for experiments in the laboratory. Less antimony was sold now since croton oil came into use, but there was scarcely a day that antimony was not ordered in some shape or other—sometimes in the shape of tartar emetic dissolved in wine. He might sell one or two ounces in the course of a year, in addition to large quantities mixed with lard sold to veterinary Surgeons. The quantity in a prescription for internal use was generally small.

James Thomson, formerly in Mr. Taylor's employment, deposed to having purchased Battley's Solution frequently for Mrs. Taylor. The last occasion was the night before she left for Glasgow.

Two witnesses were examined with reference to having been treated by Dr. Pritchard for ear-ache and deafness, and to having been supplied by him with phials labelled "Poison," in some cases for external use, and in others to be dropped into the ear. One of the witnesses produced a phial, but no motion was made for its examination.

Dr. M'Hattie, analytic chemist, Glasgow, was examined as to the contents of a large number of phials found in Dr. Pritchard's house. There was nothing in any of them from which the prescription No. 3, produced for the prosecution, could have been made up.

Charles Pritchard, a beautiful, fair-complexioned boy, who entered the box with a smile of wonderment on his face, was asked by Lord Jerviswood—What age are you?—He answered "Thirteen." His Lordship, instead of putting the boy on oath, said, "You know you must speak the truth, the whole truth, and nothing but the truth; will you please use these words?" And the Judge, repeating the form, was answered distinctly by the witness.

Examined by Mr. Clarke: You are Dr. Pritchard's eldest son?—Yes. You lived with him in Glasgow?—Yes. You were at home when mamma died?—Yes. Did you always live very happily together till mamma died?—Yes. Papa and mamma seemed very fond of one another?—Yes.

Fanny Pritchard, a girl of 15, dressed in deep mourning, whose extremely beautiful features and lady-like manners seemed to engage the admiration of the audience, was sworn in the usual manner. She was examined

By Mr. Clarke: You are a daughter of the prisoner?—Yes. You lived a great deal with your grandmother in Lauder-road, Edinburgh?—Yes. Was your papa often there?—Yes. Were your grandmother and your father deeply attached to each other?—Very much so. And she always spoke very kindly to him, and he to her?—Yes.

This concluded the evidence for the defence, and a few minutes before 12 o'clock, after a brief adjournment,

The Solicitor-General said it was his duty, on the evidence they had heard, to press against the prisoner two acts of wilful murder, committed deliberately and with much cruelty on two defenceless women, the mother being sacrificed while tenderly watching over her child, on whom he was practising his nefarious and subtle arts, urging her slowly but surely to the grave. He pointed out, in careful detail, the circumstances which he held showed that the deaths were not attributable to accident or suicide, but were directly to be traced to the guilty hand of the prisoner. He concluded by asking a verdict of guilty.

Mr. Clark addressed the jury for the prisoner. He began by pointing out the horrible and incredible nature of the crime imputed to a member of an honourable Profession, whose function it was to save life, not destroy it, and who was now charged with turning his knowledge with a devilish purpose against two defenceless women of his nearest kindred; he was also charged with the incredible crime of, while able to employ the more potent poisons, preferring to poison by slow degrees, all the time comforting and sympathising with his victims. He also went on to speak of the absence of all reasonable motive. As to the *amour* with M'Leod, no one could suppose that, having already had his desires gratified, he could have any intention of marrying the girl; much less was there any motive to murder his mother-in-law, who was always ready to assist him in his pecuniary difficulties. He accepted the alternative stated by the Solicitor-General, that the murder was committed by the prisoner or by Mary M'Leod, and commented upon the strange omission of the Crown to ask Mary M'Leod whether or not her hand had administered the poison. Mr. Clark went on to show that all the poison had passed through her hands, while all the medicines and drugs in the house were in an unlocked press, within reach of the whole household. In the case of Mrs. Taylor he remarked that the poisoned tapioca had never been traced to any other hand than M'Leod's, there being no evidence that the prisoner ever knew that the tapioca was in the house at all; he attributed Mrs. Taylor's death to an overdose of Battley's Solution, taken to relieve the pain caused by the poisoned tapioca, con-

cluding that the poison had not been in it at the time, it being absurd to suppose that the prisoner, who never was alleged to have had access to the old lady's pockets, would allow that bottle to be about the house for a month if he had put poison in it; he pointed out the opportunities which M'Leod had had in her attendance on Mrs. Pritchard, and remarked that Dr Pritchard had not prevented, but encouraged his wife getting a nurse and medical advice, and showed that the prisoner had taken no steps to keep people away who might have the means of watching him. He concluded by a pathetic appeal to the jury for a verdict of acquittal.

The Court then adjourned till Friday.

FIFTH DAY.

The Lord Justice Clerk, after referring to the great atrocity of the crimes laid to the prisoner's charge, and the singular means by which it was alleged he had perpetrated these crimes, said there were three things of which the jury must be satisfied upon the evidence:—In the first place they must be satisfied that the deceased died by poison; in the second place, that the poison was wilfully administered for the purpose of destroying life; and, in the third place, that it was the prisoner at the bar who so administered it, or caused it to be so administered. Having gone over the Medical evidence in regard to the first question, he said the jury would consider whether it was possible to resist these conclusions—first, that Mrs. Pritchard died from the action of antimony alone, administered in large quantities; and second, that Mrs. Taylor died from the action of antimony, either alone or in combination with the vegetable poisons of aconite and opium. In the case of Mrs. Pritchard, the evidence of the poison having been taken continuously for a period of months excluded the possibility of either accident or suicide; and therefore it seemed impossible to resist the conclusion that the poison must have been administered by some one for the purpose of destroying her life. The character and conduct of Mrs. Taylor, and her general condition of body and mind, were such as not to suggest the idea of suicide in her case as a possibility at all; and whether she died through the influence of antimony administered in several doses, as the chemical reports clearly bore out, or whether her death was brought about immediately through swallowing some of the contents of the bottle of Battley's Solution, it was very difficult to understand how her death was brought about by accident. The jury would consider whether they could resist the conclusion that the poison by which Mrs. Taylor was deprived of life was also wilfully given for the very purpose of destroying life; the third question, which was one of vital interest in the case, was whether the prisoner administered, or procured to be administered, to either or both of the ladies, the poison by which their lives were destroyed; his Lordship went minutely into the evidence relating to the illness and death of the two ladies, directing the attention of the jury to the fact, and characterising it as "very remarkable circumstance" that throughout, whenever the prisoner had occasion to explain to anybody what he thought was the matter with his wife, he called it gastric fever, when all the symptoms indicated the very reverse of her being under fever. He also pointed out to the jury that the prisoner reported to the Registrar that Mrs. Taylor had been under paralysis for twelve hours, which he knew was an absolute falsehood, and that the disease which immediately preceded death was apoplexy, while the Medical evidence had demonstrated that there was not a trace of apoplexy in the case. The jury would consider whether in the case of a Professional man like the prisoner he could, under the circumstances, if his wife died under the effects of antimonial poison, be so far deceived as to believe she died of gastric fever; after noticing the evidence as to the poisoned cheese, the egg-flip, and the tapioca, his Lordship said it appeared beyond a doubt that some one had been practising a system of poisoning, and that in possession of the prisoner were the agents to carry it on. If he understood the theory of the prisoner's counsel aright, it was that Mary M'Leod was the person who caused these murders, and that the jury must choose between her and the prisoner at the bar by balancing probabilities; but the prisoner's counsel did not seem sufficiently to advert to the possibility that both might be implicated, and if that was so they could have very little doubt who was the master and who set on the other; but he (the Lord Justice-Clerk) did not desire the jury to take this theory, and he thought it quite right that they should consider upon the balance of probabilities which of the two was the perpetrator of the crimes. Was it conceivable that a girl 16 or 17 years of age, in the position of a servant maid, could have herself conceived or executed such a design? And if she had conceived it, could she have executed it subject to the vigilance of the husband of her victim, himself a Medical man? That was very hard to believe indeed. On the other hand, if the prisoner conceived and executed the design, it was not so difficult to believe that Mary M'Leod may have been the perfectly unconscious and innocent instrument of carrying out his purpose. If they were satisfied the murder was committed, the parties who had access to Mrs. Pritchard only could have done it. Some of them were plainly innocent, and in case of others the probability of guilt was reduced to two of these; one or two of them were guilty of the deed.

The jury retired to consider their verdict about 20 minutes past 1 o'clock, and returned in about an hour with an unanimous verdict of *Guilty* of both charges.

The Lord Justice Clerk then sentenced the prisoner to be executed at Glasgow on the 28th inst., and in passing sentence said that the verdict of the jury proceeded upon evidence which could leave no reasonable doubt on the minds of those by whom it was considered.

The prisoner, who had maintained great composure throughout the five days of the trial, seemed greatly affected when the verdict was pronounced, and leant slightly on the policeman sitting beside him; but while the sentence was being recorded he completely regained his composure, and after sentence was passed upon him he bowed to the judge and also to the jury before leaving the dock.

ROYAL COLLEGE OF SURGEONS.

ANNUAL DINNER OF THE FELLOWS.

On Thursday, July 6, the annual dinner of the Fellows of this College took place at the Albion Tavern, Aldersgate-street. Mr. De la Garde, of Exeter, was in the chair, and about 140 gentlemen were present on the occasion.

On the removal of the cloth, the usual loyal toasts were drank with the utmost enthusiasm. The chairman coupled the health of the infant Prince with that of "the rest of the Royal family."

The Medical Departments of the Army, Navy, and Volunteers were appropriately eulogised.

Mr. De la Garde stated that, were that the proper time and place, he could narrate such anecdotes—real anecdotes, for they had never been published—of Nelson and Cochrane as would elevate even yet more the high character of the English navy. The volunteers of the present day were not "playing at soldiers;" they were really the best security for peace. He regretted the reluctance of our Profession to enter the army and navy; but we had not yet received sufficient consideration on the part of the Government. (Hear, hear.)

Surgeon-Major Judd replied for the army.

In proposing the General Medical Council, the Chairman took an apologetic view of their position. Their great difficulty had been the unreasonable expectations entertained by the Professions. The expectations referred to arose partly from the high merits of the individual members of the Council. They had also a most arduous task before them—namely, to reconcile many contending interests, and to settle many long unsettled questions. The Council had committed themselves to no particular course on such matters. The Profession were themselves working out many difficult questions respecting their relation to the public. He (Mr. De la Garde) had great contempt for the public; and yet the public must be considered.

The President of the Council (Dr. Burrows), who, on rising, was received with marked enthusiasm, stated that much he would have said had been anticipated by the Chairman, and apologies had been offered which need not be repeated by him. Great measures had, indeed, been expected of the Council; but difficulties very great, owing to contending interests, had to be overcome, and there was difficulty also in bringing about co-operation between the members of the Council themselves, returned, as they were, by so many different corporate bodies, each corporation naturally thinking for itself, and not taking a broad and comprehensive view for the interests of the whole Profession. The Council were, however, becoming an harmonious and effective body. The General Council was continually appealed to to do more than it was empowered to accomplish. Thus, for example, to

monopolise all Medical practice. Now, certainly, the Profession were more competent to take care of the interests of the public than are impostors, in the shape of quacks. But the public don't believe it. This disbelief was chiefly due to the general feeling in favour of free trade. The Medical Council had endeavoured to introduce a bill to improve the Medical Register; yet even that measure was opposed, strange to say, by many members of our own Profession. Unless, however, the Register be perfect as an educational list, it can be no protection to the public. Then, again, to prevent impostors from assuming titles as if they were qualified Practitioners, a special clause had been framed by skilful lawyers. The Home Secretary stated that the bill in question could not be introduced during the past session of Parliament. The Medical corporations of London gave the Chairman the opportunity of paying a well-merited tribute of respect to the Apothecaries' Company. In 1815, that Company became the assessors of Medical men, and although a trading company, they had since done much in advance to raise the standard of Medical education. (Hear.)

In connection with the Royal College of Surgeons, allusion was made to Hunter and other men whose names will not die; among them the Chairman specially referred to the venerable President of the College, whose valuable labours in Surgery, high character, and distinguished career worthily associated him with the great ones of the past.

Mr. Hodgson responded in feeling and appropriate terms. As a provincial Surgeon, he had naturally a strong desire to uphold the interests of that body. The provincial Surgeons were fully competent to educate men for practice. (Applause.) That day had been a proud day for them. They had returned to the Council of the College a man whose character, intelligence, and independence entitled him to the respect and confidence of the Fellows. They had elected Mr. Turner. (Renewed applause.) They had also elected an illustrious man, whose spirit of research, great industry, and clear judgment claimed for him, as it had earned, their highest regard and esteem. They had elected Mr. Paget. (Loud cheers.) Respecting the Council of the College, he would only say that they strove by constant industry and anxious deliberation to serve the true interests of the College. (Considerable disturbance, apparently at the lower end of the room, rendered the President's concluding remarks almost inaudible. We could only catch a word or two about the late Mr. Belfour and a suitable provision for his family.)

Mr. Wheeler and Mr. Cooper respectively acknowledged on behalf of the Apothecaries' Company.

Mr. Solly proposed the Provincial Schools. He was not going to plaster them over as if they were perfect. There were, he said, provincial schools which were not creditable, and he hoped when the "Calendar" was published they would be enabled to distinguish the good from the bad. Mr. Solly spoke in high terms of Mr. Turner, and he with his colleagues warmly welcomed him to a seat at the Council.

Mr. Turner, who was loudly applauded, said: Mr. President, Mr. Solly, and Gentlemen, I appear to-night in a new position. On former occasions, as a candidate for the high honour to which I have long aspired, and to which by the confidence of the Fellows I have this day attained. I especially thank the Provincial Fellows. I declare I will do my duty. I will strive to be present at every meeting at which the interests of the College shall be prominently brought forward. I have no objection to be questioned. I will not swerve to the right hand or to the left from the path of my duty as I understand it. Is the College of Surgeons perfect? I answer as all human institutions are, but there are features in it to be improved, and the introduction of the provincial element will do no harm. The College wants reform, but it also wants conservation. Let us strive hand in hand, heart with heart, to promote the honour, the dignity, and the liberality of our common Profession. (Cheers.)

Mr. Green, long and intimately connected with the provinces, could not withhold his tribute of respect for the Surgeons of the London Schools. The mantle of the great men of the past had fallen on many then present. When any new Surgical proceeding had passed through its trial in London, that was a guarantee to them in the country. He had the honour to propose the Metropolitan Schools, coupled with Mr. Quain.

Loud and repeated cries for Paget were repelled again and again by equally vociferous demands for Quain.

Silence being at length restored, Mr. Quain was understood to say that the Provincial Schools ought to be on a par with those of London. A great injustice had been done to both Metropolitan and Provincial Schools by a piece of legislation, not sufficiently known to the Profession, which had conferred privileges on other bodies, of which these institutions do not partake. Mr. Quain would not extend his remarks, for, not being very musical, he did not appreciate the melodious accompaniment with which some previous speakers had been favoured. (Laughter.)

Mr. Paget was greeted with a prolonged burst of cheering. He regarded the very warm reception he had met with as a mark of their satisfaction on his election that day to the Council. He much approved of Medical education apart from the systematic instruction in Medical Schools. As much good Surgery might perhaps be learned out of as in registered schools of Medicine. Mr. Paget eloquently eulogised the Chairman, Mr. De la Garde, and proposed that his health be drank upstanding, and with three times three.

Mr. De la Garde acknowledged the honour in appropriate terms.

"The Medical Benevolent Institutions," proposed by Mr. Curling, was responded to by Mr. Toynbee, who had the greatest satisfaction in announcing that Mr. Hind, of Budleigh Salterton, had bequeathed £5000, and the residue of his property, amounting to £3000 more, to the Medical Benevolent Fund and College.

The Stewards were coupled with Mr. Brooke, who briefly acknowledged the compliment.

Mr. Hulme, the Honorary Secretary, was unanimously thanked for his exertions on behalf of the dinner, and the company separated.

The musical arrangements, by Mr. George Perren and other professional singers, seemed to afford general satisfaction.

The dinner itself was excellent.

REVIEWS.

Contributions to Assist the Study of Ovarian Physiology and Pathology. By Charles G. Ritchie, M.D. London. 1865. 8vo. Pp. 208.

One would suppose, on first thoughts, that the growth of pure science would be pretty uniform, like that of an oak in some sheltered valley. In all ages there must have been about an average amount of intellect, with curiosity, enthusiasm, and industry, pushing inquiry, weaving theories, making discoveries, recording results, and applying them for the benefit of mankind in useful inventions. But one era is marked to us by the vast explorations of the astronomer, another by the magnificence of architectural design, a third by the profundity of its philosophy and political conceptions. Then we find men, lured by false aspirations and beliefs, groping with undiminished power and subtlety into the abysses of occult lore and the wilds of metaphysical wildernesses. A sudden change under new influences and guidance brings us into the blaze of discovery among the natural sciences, and reveals to us of the present day a knowledge of the principles which, in operation, are once more changing the face of nature, and giving a new turn to the tide in the affairs of men.

And so it is—erratic growth is the rule—with each single branch of human inquiry, the science of Medicine among others. Now, all Physicians are anatomists, then chemists; at one time speculative, at another practical; to-day in a group regarding all diseases by the light of one grand principle, to-morrow splitting up into sections and becoming specialists. It is curious sometimes to trace the causes of these vagaries of development. All oaks are not rooted in valleys, and science has flourished among many different peoples. An east wind blows at budding time, and one side of the tree is for a while dwarfed. Another year a drought restores the balance by starving the opposite limbs. Then with favouring seasons all goes on regularly, and the full and fair proportions are reached at last. In like manner with us, and in our own day, we have had nosologists, men of comprehensive, methodical, and dogmatic turn of mind, driving us into systems of nosology, where, by a sort of universal suffrage, we were compelled to regard all diseases as of equal importance, or, at any rate, to study them cooped together in a kind of happy family alliance. Then springs up a man with tubercular lungs, whose concentrated energies are devoted to investigations of pulmonary disease. He improvises or devises a stethoscope, and every one sets about cultivating his ears. All the world will be auscultated and learn their destiny. To doubt the possibility of

hearing all the classified modifications of sound indicated by the baton of the great composer, or to waver in accepting his interpretations of them, consigns you, for the time being, to oblivion and want of fees. After a while the microscope discloses the minutiæ of molecular change. Cerebral pathology gives way to cardiac disorganisation, and the coroner's old verdict of "Death by apoplexy" is obsolete.

A new order of things begins with a new reign. There are royal marriages, births of princes and princesses, marriages again of princes and princesses of another generation, and again more births. Woman is in the ascendant. Gynecology is the result. Simpson popularises the speculum. Bennet finds a mare's nest for the public, and a fortune for himself in the cherry-red lips of a virgin womb. Spencer Wells turns folk-craft into high art, spaying into ovariotomy, and convinces the very incarnation of prejudice that you may more than justify a deed which is not only safe but life-saving. Lucinda belts and spurs her Locock, and leads him from the cubiculum to the hustings. Obstetricians in general look up, form societies, read reports, assume a scientific status, and of course multiply and increase. But there are many stages of development, and many rounds to the ladder. Obstetriculus must do something before he can become Physician-Accoucheur, and put his name to a royal bulletin. So, finally, and among the most recent of these ovarian phenomena of the present, Dr. Ritchie, hereditarily, by special adaptation, and *ex proprio motu* the coming ladies' man, writes a book, the book before us. And his first move augurs success. It makes us think that we shall see him in due time author, professor, Hospital Accoucheur, public favourite, court slave, rich, envied, supplanted. He is drawn to his fate by the force of circumstances. We, the acquiescent public, if we have neither the wish nor power to stay his career, may, nevertheless, scan his doings and criticise what he publishes. Now, how is this book—the creation, as it were, of an irresistible necessity, thrown off under the access of an ovarian œstrum—to be described? Not disparagingly we may call it a graft on an old stock, potted in historical compost, and giving promise of good fruit in the future. These three parts have their respective merits. The historical summary of ancient and modern notions on the physiology and pathology of the ovary is carefully and fairly done. Those who wish to get a bird's-eye view of the speculations cropping up from the fertile brains of some forty authors, including men so widely different and apart as Hippocrates and Dr. Wilson Fox, may here read and trust that they are not being misled by false expositions and quotations mangled to suit the purpose of the quoter. That part of the book alluded to as the stock on which Dr. Ritchie grafts what he has himself to say is a reprint of some valuable papers published by his father, twenty years ago, in the London *Medical Gazette*. The chief assertion established in them was, that in the human subject and in beasts, independent of menstruation or rut, there is a constant evolution of ova which, according to chances, either perish or become fertilised. We cannot see that the reproduction in full of all the other matter was of importance to the public; and considering that, at the time the papers were written, even the best informed and most observing men were in the habit of working up very random hypotheses, it would have been better to condense into a few sentences the points of interest which seem to have helped on our general knowledge of the subject. However, in these days, when "old governours" are more likely to be snubbed than quoted, it is not worth while to sneer at such an instance of filial devotion.

The last chapter—number five—contains the results of the author's observations, and his deductions therefrom. He has had the opportunity of making many dissections of diseased ovaries, and classes cystic tumours of those organs as principally of three kinds. In the first he finds excessive growth of the Graafian follicles naturally existing; in the second he recognises a more than natural number and growth of those follicles; and in the third kind he supposes the tumours to consist of unimpregnated ova which have undergone developmental changes in various devious directions. All pathologists will admit without dispute that the greater number of ovarian cystic tumours are of the sort first named; and it may be true that in some cases ovisacs are produced in quantities far exceeding the normal extent. A very moderate calculation by a modern anatomist—Sappey, of Paris—gives the number of ovisacs in an adult ovary as about 300,000. He also makes it clear by his dissections, measurements, and countings that, from early life to full age of maturity, the number of ovisacs in the ovary is undergoing gradual increase as time advances. These anatomical facts are sufficient to satisfy us when applied to the explanation of pathological conditions. As to some of the ovarian tumours which come under notice consisting of ova themselves, or masses of ova irregularly developed, we have no doubt. Rokitansky has recorded that he discovered ova, mostly with some faulty appearance, and more or less disintegrated, in the ovisacs making up the bulk of a tumour. Ova, as perfect as those of the most healthy woman, were shown to Dr. Ritchie last summer, taken from the ovisacs of two tumours removed from a patient 54 years of age by Mr. Spencer Wells; and he says that he has since been able to find them in various conditions in the ovisacs of other similar tumours. We can carry this matter a stage further. Sometimes the ovum has been found attached within the ovisac enormously enlarged, covered with epithelium, and forming a secondary enclosed vesicular tumour. We have also repeatedly seen in healthy animals recently dead, ova which had some time before escaped from the ovisacs, not only in the Fallopian tubes and in the uterus, but fixed to the peritoneal surface near the ovary, and there taking on rapid growth. Such ova, as we know, usually perish; but a recognisable size once attained, and vascularity once established, who can gainsay the fact of their being the starting point of some equivocal tumours supposed to be truly ovarian? But the error with these, as with other pathological questions, lies in not looking at them from a higher point of view. For what, after all, is an ovary? It is very well to describe it as an organ or a gland; and simply as the subject of dissection, it may truly be called a mass of erectile tissue in certain relation to cysts or groups of ovisacs. But essentially it is nothing more than a series of plasmatic cells, lying between layers of peritoneum, there waiting for the special influences which cause their development into ovisacs. Like other cysts in other parts—bursæ, for instance—having a similar origin, they become vascular and lined with epithelium. No one can account for the causes which bring about special changes. But in the bursæ epithelium remains epithelium. In the ovisac, one, sometimes more than one, of the lining cells, call it epithelium, for there is no difference, goes on to the formation of an ovum. All this is clear enough when you look at the same thing in the lower animals. Take, for instance, the ovary of the toad, or the ovary of the hydra, and you have nothing more than an enderonic cell, or enderonic cells, precisely similar at first to the rest of the plasmatic cells among which they are found, undergoing specific changes which are to fit their contents for admixture or contact with the contents (spermatozoa) of certain other enderonic cells (the spermatic cells), which may or may not, in the chapter of accidents, be brought into impregnating relation to them. Now, whatever changes or developments plasmatic cells pass through elsewhere, they may pass through in the ovary. Hence a variety of natural and morbid growths which may form tumours. Whatever special growths take place naturally in these ovarian cells under the influence of causes which tend to reproductive action, may be modified in various ways. Hence some of the varieties of ovarian cystic tumours. We commend this view of the subject to Dr. Ritchie, who has written and must write again, and to Mr. Spencer Wells, who has promised to write. In the meantime, all who are interested in the matter will do well to study what Dr. Ritchie has already written.

Parturition and its Difficulties; with Clinical Illustrations, and Statistics of 13,783 *Deliveries, etc., etc.* By J. Hall Davis, M.D., etc., etc. London: Hardwicke. 1865.

Damning with loud praise is as bad as damning with faint praise. In the case of a practical author it is worse, because it lays him open to nasty insinuations, and, unless carried to the pitch of the shouts of modern popular puffery, never fails to ensure neglect. Happy, then, is the man who is fairly dealt with by critics, whose reputation is unblatantly respected by his fellows, and whose judgment is trusted by the public on his shown merits. Such an enviable lot seems to be that of Dr. Hall Davis. He has had the good fortune to escape being the fashion or the fancy of child-bearing women; but when they find that parturition has its difficulties they ask for him. The Profession has never made him a momentary idol; but in the perplexities of practice he is sent for. What he has written has never been loudly lauded, but always read. Now comes another edition of his work "On Difficult Parturition." We have before told the Practitioner that this was a book for him, not for the public. There is nothing, in the

common sense of the word, popular about it. Treating of a subject which must needs interest all women, we don't believe that any woman would be drawn on to read a second page. It might easily have been made otherwise; if not one of the waifs and strays of the drawing-room table, at any rate the oracle of the private chamber. A few prints with artistic accessories, as well as exact anatomical details, descriptions, elaborate, piquant, sentimental instead of technical, notey, just rough from the case-book, with careful attention to the binder's millinery and the conventional ceremonies of introduction to the public, would have changed all, but marred nature. Like man, like book. The man is Professional, and the book is Professional. No wonder that we spoke well of it, and that the Profession showed they liked it by using it. As a rule, Doctors are intensely shoppy. If they get together they talk of cases; if they can write nothing else, they publish cases; and, in preference to all other reading, they read cases. Dr. Davis's book is full of cases, and just those kind of cases which it is the fate of all men to meet with. Almost every other paragraph of the dogmatic part of the book has reference to some particular case recorded. Reading the book is like a quiet Medical gossip. You take the cases one by one, and you can cap them from your own experience. You theorise; Dr. Davis leaves your wisdom untouched. You talk practice, and you find your own skill reflected in the book, together with a great deal more that is worth knowing, saving the bore of being lectured. Without being crafty, Dr. Davis has acted wisely. His work is none the worse in itself for meeting undesignedly a Professional weakness; and, being in reality sound, is therefore all the more likely to do good.

This edition is what it professes to be;—not a mere reprint. With the additional experience of more than six thousand cases in one charity alone, both writer and reader must be very fools if the one had not something fresh to impart, or the others could not deduce some new lessons from his stores of matter. Dr. Davis has not failed in doing his part. He states his facts plainly, groups his arguments logically, gives his advice clearly and forcibly, and on all points speaks, as he is entitled to do, like one having authority. Let his new readers do as his old ones have done,—read carefully, put his teachings to the test of clinical trial, trust to his judgment when doubt makes wise counsel priceless, and follow his guidance in the difficulties which are sure to beset and jeopardise his practice. In short, this book will fully bear the application of the words of Bacon,—he that comes to it and "questioneth much, shall learn much, and content much."

A Radical Operation for Procidentia. By Thomas Addis Emmet, M.D., Surgeon to the State Woman's Hospital, New York. New York. 1865. Pp. 17.

This is a reprint of the report of the proceedings of the New York Obstetrical Society on December 20, 1864.

Dr. Emmet imagines that he has found out a successful manner of treating those painful cases to cure which so many vain efforts have been made. It is not, however, the first time that similar announcements have been made prematurely, and therefore it will be well not to pronounce upon the operation until it has had a fair trial in this country. The different operations which have been proposed for the radical cure of procidentia of the uterus might be divided into two great classes. In the first class the operation aims at retaining the womb within the vagina by narrowing the vulva to such an extent that there is no room for the womb to pass through it. To this end Mende proposed that an artificial hymen should be made. Fricke's (1833) operation was slightly different. He removed from the edge of each labium a portion as thick as two fingers, the incisions on each side commencing a short distance below the anterior commissure, and meeting at the posterior commissure. He then sewed together the raw edges thus opposed to each other. Malgaigne increased the depth of the incision, and removed also a portion of vaginal mucous membrane.

The operation had a very fair trial, but it failed; the womb always gradually dilated the small orifice left, and was soon as far prolapsed as before.

A modification of the operation was proposed by Mr. Baker Brown. Mr. Brown does not remove any of the substance of the labia. He only dissects the mucous membrane from their inner surface, and sews the surfaces together.

It is quite impossible to understand how a proceeding of this description should succeed, while Fricke's much more formidable operation should prove insufficient.

In the second class of operations an attempt is made to narrow the vagina itself. The uterus is not to be left prolapsed and mechanically imprisoned in the vagina, but it is to be held in its proper place by rendering the vagina so narrow that prolapse is impossible.

The narrowing may be effected in different ways. Desgranges proposed to compress folds of vagina in small bulldog forceps, which were left several days in position until the opposite sides of the fold had adhered. Pauli proposed to induce inflammation of the vagina by mechanical means. Dr. Marshall Hall removed strips of mucous membrane, and allowed the cicatrices to contract. Langier used strong nitric acid for the same purpose. These operations were rarely or never of permanent utility.

The operation which Dr. Emmet now proposes is a modification of one recommended some years ago by Dr. Marion Sims. It consists of a cutting stage and a sewing stage. In the cutting stage the mucous membrane of the anterior wall of the vagina is dissected off in lines as broad as the finger, and in such a way as to form an isoceles triangle, whose apex is close to the urethral orifice, while its base is just in front of the cervix uteri. In the sewing stage the edges are brought together in such a way that the base of the triangle is doubled upon itself, while the equal legs of the triangle are sewed together.

Dr. Emmet professes to be highly pleased with the result of this operation. Warned, however, by past disappointment, we are inclined to be somewhat sceptical; and we are all the more so when Dr. Emmet tells us that some time after the operation the anterior vaginal wall is no longer felt to be thickened, the fold having disappeared by absorption. We fear that this is a step to the return of the procidentia.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, July 11.

In the course of last week there took place, before the High Court of Justiciary at Edinburgh, one of the most remarkable trials which have appeared in the annals of jurisprudence. Edward William Pritchard, a Member of the Royal College of Surgeons, London, a Doctor of Medicine of Erlangen, and Licentiate of the Apothecaries' Society, was charged with the double murder of his wife and his mother-in-law, by the administration of poison. Deep and unpleasant excitement was caused, and this was increased by the many rumours which the reserved and mysterious method of judicial inquiry in Scotland gave opportunity to. The case is specially interesting to Medical men from the important nature of the scientific evidence, and, perhaps, also, from the unusual position assumed by one of the Professional witnesses.

Dr. Pritchard is a native of Southsea, Hants. He served his apprenticeship in Portsmouth, and, it is said, with considerable credit for diligence and propriety of conduct. He entered, in 1843, as a student of the Medical school of King's College, London, was diligent and zealous in his studies, and, after passing his examination at the Royal College of Surgeons, was gazetted an Assistant-Surgeon in the Royal Navy. He soon, however, left the service; and, after obtaining the licence of the Apothecaries' Hall, began practice at Filey, in Yorkshire, and, while there, married a Miss Mary Jane Taylor, daughter of a retired silk merchant residing at Edinburgh. In 1859 he settled at Glasgow, where, in the course of a short time, he won a very respectable position, and was promoted to various honorary appointments, Professional and public. His habits of industry are also attested by various published contributions—none, perhaps, of very great merit—which appeared in the pages of the *Medical Times and Gazette*, the *Lancet*, and the *Transactions* of the Obstetrical, Pharmaceutical, and King's College Medical Societies. He is also author of "A Visit to Pitcairn Island," "Observations on Filey as a Watering Place," "The Guide to Filey and its Antiquities," "Coast Lodgings for the Poor of Cities," &c. He was fellow or member of nearly twenty learned societies and institutions in the United Kingdom, and Medical officer to several life assurance offices.

The brief span of his life with which we are at present concerned dates from the month of November, 1864. At this time the prisoner resided in Clarence-place, Sauchiehall-street. He was the father of five children, living, apparently, on the

best of terms with his wife. True, it was shown by the evidence that Dr. Pritchard had given his wife occasion to complain of his affection, but, from her singular amiability of character, this opportunity had not been made use of. The other inmates of his house were two boarders—students of Medicine—and two female servants.

The first event of the tragedy was the illness of Mrs. Pritchard, in November, or at the end of October, first slight, and gradually becoming more severe, and consisting principally of depression and sickness. She went to visit her friends in Edinburgh at the end of this month, and, here, her sickness almost entirely left her. About Christmas she returned to Glasgow, and the illness returned, and gradually became more and more severe. At special dates the attacks were specially distressing, and to the sickness were added retching, vomiting, cramp, pain, and purging. A Medical friend was summoned from Edinburgh, and Professor Gairdner was consulted. Both gentlemen were puzzled by the symptoms. The husband, who assumed the position of ordinary Medical attendant, spoke of the case as one of catalepsy, and, afterwards, of gastric fever. On the 10th of February Mrs. Taylor, the mother-in-law, arrived to nurse her unfortunate daughter. A few days afterwards she also became unwell. Previously a perfectly healthy woman, and in the enjoyment of extraordinary bodily vigour for the age of seventy-one, she one evening partook of some tapioca originally prepared for her daughter, and, in less than an hour, was attacked with severe vomiting and retching. She got better, but only to be again prostrated on the 24th; this time sudden syncope accompanied the sickness. Dr. James Paterson, a Medical Practitioner who resided in the neighbourhood, was called in. He found Mrs. Taylor in bed, presenting all the appearances of a sudden attack of unconsciousness, and he formed the opinion of poisoning by opium. Dr. Pritchard had led him to suppose that the illness was caused by an excessive indulgence in bitter beer. The unfortunate mother-in-law died in the course of a few hours. A certificate of death was very properly refused by Dr. Paterson, and Dr. Pritchard sent in a return to the Registrar—"That the primary disease of which she died was paralysis, duration, 12 hours; secondary disease, apoplexy, duration, 1 hour."

We shall now go back to the deathbed of this lady. So sudden had been her illness that she was carried to the room of her sick daughter and placed in the bed which she occupied, and thus Dr. Paterson had an opportunity at this visit of seeing Mrs. Pritchard. This opportunity was not a great one. It was not such as many students of the present day should wish to be restricted to, or in which the systematic and elaborate methods of clinical examination we have heard so much of could be applied. It only permitted the Doctor to "glance" at the patient, not even to put a question to her. But searching, penetrating, and eminently sagacious must have been that brief inspection; by it he arrived at the conclusion that Mrs. Pritchard was being poisoned by antimony. Dr. Paterson is a Practitioner of upwards of thirty years' standing, and he has for twenty-two years occupied the honourable position of a teacher in the Andersonian Medical School. We must in all fairness add that Dr. Paterson had seen, in the course of his experience, two cases in which overdoses of antimony had proved fatal to children. Surely such remarkable powers of diagnosis must be reserved for those only who have enjoyed such advantages of observation! Dr. Paterson had another opportunity in a few days of seeing Mrs. Pritchard. His interview was a strictly private one, and he asserts that his opinion of her case was then confirmed. We fear there are many in his Profession who will feel sadly disappointed at the position he now assumes. He says that he was convinced that his patient—for assuredly she was such, as her consulting or ordinary Physician—was being poisoned. He even claims the knowledge of the particular poison by which the life of a fellow creature—a mother in the prime of womanhood—was being cruelly and dastardly taken. He admits that that life could then have been saved by means within his knowledge. The only steps he took were to refuse a certificate of, and to write an insinuating letter regarding, the death of another inmate of the same household. Why, we ask, did he then forget that a great obligation—nay, an imperative duty—rests on each of us to prevent the destruction of human life, and that this obligation should be especially felt by the members of a Profession who exist almost solely to arrest the causes of death? We indignantly deny that any rule of Professional etiquette is known among Medical men which can prevent a simple performance of duty.

The tragedy is now soon told. Mrs. Pritchard continued gradually becoming worse and worse; the fits of severe illness increased in frequency, and the prostration became daily more hopeless. Various articles of food, such as cheese and egg-flip, were satisfactorily shown to have passed through the hands of Dr. Pritchard, and to have been the cause of attacks of vomiting and sickness in the patient (we may say victim), and, accidentally, in various members of the household. Death closed the scene on March 15.

The suspiciously short interval between the deaths of Mrs. Taylor and her daughter, and various hints received by the authorities, led to the arrestment of Dr. Pritchard, and the examination of the two bodies. The result of this post-mortem examination by Drs. Maclagan, Littlejohn, and Gamgee showed that there was no pathological appearance in either case to account for death. A chemical investigation was made, with the general result that large quantities of antimony were found in almost every structure in both bodies, and also a trace of mercury, which was, however, accounted for by a proven Medical administration. Stores of antimony and also of tincture of aconite, digitalis, and conium were found in extraordinary quantities in Dr. Pritchard's possession. He was shown to have purchased from one house in Glasgow larger quantities of antimony and of tincture of aconite within three months than were sold by the same firm, in an extensive business, to all their customers in one year.

Every advantage was given him on his trial by the counsel for the Crown (Mr. Young, Solicitor-General), and his defence was conducted in the most able manner by Dr. Rutherfurd Clark, one of the most accomplished pleaders at the Scotch bar. The Crown proved the certainty of death by poison, the connection between Dr. Pritchard and certain articles of food which caused poisonous symptoms, the possession of poisons which could cause such symptoms, and the untruthfulness of the returns of death by Dr. Pritchard. The prosecutor reduced the question to the certainty of the guilt of either Dr. Pritchard or of a servant girl, Mary McLeod, 17 years of age, and in the highest degree unlikely to possess the necessary knowledge of the actions and doses of poisons.

The defender urged the necessity of certain proof to establish the charge of so black and diabolical a crime, and insisted on the obligation resting on the Crown to show that the murders had not been committed by Mary McLeod. The only motives which had been brought forward were an improbable promise of marriage to this girl, whom he had seduced, and the uncertain prospect of gaining a paltry sum of money, and these, it was strongly pleaded, could not in such a case be looked upon as motives. After a most able, exhaustive, and inevitably conclusive summing by the Lord Justice Clerk, on the fifth day of the trial, the jury brought in an unanimous verdict of *guilty of both charges*. The unfortunate man is condemned to be hanged on the 28th of this month.

No doubt can exist that his sentence is a just one. His motives we know not; nothing sufficient was referred to during his trial, and he appears to have perpetrated his foul purposes with a cold-blooded and calculating coldness which demonstrates the possession of every mental faculty. We must especially regret that—in the words of the counsel for the prisoner—"a member of an honourable Profession, whose duty and whose pleasure it is to assauge suffering and to ward off the attacks of disease," should have proved himself one of the "foulest criminals that ever lived." Self-congratulation—feeble in comparison with such a blot on one of our Profession—we may indulge in, that mainly by the instrumentality of that Profession his guilt was laid upon him.

GENERAL CORRESPONDENCE.

NAVAL MEDICAL OFFICERS AND THE ORDER OF THE BATH.

[To the Editor of the Medical Times and Gazette.]

SIR,—The *London Gazette* of Friday last informs us that Surgeon-Major John Elliot Carte, M.B., 14th Regiment, and Staff-Surgeon Anthony Dickson Home, V.C., were appointed ordinary members of the Military Division of the Third Class, or Companions of the Most Honourable Order of the Bath.

Most people on reading the foregoing announcement would naturally conclude that Naval Medical officers are equally

entitled to have such honorary distinctions conferred upon them; but such is not the case.

In the 9th and 11th statutes of the Order it is distinctly laid down that no Naval Medical officer under the rank of Deputy-Inspector-General of Hospitals and Fleets shall be entitled to the Order of the Bath.

Now, inasmuch as the promotions to the inspectorial grades in the navy are few and far between, and inasmuch as the positions in which those officers are employed preclude them from acquiring that peculiar service—viz., service before an enemy—necessary to qualify for the distinction, it is manifestly clear that Naval Medical officers are practically excluded from the Order of the Bath.

I shall refrain from trespassing on your space by commenting upon the injustice and the impolicy of such exclusion, and I shall not trouble you with any remarks upon the utter disregard shown by the authorities for the well being of the Medical Department of the Navy. But I should like—with your kind permission—to bring the subject under the notice of any young Surgeon who might possibly be induced to offer himself as a candidate for an Assistant-Surgeoncy in the Royal Navy.

I am, &c.

London, July 10. A Physician.

THE AUTHORSHIP OF THE ACTONIAN PRIZE ESSAY ON RADIATION.

Letter from Robert Warington, F.R.S.

[To the Editor of the Medical Times and Gazette.]

Sir,—Allow me to point out a misunderstanding which appears in your number of this day. In your review of the "Actonian Prize Essay on Radiation" (p. 47), just published, you speak of it as if it were mine. This is not the case; it is written by my youngest son.

I am, &c.,

Robt. Warington, F.R.S.

Apothecaries' Hall, Blackfriars,
London, July 8th, 1865.

MEDICAL NEWS.

Apothecaries' Hall.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, July 6, 1865:—

Thomas Henry Whitehouse Davies, Chalford, Gloucestershire; John Bradley, Liverpool; Robert Arthur Jones, Carnarvon; Isaac Thomas Bridgman, Camberwell; Paul Quick Karkeck, Pen Treve, Truro; James Wells, Nailsworth; Charles James Wills, Park-crescent, Stockwell; Edward Coldridge Roberts, Exeter; John Hackney, Royal Free Hospital; Charles Arthur Brigstocke, Carmarthen; Jabez Thomas, Swansea; Henry Reginald Hatherly, Derby Infirmary.

The following gentlemen, also on the same day, passed their first Examination:—

John Williams, Guy's Hospital; William Brown Holderness, St. George's Hospital; Frederick Hopkins, General Hospital, Birmingham; George Bainbridge, Leeds School of Medicine.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Fawcett, T. J., M.R.C.S. Eng., has been elected Resident House-Surgeon to the Halifax Infirmary.

Lawlor, Michael, L.A.H. Dub., has been elected Apothecary for the Tralee Union Workhouse.

Palfrey, James, M.D., has been elected Physician-Accoucheur to the Farringdon General Dispensary and Lying-in Charity.

Wilson, William, M.D., M.R.C.P. Lond., has been appointed Physician to the British Legation, Florence, Tuscany.

DEATHS.

Barrett, John T., L.R.C.P. Edin., at Lees, Manchester, on June 26, aged 29.

Burke, James, L.R.C.P. Edin., Staff Assistant-Surgeon Army, at Burhampore, E. Indies, on April 26.

Fryer, R., M.R.C.S. Eng., Assistant-Surgeon Bengal Service, on June 28, at Edinburgh.

Hillman, William, M.R.C.S. Eng., Surgeon R.N., recently.

Lawrence, J., Surgeon R.N., recently.

Munro, J., M.D., R.N., Deputy Inspector-General of Hospitals and Fleets, recently.

Storey, Robert, M.R.C.S. Eng., Assistant-Surgeon Military Train, at New Zealand, on February 9.

Royal College of Surgeons.—At a meeting of the Council on July 13, Mr. Thomas Wormald, Surgeon to St. Bartholomew's Hospital, was elected President of the College for the ensuing year, in the vacancy occasioned by the retirement of Mr. Hodgson; and Messrs. Richard Partridge, F.R.S., Surgeon to King's College Hospital, and John Hilton, F.R.S., Surgeon to Guy's Hospital, were elected Vice-Presidents of the College for the ensuing year. Mr. Kiernan, who during the past year has filled the office of Vice-President, had, in consequence of the state of his health, declined to be again put in nomination for that office. At this meeting, Messrs. Quain, Turner, and Paget, the recently-elected members of the Council, were sworn in, and took their seats.

College Examinations.—The next primary examination in Anatomy and Physiology for the diploma of Member of the College of Surgeons takes place this day (the 15th) and the Pass or Surgical Examination on Saturday next, after which the Court will rise for the vacation.

General Elections.—Whatever may be the result of the general elections to the various political parties in the House of Commons, it is pretty certain that our Profession will be the gainer in point of representation. Mr. Mitchell Henry has been beaten at Woodstock, but Mr. Clement has been returned, without opposition, for Shrewsbury, and he will most worthily and fittingly represent us in the House. We must wait longer to learn whether Sir C. Locock, Mr. Smee, and Dr. Brady are successful.

Charing-cross Hospital.—The late Mr. Thomas Farrance, the well-known confectioner, of Charing-cross, whose will was sworn under £40,000, has bequeathed £50 to the above Institution.

King and Queen's College of Physicians in Ireland.—Since the death of the late Dr. George Alexander Kennedy, Librarian to the College, it has been resolved to appoint two library officers; one, the Honorary Librarian, to be chosen from among the Fellows, to perform such duties as are discharged by the Librarian of Trinity College, and other large libraries, receiving from the College an annual *honorarium* or fee for his services; the second, the Librarian, to perform the duties usually discharged by the assistant-librarian in large libraries, and to be paid a salary out of the College estates under the provisions of 40th Geo. III., cap. 84. On the 7th inst. the College chose Dr. Belcher, one of the Fellows, to the former office; and Mr. Fennell, Assistant-Librarian to the Royal Dublin Society, to the latter.

The Case of Mr. Debenham.—Mr. Debenham, the Surgeon, of Heath House, Commercial-road East, surrendered on July 12 to his trial on the charge "of having, on June 5, feloniously killed and slain Thomas Solomon." It will be remembered that the prisoner's house had lately been several times attempted by burglars, and on the night mentioned, seeing a man in the back yard of his house, he more than once hailed him, warning him that if he did not answer he would be shot. Receiving no reply, the prisoner fired in the direction of the man, intending, he affirmed, only to frighten him; but most unfortunately shooting him in the head and killing him on the spot. Evidence was adduced to prove that the bullet must have hit some hard substance and rebounded before striking the deceased. The jury returned a verdict of "Not guilty, upon the ground that the pistol was fired to alarm, not to injure or kill."

Confession of Pritchard.—The following is a copy of the confession written by Dr. Pritchard in the presence of the Rev. R. S. Oldham. It will be seen that whilst it admits the fact of his wife's death having been caused by him, it attributes it to an over-dose of chloroform. The prisoner denies any guilt in the case of Mrs. Taylor:—"I, Edward William Pritchard, M.D., M.R.C.S.E., and L.A.S., &c., hereby make in writing, in the presence of the Rev. R. S. Oldham, M.A., the following confession, for transmission by him to the proper authorities:—'It was when my wife was at Ardentinny (a), in the summer of 1863, that I first became intimate with the girl Mary McLeod, sleeping with her in my house at 22, Royal-crescent. This continued at intervals up to the time of our removal to 131, Sauchiehall-street. She became pregnant in May last [year], and with her own consent I produced miscarriage. I have reason to believe that Mrs. Pritchard was quite aware of this, and rather sought to cover my wickedness and folly. My mother-in-

(a) By a supplementary writing the convict afterwards desired this name to be altered to Kilmun.

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law, Mrs. Taylor, came last February to our house, and caught Mary McLeod and myself in the consulting-room; and the day before her death, having apparently watched us, she said to me in the same room, 'You have locked her into the cupboard,' which was true; but nothing more passed. I declare Mrs. Taylor to have died in the manner I have before stated; and I now believe her death to have been caused by an overdose of Battley's Solution of Opium. The aconite found in that bottle was put in by me after her death, and designedly left there in order to prove death by misadventure in case any inquiry should take place. Mrs. Pritchard was much better immediately after her mother's death, but subsequently became exhausted from want of sleep. I accounted for this by the shock produced by her mother's death; and hardly knowing how to act, at her own earnest request I gave her chloroform. It was about midnight. Mary McLeod was in the room, and in an evil moment (being besides somewhat excited by whisky) I yielded to the temptation to give her sufficient to cause death—which I did. I therefore declare before God, as a dying man, and in the presence of my spiritual adviser, that I am innocent of the crime of murder so far as Mrs. Taylor is concerned, but acknowledge myself guilty of the adultery with Mary McLeod and the murder of my wife. I feel now as though I had been living in a species of madness since my connection with Mary McLeod, and I declare my solemn repentance of my crime, earnestly praying that I may obtain Divine forgiveness before I suffer the penalty of the law. (Signed) EDWARD WILLIAM PRITCHARD.—John Stirling, Governor, R. S. Oldham, and John Mutrie, witnesses." North Prison, Glasgow, July 11, 1865.

KING'S COLLEGE, LONDON.—The distribution of prizes to the students of the Medical Department took place on Friday, July 7. In the unavoidable absence of the Archbishop of Canterbury, who was detained at the baptism of the Royal Prince at Windsor Castle, the Bishop of Bath and Wells presided. The Bishops of Lichfield, Gloucester and Bristol, and Ely were also present, with the Professors of the College, and a large number of visitors and students. Professor Bentley, Dean of the Medical Faculty, gave a very satisfactory account of the number of students and the efficiency of the Medical School, when the following scholarships and prizes were distributed:—*Scholarships*—Smith, Robert Shingleton, senior scholar; Richards, William Alsept, 2nd year scholar; Garrod, Alfred Henry, Baxter, Evan Buchanan, and Curnow, John (equal), junior scholars; Baxter, Evan Buchanan, and Curnow, John (elected for three years), Fiddian, Alexander Paull, Garrd, Alfred Henry, McGill, Arthur Fergusson, and Bland, Henry (elected for two years), Warneford scholars, class I.; Evans, Edward Charles, Warneford scholar, class II. *Prizes and Certificates of Honour, Winter Session*, 1864-5—Warneford: Kelly, Charles, 1st prize; Bradshawe, Paris, 2nd prize. Leathes: Dabbs, George Henry Roque, 1st prize; Gooding, Ralph, 2nd prize. Divinity: Gooding, Ralph, B.A., 3rd year; Dabbs, George Henry Roque, 2nd year; Milles, George Ridley, 1st year. Gill: Fiddian, Alexander Paull. Anatomy: Molecey, Octavius Twigge, prize; Willcox, Robert Lewis, Canton, George Anderson, and Robinson, Richard Holt (equal), certificates of honour. Physiology: Nettleship, Edward, prize; Parsons, Frederick William, Robinson, Richard Holt, and Willcox, Robert Lewis (equal), certificates of honour. Chemistry: Nettleship, Edward, prize. Medicine: Kelly, Charles, prize; Gooding, Ralph, B.A., certificate of honour. Surgery: Kelly, Charles, prize; Bell, William, Atherstone, Edwin, certificates of honour. Clinical Medicine: Gooding, Ralph, B.A., prize; Burge, Frederick John, certificate of honour. Clinical Surgery: Bell, William, prize; Little Edward, Moore, certificate of honour. Practical Chemistry: Parsons, Frederick William, prize; Richards, William Alsept, certificate of honour. Forensic Medicine: Buckle, William Turberville, prize; Bradshawe, Paris, certificate of honour. Botany: Richards, William Alsept, prize; Seccombe, Edward Hepburne, certificate of honour. Midwifery: Wolston, Walter Thomas Prideaux, prize; Smith, Robert Shingleton, and Wright, John Harrington, certificates of honour. Materia Medica: Parsons, Frederick William, prize. Comparative Anatomy: Seccombe, Edward Hepburne, prize; Wolston, Walter Thomas Prideaux, certificate of honour. Todd Clinical: Powles, Revett Coleridge, prize. Clinical Medicine: Bradshawe, Paris, prize. Clinical Sugery: Burge, Frederick John, prize; Smith, Robert Shingleton, certificate of honour. *Names of those Elected Associates of King's College, London.*—Antonini, Charles; Bell, Hutchinson Royes; George, John Winnall; Roberts, Edwin; Salter, John Henry; Shuttleworth, George Edward; Smith, Robert Shingleton; Willey, Henry.

PRESERVATION OF ICE.—In localities where ice cannot be readily obtained it may be of service to put into force a simple plan by which Dr. Schwarz states that it may be preserved unmelted for a long period. He places the ice in a vessel covered with a plate upon a feather bed, and surrounds it with cushions filled with feathers. Feathers possessing little conductibility, the ice long remains unmelted.

A REQUEST NOT MADE PREMATURELY. — Professor Purkinye, of Prague, who is at present at Vienna on account of the approaching university festivities, has taken the opportunity of asking, seeing that he is 77 years old, that he should have the aid of a younger man to assist him in his Professorial duties.

PROFESSOR CZERMAK'S PHYSIOLOGICAL INSTITUTE AT PRAGUE.— This edifice, which was erected two years since at great expense for the purpose of accommodating and encouraging physiological inquiries, has just, upon the Professor's call to Jena, been converted into a gymnastic establishment for young ladies.

THE Lectureship on Forensic Medicine, for the session of 1865-6, has been conferred by the Council of the University on Mr. Neild. There were only two candidates for the appointment—namely, Mr. Nield, and Mr. W. Thompson, of South Yarra; but, we understand, so obnoxious was the latter candidate to the Vice-Chancellor, and notably to Professor Halford, that both gentlemen threatened to resign (the latter on personal grounds), if Mr. Thompson got the appointment.—*Melbourne Age.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Bristowe's letter on Fever and Workhouses is unavoidably postponed until next week.

We have received a report of a case of effusion into the right knee-joint of a female patient who had been the subject of syphilis. The Author has forgotten to send his name.

We have received a communication from Southampton with reference to the letter signed "Medicus," which appeared in our pages a short time ago, and with reference also to some editorial remarks by ourselves. A good deal of misconception would appear to exist. The writer of the letter did not claim to be a Practitioner in Southampton. Not one word was said about the Professors or Medical Staff at Netley. Nor was it at all inferred that they were aware even of the alleged occurrences. What our correspondent did say was, that he had heard of certain things which, if true, proved that the men who have of late entered the Army Medical Service have been of a very different class from what they were when the high character and gentlemanly conduct of the candidates was a matter of congratulation to every one. Thus much for our correspondent, whose letter was personally authenticated. Now for ourselves. We can assure the Professors that, so far from having even said a word in disparagement of the school at Netley, we have invariably held its staff of Professors and the discipline maintained there in the highest honour and esteem; and we have always looked upon it all as exerting the very best influence. We are now assured upon unexceptionable authority—and we have much pleasure in stating it—that the standard of the Medical examination has not been lowered in any wise.

An Old Student.—Inquire of the Secretary; you may possibly be admitted under the old regulations at the last examination for this Session, about the 26th or 27th inst.

THE ANTIQUITY OF TRANSFUSION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In his interesting history of Oxford, Dr. Richardson says that "Englishmen urge, with natural pride, that Dr. Lower discovered transfusion about the year 1665; and all admit that he first practised it; but the Germans claim that in 1606 one of theirs, by name Libavius, suggested the idea of transfusion. We need not stop to discuss this point, but may broadly affirm that not only was Lower the first man to transfuse, but that, in so far as he was concerned, he was original in devising the experiment." If the following is to be relied on, it was known for nearly two centuries before the time of Lower, and was practised on Pope Gregory the Eighth, as mentioned by Sismondi and others. The following account is taken from Villari's "Life of Savanarola:"—

"The vital powers of Innocent VIII. rapidly gave way; he had for some time fallen into a kind of somnolency which was sometimes so profound that the whole Court believed him to be dead. All means to awaken the exhausted vitality had been resorted to in vain, when a Jew Doctor pro-

posed to do so by the transfusion, by a new instrument, of the blood of a young person, an experiment that had hitherto only been made on animals. Accordingly, the blood of the decrepid old pontiff was passed into the veins of a youth, whose blood was transferred into those of the old man. The experiment was tried three times, and at the cost of the lives of the three boys, probably from air getting into their veins, but without any effect to save that of the Pope. He expired on the 25th of April, 1492, and without loss of time they set about the election of his successor."

I am, &c.

St. Thomas-street, Southwark, July 8. S. W.

LETTER FROM DR. ALEX. J. SUTHERLAND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—You will much oblige me by allowing me to state through your columns that I am not the Dr. Sutherland whose claims on the Government have recently been the subject of discussion in the House of Commons. It will save some inconvenience and delay in the transmission of letters and communications intended for Dr. John Sutherland, Army Sanitary Commissioner, if they are addressed to his own residence, 41, New Finchley-road, N.W., as I am frequently receiving communications from the War Office and elsewhere intended for that gentleman.

I am, &c. ALEX. J. SUTHERLAND, M.D. Oxon.,

6, Richmond-terrace, Whitehall, July 6. F.R.S., F.R.C.P. Lond.

BIRD'S DEODORANTS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As the Medical Profession are not yet generally acquainted with the valuable nature and properties of Dr. Bird's deodorants, I beg leave to furnish the following particulars:—

These deodorants are used in two forms, either powder or liquid. The powder should be used in all cases where it is not necessary to examine the evacuation, in the proportion of two tablespoonfuls stirred into a pint of water, and this mixture poured into the bed-pan, commode, or chamber utensil prior to its being used. This will prevent all unpleasant odour. The liquid should be used where it is desirable to inspect the evacuations, in the proportion of two tablespoonfuls to one pint of water.

The liquid is also serviceable in cases of fevers, especially those of an infectious character, for general ablution twice a day, in the proportion of one tablespoonful to one quart of water.

I am, &c. N. H.

HYPODERMIC AND SUBCUTANEOUS INJECTIONS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have carefully observed this controversy, and must say that I cannot see in Mr. Hunter's letter of the 1st instant any language strong enough to justify the depreciatory commencement of Dr. Wood's, of the 8th. I certainly have always understood that Dr. Wood took as a basis of his treatment the principle of localisation, and this seems to have been the case as recently as his former letter, in which he implies that other Medical men have failed by injections at a distance where the local treatment has subsequently cured. I have used the hypodermic injections very extensively, and find that into whatever part of the cellular tissue it is introduced, I have invariably good results. If Dr. Wood claims the honour of the discovery of the general use of the syringe, how does he reconcile the two facts in his first letter,—viz., that the remedies used at a distance from the affected part without advantage proved efficacious when properly locally applied? He wishes to claim priority in the general treatment, and refers Mr. Hunter to the bottom of page 18 of his pamphlet, where he asks the Profession at large, "Have we no means of introducing medicinal agents very rapidly into the body?" etc. He does not even suggest a way. I consider that Mr Hunter has solved this problem, and that he answers, "Yes; there is a way; I have tried it, found it satisfactory, and will at once make it known to the Profession." Dr. Wood certainly deserves and has the credit of introducing certain remedies for particular affections; but with Mr. Hunter I contend that the treatment, though apparently similar, is really different. Dr. Wood seems, at the time of publishing his pamphlet, to have had an idea of the probability that what was true in regard to narcotics would be found equally true with regard to other remedies, thereby showing that at that time he depended on the local application of the narcotics to the affected nerve, "as in neuralgia." Yet I have not read or heard of any cases of general injection published by him, so must suppose that they were either never performed, or that they were not deemed of sufficient importance to be reported. Mr. Hunter, on the contrary, having first thoroughly tested the value of his method, made the result of his investigations known to the Profession six years ago; and as he first published cases wherein he has shown the benefit to be derived from that method, and having struck out for himself and others a plan of general injection, which has been proved to be satisfactory, let us give him that to which he is justly entitled,—namely, the credit of his discovery.

I am, &c.

Hawkhurst, July 10. ROBERT COOK, M.R.C.S. Eng.

COMMUNICATIONS have been received from—

DR. JOHN WHITMORE; Mr. E. B. STEPHENS; Dr. R. L. CAMPBELL; Mr. J. W. GEORGE; Dr. H. HARRISON; M.B.; WESTERN MEDICAL AND SURGICAL SOCIETY; Mr. J. W. WHITE; TRETANE; Prof. BENTLEY; Mr. ALBERT H. ELWORTHY; Mr. T. R. FRASER; H. E.; Dr. LEARED; THE SECRETARIES OF THE SOUTHAMPTON MEDICAL SOCIETY; Dr. WILLIAM DUNCAN; Dr. A. J. SUTHERLAND: Mr. T. E. EASON; APOTHECARIES' HALL: A PHYSICIAN; Dr. W. L. LINDSAY; S. W.; Mr. R. WARINGTON; Mr. CHARLES HUNTER.

BOOKS RECEIVED.

Half-yearly Abstract of the Medical Sciences. Vol. 41.—January to June, 1865. London: John Churchill and Sons.

Dictionary of Chemistry. Parts XXVII. and XXVIII.—Nitrogen—Oleic Acid—Osmiridium. Longmans.

Dictionary of Science, Literature, and Art. Part III.—Cogs—Drift. Longmans.

Edinburgh Medical Journal. July, 1865. Edinburgh: Oliver and Boyd.

*** A highly interesting clinical lecture on pneumonia delivered fifty three years ago by Dr. Rutherford. Articles on "Deformity of Human Cranium," by W. Turner, M.B.; on "Acupressure," by Dr. P. Heron Watson; and of a "Roseoloid Exanthem," by Mr. Welch, of the 22nd Regiment.

The Declaration of Students of the Natural and Physical Sciences. London: Simpkin and Co.

*** Intended to protect religion from what (we think falsely) are supposed to be encroachments of science.

On Changes of Air in the Prevention and Cure of Pulmonary Phthisis. By John C. Thorowgood, M.D. Second Edition. London: H. K. Lewis.

*** Very useful: the author is in favour of a bracing climate.

The Westminster Review. July. London: Trubner and Co.

*** Contains a continuation of the analysis of Comte, and a very interesting review of Herbert Spencer's "Biology."

Calendar of Queen's University and College, Kingston, Canada. Session 1865-66.

*** Seems to have facilities for cheap and complete education.

Lectures on the Diseases of Infancy and Childhood. By Charles West, M.D. Fifth Edition. London: Longman and Co.

Annual Report of the York Lunatic Asylum for 1865.

A Dictionary of Chemistry and the Allied Branches of other Sciences. Part 28. By Henry Watt, B.A., F.C.S. London: Longman and Co.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 8, 1865.

BIRTHS.

Births of Boys, 1005; Girls, 988; Total, 1993.
Average of 10 corresponding weeks, 1855-64, 1660·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	810	726	1536
Average of the ten years 1855-64	571·0	522·4	1093·4
Average corrected to increased population..	..	..	1202
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	..	11	4	..	9	4	54
North ..	618,210	4	2	11	1	16	8	104
Central ..	378,058	1	1	7	..	8	8	34
East ..	571,158	1	1	8	2	13	24	57
South ..	773,175	4	9	10	2	9	15	52
Total ..	2,803,989	10	24	40	5	55	59	301

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·792 in.
Mean temperature	66·1
Highest point of thermometer	84·2
Lowest point of thermometer	48·9
Mean dew-point temperature	54·7
General direction of wind	S.W.
Whole amount of rain in the week	0·89 in.

APPOINTMENTS FOR THE WEEK.

July 15. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

17. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

18. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

19. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

20. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

21. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LECTURES ON CHEMICAL AND MECHANICAL DISEASES AND THEIR RELATIONSHIP.

By H. BENCE JONES, A.M., M.D., F.R.S.

Lecture VI.

DISEASES OF SUBOXIDATION.—ON XANTHIN AND CYSTIN.

(Continued from page 30.)

On the Complications of Cystin Diathesis with Other Disorders.

All the usual deposits in the urine may occur when cystin is present there, and the examination of calculi shows that phosphates, oxalates, and urates may co-exist with cystin. In other words, the cystin diathesis does not render the simultaneous formation of other products of suboxidation impossible.

When the bladder becomes diseased, mixed phosphates may be deposited with the cystin, as in a large cystin calculus in St. Bartholomew's; and the larger the stone, the more likely the bladder is to become affected. In the large stone—two and a-half inches long by one and three-quarter inch broad—in the museum of University College, phosphate of lime only exists, showing that the urine was nearly neutral, but that the bladder was not diseased.(a) Oxalates with the cystin may be found on examination of the urine by the microscope, although I do not recollect any mixed calculus of cystin and oxalate of lime.

A young man, about 25, had been troubled with gravel when ten years old, for which he was attended by Dr. Prout for three years; he remained tolerably well, though delicate, until three months before I saw him, when, with great suffering, he passed a cystic oxide calculus. He was also troubled with nocturnal emissions, and the urine on examination contained cystin with crystals of oxalate of lime; it was feebly acid, pale, and of low specific gravity.

How different the accompanying deposits and state of the urine may be is well seen in the following case:—In a middle-aged lady the urine was highly acid, and thick from deposition of red urates; specific gravity, 1027·9. When filtered, it was of a bright yellow colour, with a rather peculiar, but not very marked, smell; examined by the microscope, it contained multitudes of small and large cystin crystals, single and in masses, with amorphous urates in very considerable quantity. To the filtered urine, acetic acid was added, and a very plentiful amorphous precipitate fell; on standing, this deposit gave uric acid crystals. The addition of nitric acid to the unconcentrated urine produced crystals of nitrate of urea.

The co-existence of cystin diathesis and granular disease of the kidney is well shown in the following case:—

An Italian courier, aged 45, consulted me November 22, 1848, for hæmorrhage from the kidney for three weeks, which, he said had been stopped by drachm doses of tincture of steel. He said that he had constantly, for twenty years, passed calculi, many at the same time, and that they resembled sugar candy; that he had had frequent attacks of hæmaturia; that he had some pain in the loins, and the small quantity of urine which I could obtain contained many pus globules and much albumen, and was feebly acid to test paper. Specific gravity, 1·023. There was no œdema of the legs. No effusion in the chest; and no signs of disease of the heart. Fourteen months afterwards I again saw him. He was drowsy, and rapidly became comatose, and died January 26, 1850.

The body was well formed, and in good condition. The kidneys only were examined.

On cutting open the left kidney, one large calculus and some smaller pieces were found there; all consisted of cystin. The calculus was not loose in the pelvis, but adhered, requiring to be cut out before it could be removed. The mammary processes of the kidney were absorbed, and the chief part of the cortical structure was much encroached on by the stone. The irregular cavity formed by this dilatation of the pelvis contained some highly offensive purulent fluid. The left ureter appeared to be pervious, though it was thickened, and the lining membrane was inflamed.

The right kidney was very small, being less than one-half its natural size. It was remarkably diminished in thickness. The capsule was firmly adherent, and when removed the cortical substance was very rough with a granular beaded appearance. No urinary cysts were observed in it. On section, the cortical structure was very much wasted, and of a very deep colour. A considerable quantity of fat was surrounding both kidneys, closely adhering to the capsules of the kidneys and to the surrounding tissue. The mucous lining of the bladder near to its neck was somewhat more vascular than natural. No other morbid appearance was observed.

When the cystin diathesis tends to the formation of stone, the mechanical disease in no respect differs from that produced by any other concretion. Though the cystin stone is one of the softest and most elastic of all stones, so much so that a large stone for some days at least after its removal from the bladder is distinctly compressible and elastic between the finger and thumb, yet the mechanical symptoms cystin causes do not appreciably differ from those which the hardest of all stones, oxalate of lime, occasions.

The deposition of cystin calculus can only occur when the urine is neither highly acid nor highly alkaline; and though no instance has as yet been recorded of the solution of a cystin calculus whilst in the bladder, yet if the urine is feebly alkaline, dilute warm hydrochloric acid caused to pass through the bladder by means of a double catheter would rapidly dissolve the stone; or if the urine was over acid a warm dilute solution of carbonate of potass would have very great solvent power on this kind of stone. As phosphates are apt to be precipitated when the stone is large, at first dilute acid should be used; and after some time, when the stone decreases, dilute alkalies should be employed to dissolve the stone by passing in quantity through the bladder.

On the Treatment of Cystin Diathesis.

The conversion of cystin into sulphuric acid, carbonic acid, and urea, though not at present accomplished out of the body, is perhaps one of the constant chemical transformations occurring within. The treatment of this diathesis, like that of all the other diathesis which I have brought before you in this course of lectures, consists in increasing the oxidising action in the body. The indication to be followed is the same as in the treatment of diabetes, oxalic acid, uric acid, and xanthin; but as cystin implies a much greater degree of deficiency of oxidation, so the oxidising treatment must be much more energetically carried out in this than in the other errors arising from suboxidation of the albuminous substances. Perhaps, for comparison, I might say that cystin stands in nearly the same position to the albuminous food that sugar does to the amylaceous food, and that the smallest degree of oxidation of these two classes of food may give rise to two homologous diseases apparently so different as the cystin and saccharine diatheses.

In concluding this first part of my course, let me say that the mutual relationship which I have endeavoured to point out between diabetes, acidity, uric acid, gout, oxalic acid, xanthin, and cystin, and the influence of one and the same cause in their production is so startling, and our knowledge of animal chemistry is as yet so incomplete, that I cannot hope to bring conviction quickly to the minds of all; but I am sure that many and great additions will be made to the evidence of suboxidation which I have given you on each of the subjects on which I have dwelt; and if I had taken diseases of the liver and other organs, I might have multiplied greatly the number of diseases that arise in the body from suboxidation.

Whether you adopt my theoretical views or not, you will find a practical gain by endeavouring by food, by air, and by medicine to produce an increase of oxidation in the treatment of these different complaints. In a short time probably much more will be known regarding the action of ozone in the body; and be not of the number of those who think no more of oxidation in health and disease than they are compelled to do by the grand fact that oxygen goes in with the air, and that carbonic acid comes out in the breath as long as the patient lives, and whatever the state of health or of disease may be.

Hitherto the healthy and the morbid structure of the body has formed the chief object of Medical scientific investigation, and the forces which do all the work in these structures have hardly yet got their first fundamental basis fixed in the fact that force, like matter, is indestructible; whilst the inquiry how far the forces of the body proceed from the chemical actions which take place within (instead of being considered as opening a new and a great field for investigation) is denounced almost as a heresy, for which perpetual peroxidation would be too poor a punishment.

(a) See *Medico-Chirurgical Transactions*, 1840, p. 193.

To some of my hearers who hold that in all idiopathic fevers "the nervous system (and particularly the sympathetic and vagus) is paralysed," and that in inflammations the dilatation of the blood-vessels by one-third or more of their diameters depends on a paralysis of the vasomotor nerves, the omission from these lectures of the term nervous force will prove a fatal objection; but my object has been to treat these diseases as chemical questions, in order that it may appear how much and how far chemistry can add to our knowledge of these complaints; but there is in the distance a question which greatly concerns these diseases, and which involves the action of the nervous force, and this, in conclusion, I must shortly bring before you.

On what does the want of oxidation of which I have been speaking depend?

I may state the answer to this question thus:—Suboxidation occurs if the fuel is excessive, if the oxygen is deficient, and lastly if the conditions for the action of the chemical forces in the oxygen and fuel are unfavourable. It is regarding this last determining cause that the question of the action of the nervous force arises.

In the salivary glands the experiments of Ludwig, Bernard, Eckhard, and Schiff show that two kinds of vasomotory nerves exist:—1st, those that close the artery—these proceed from the sympathetic; and 2nd, those that enlarge it—these come partly from the facial and partly from the trigeminal nerve.

When by irritating directly or reflexly the closing nerve little blood passes through the salivary glands, then the production of saliva is at its lowest amount; whilst by irritating directly or reflexly the trigeminus, the blood flows freely through the capillaries, even so as to admit the pulse to be seen in the veins; the venous blood becomes red, and the secretion of saliva is most free.

The capillaries generally throughout the body are subject to the vasomotory action of the sympathetic nerve. When the sympathetic is irritated, the capillaries contract to the uttermost, and the circulation is retarded; and when the sympathetic is paralysed, the capillaries become dilated to the greatest degree possible, and the circulation is accelerated.

Thus this vasomotory action of the nerves affects the passage of the blood in the bloodvessels, and oxidation is promoted or retarded through the circulation.

It may be said that the nervous force, without the intervention of any action on the bloodvessels, can exalt or depress the conditions necessary for oxidation and increase or diminish the oxidising action in the capillaries and in the cells which are nourished by the liquor sanguinous. Without hesitation the vitalist adopts this view. The chemist, on the contrary, will admit it only when animal chemistry is so far advanced that it can be proved that the quantity in which the active substances are supplied, and the rate of removal of the products of the action are clearly insufficient to account for the increased or diminished oxidation which in these different circumstances is found to occur.

Errata, p. 540, vol. i., 1865, On Gout.

But first of the diet:—

Let us suppose that the minimum diet of health may be represented by 10·5 grammes (162 grains) of soluble nitrogen, and 240 grammes (3696 grains = 8 ounces nearly) of soluble carbon—

If 1 ounce of meat when cooked contains 77 grains of nitrogen and 92 grains of carbon; or,

If 1 egg contains 16 grains of nitrogen and 118 grains of carbon,

And 1 ounce of butter contains 355 grains of carbon,

And 5 ounces of dry bread contain 38 grains of nitrogen and 592 grains of carbon,

And 21 ounces of arrowroot contain 3633 grains of carbon,

Then it is easy to see that 2 ounces of dry meat, and 2 eggs, and 14 ounces of bread will give more nitrogen than the system requires to repair ordinary losses, and the excess may have to be thrown out, partly in the form of urates, when the oxidation is insufficient to produce urea.

If 2 ounces of dry meat or 2 eggs only are taken, about 10 ounces of butter would be necessary to furnish the fuel and power for the system, or an equivalent quantity of fat must be absorbed from the stores deposited in the cellular tissue. Or, if 5 ounces of dry bread only were eaten, then above 9 ounces of fat must be taken up in twenty-four hours; but a diet of 2 ounces of dry meat, and 2 eggs, and 5 ounces of bread, requiring the wasting of the body by 7 or 8 ounces of fat daily, could not long be endured. Moreover, these quantities of nitrogenous food produce more uric acid than a less nitrogenous diet would do.

If a little more than 21 ounces of dry arrowroot were taken daily, this would supply more carbon than is lost in the daily oxidation. The excess of carbon must either be deposited as fat, or must take away the oxygen, so as to leave none free to act on the nitrogenous substance that is passing out from the albuminous textures. Hence, with carbonaceous diet in excess, the whole of the uric acid from the tissues might pass off through the blood unoxidised.

It follows, then, that in gout a minimum of albuminous food should be taken in order to produce the least uric acid; and a minimum of carbonaceous food in order to allow the uric acid to be oxidised as much as possible.

If a pint of ordinary beef-tea, free from fat, contains 46 grains of nitrogen and 160 grains of carbon, and if an ounce of dry arrowroot contains 175 grains of carbon, then 3¼ pints of beef tea and 18 ounces of arrowroot will contain the full amount of elements that are required even in health for the system, and far less than this would be desirable when the minimum production of urates is required.

ORIGINAL COMMUNICATIONS.

ON THE DANGER OF ADMINISTERING CHLOROFORM IN CERTAIN CASES OF ENLARGED TONSILS.

By WILLIAM J. SMITH, M.B. Lond.,
Surgeon to the Islington Dispensary.

When the capacity of the chest is increased by the action of the inspiratory muscles, air of necessity enters by any opening or openings which are at the time patent, and in the double entrance to the lungs we have an illustration of the great principle of compensation by which Nature adapts herself to casual difficulties in the performance of her functions. Under ordinary circumstances respiration may be carried on through the nose and mouth simultaneously, or through either of these passages exclusively. When there is *no* obstruction in the nose, air may be made to pass entirely through the mouth during both inspiration and expiration if the soft palate is raised and kept applied to the posterior wall of the pharynx. *Exclusive* nasal respiration occurs not only when the mouth is closed, but even when the latter is widely open, supposing that the root of the tongue and the soft palate are in coaptation. Of the readiness with which the passage through the mouth is intercepted by apposition of the tongue and velum, any one may easily convince himself by closing the anterior nares and endeavouring to expire through the nose, when even though the mouth is kept open, no air escapes; but that in the nasal passages is compressed, and the palate is applied to the root of the tongue with a force proportioned to the strength of the expiratory effort; again, when the mouth is nearly closed, there may be sufficient space between the tongue and palate, to enable oral respiration to be carried on with perfect freedom, so that the degree of patency of the mouth is no criterion of the readiness with which air enters the lungs by this channel. When awake and in health we can voluntarily determine by which of these passages air shall enter, but in comatose conditions such is not the case, and obstruction of the nose may then prove a matter of considerable importance. During sleep respiration is sometimes carried on through the nose and mouth at the same time; at others, through the nose only. Under the latter circumstances if the anterior nares are quietly pinched together the patient either wakes or is somewhat roused and opens the mouth. In artificial plugging, and in some diseases of the nose, no air can possibly enter by this source, and yet such persons respire safely during sleep, so that there is an adaptive automatic arrangement of the mouth and tongue which takes place like the movements of respiration during the unconsciousness of sleep; in the insensibility of disease this does not always occur, as is shown by the following case, for an acquaintance with which I am indebted to the kindness and courtesy of my friend Mr. Roberts. A woman, aged 60, was brought into St. Pancras Infirmary in a state of coma, dependent on cerebral hæmorrhage. The mouth was quite closed, and considerable force was required to depress the lower jaw; the pulse was feeble, and after attentive examination no paralysis could be detected. She could be sufficiently

roused from her comatose state to reply when asked her name, but answered no other questions. On pinching together the anterior nares respiratory efforts were made, but no air entering the chest the uneasiness occasioned roused the patient pro tem. and the mouth was opened; after a very short time, however, she relapsed into her previous state of insensibility, and the mouth was shut, so that, though the muscular action continued, no air gained admission, the cheeks sank in during inspiration and lividity occurred. This experiment was repeated several times, and continued long enough to convince me that fatal apnœa would have occurred had the nasal obstruction not been removed. But the following question at once suggests itself: Would not relaxation of the muscles which kept the lower jaw so firmly applied to the upper have necessarily occurred prior to death, and at a stage which, though it would be unwise to induce by experiment, might nevertheless be recovered from?

The following case, witnessed by me, will, I think, justify an answer in the negative. A gentleman who was administering chloroform to a patient during amputation of the breast, through his anxiety to see the operation, gave so much of the anæsthetic that the woman was suddenly discovered to be almost dead, the respirations being reduced to about five or six per minute, and the radial pulse being imperceptible. The Surgeon, on endeavouring to open the mouth in order to give brandy, found the jaws so firmly closed that great effort was required to separate them.

What would have been the probable result had there been nasal obstruction in such a case? Not even temporary opening of the mouth could be expected, for the insensibility was too profound for the patient to be roused, as in the former instance, by the feeling of the necessity to breathe, while in such a condition the complete withdrawal of air for even a short time must have proved fatal. The firm closure of the mouth was in this case the more remarkable because of the complete relaxation of the muscles of the limbs. Enlarged tonsils occasionally obstruct nasal respiration as completely as plugging of the nares, and of several such cases which have come under my notice I will relate two.

A girl, aged 13, was brought to me at the Metropolitan Dispensary, complaing of weakness; no reference was made to the throat; and on inquiry it was described by the patient and her mother as "quite well." On examination, however, I found the tonsils very large, and both inspiration and expiration impossible when the lips were kept closely together.

Cases of this kind are not common, for when nasal respiration is quite stopped there is generally something superadded to the chronic enlargement of the tonsils, such as inflammation of the Schneiderian mucous membrane (which, by the thickening and discharge, blocks up the nasal passages), or more or less acute inflammation of the tonsils themselves, as in the case of a boy, aged 11, whose mother consulted me at the Eastern Dispensary on the propriety of removing the tonsils, which, having been large for several years, were liable to a temporary increase in size from attacks of inflammation when the child "got cold." When first seen by me the pain on swallowing had subsided, but the mucous membrane of the fauces was still red and nasal respiration impossible. At the end of a fortnight, the voice having improved in tone, and the tonsils lessened in size, inspiration and expiration could be performed *per nares*, though not without a feeling of uneasiness, and the latter, as is usual in such cases, with less effort than the former.

If in instances like these chloroform is given without a watchful attention to the position of the mouth and tongue, the patient is exposed to great danger, for should the mouth be kept closed, as is not uncommonly the case, asphyxia must of necessity result. It is true that before the insensibility has reached a certain stage of intensity, the non-aërated condition of the blood creates a feeling of discomfort, which prompts to the opening of the mouth, but, that done, more chloroform is inhaled, the coma becomes profound, the mouth closes, and suffocation ensues.

Of the several plans of treatment adopted in cases of suspended animation from the inhalation of chloroform, there is one which consists in simply opening the mouth and pulling the tongue forwards, recommended, I think, on the supposition that the asphyxia is occasioned by retraction of the tongue, and consequent occlusion of the glottis. Is it not more likely that, when such treatment has been of real efficacy, nasal obstruction has existed?

In the cases of which I am treating, chloroform may be given, but care must be taken not only that the mouth is open, but that a space exists between the tongue and soft palate, the former, if necessary, being depressed by the finger or carried forwards out of the mouth. When the true state of things has been overlooked, and death is imminent, the treatment to be adopted is that for suffocation, for it is to asphyxia proper, and not to poisoning by chloroform, that the symptoms are due; it being, of course, useless to employ any of the modes of artificial respiration, unless there exists a passage to the lungs through either nose or mouth. Though I have referred to this subject in connexion with enlargement of the tonsils, it is obvious that any of the several diseases which occasion obstruction of the nose may, under similar circumstances, produce equally disastrous results. Moreover, in insensibility from other causes than the inhalation of chloroform these same diseases may prove fatal through the lack of that instinctive, or rather purposive, arrangement of the jaw and tongue, by which alone the mouth can be rendered available for the purpose of respiration.

The object of the above is not to convey the impression that asphyxia will invariably occur under the circumstances in question, for the approximation of the jaws is not constant; but on this subject I hope to renew my remarks at a future time.

Finsbury-place South.

ON THE

RESULTS OF TEMPORARY METALLIC COMPRESSION OF ARTERIES.

By R. LAWSON TAIT,

Honorary President of the Hunterian Medical Society, Edinburgh.

(Continued from page 59.)

The one essential condition for the obliteration of a blood-vessel is accurate coaptation of the walls for a certain period followed by adhesive inflammation. Of this Deschamps writes, "It is this process of adhesive inflammation which Nature by itself alone, or assisted by art, employs for agglutinating and uniting firmly together the two opposite sides of an artery whenever the internal surfaces of those parieties are placed and kept in firm contact by means of some accidental pressure or by a methodical bandaging; and there is no essential difference in the process of adhesion of a wound healing by first intention, or between peritoneal surfaces or layers of serous membranes elsewhere, and the process of the obliteration of an artery." The flat method of compression in acupressure, as it does not injure the internal coat, is not so apt to carry the inflammation beyond the adhesive stage as the bruising and tearing produced by the circular strangulation of a ligature. Manec says in his deductions that obliteration is caused with greater rapidity when the inner and middle coats are divided than when their integrity is preserved; but in opposition to such an authority I can bring others of equal weight. John Hunter, most of whose ideas are still found to be correct, warned Surgeons to avoid injuring any of the coats of an artery, and to this effect advised that the ligature should not be drawn so tight as to cut them; while many of his contemporaries and successors dreaded any such injury so much that they used all sorts of clumsy contrivances to avoid it—such as pads of lint and bits of cork inserted between the artery and ligature. Again, Travers, in his experiments on ligature of arteries, demonstrated that Jones was quite wrong when he insisted that it was necessary to divide the inner coats; and Mr. Dalrymple, of Norwich, proved by his experiments that while simple and continued contact of the parietes of a vessel, without the slightest wound of any of the coats, was sufficient to produce permanent adhesion and obliteration, yet that division of the internal and middle coats without continued co-aptation invariably failed to produce adhesion. Hodgson says that he cannot substantiate Jones's statement that division of the coats is essential, and strongly supports the opinion that co-aptation of the walls without rupture of any of the coats will produce occlusion. The theories of Dr. Jones were strongly supported by Professor Thomson, his teacher, but were as strongly opposed by Sir Philip Crampton, who insisted that the division of the coats not only was unnecessary, but that it frequently defeats its own object—a statement one can readily understand when it is remembered that in certain states of the constitution, if ulceration be once set up in the skin and other tissues, it is not easily checked. Now, if this happens in other textures, it may happen in the walls of arteries; and it certainl

would seem to me to be an improvement in Surgery to put in use some agent for the closure of arteries which would not involve the risk of starting this ulceration. Such an agent, I believe, is to be found in acupressure. The difference between it and the ligature is precisely the difference between metallic and organic sutures, it being a well-known fact that the latter may remain in the tissues a very long time without producing ulceration; while the former set up their seton action in a very short time. Many other authorities could be quoted in support of the views held by Travers, Crampton, etc.; but I think enough has been said on this point.

In most cases where a vessel is obliterated, no matter whether by accident, ligature, or acupressure, the first step towards obliteration is the formation of the conical clot. In an excellent paper written on this subject some years ago by Prof. Spence, he gives as his opinion that the presence of the clot is not essential, and states that it is frequently absent, especially if the obstruction has been applied at a short distance below a large collateral branch. These opinions I have seen confirmed in my experiments; and although I believe the clot when present to be a valuable auxiliary, acting like an elastic buffer in removing the direct application of the force of the blood from the point of agglutination of the walls, also assisting in the after obliteration of the vessel up to the first ramification above the occluded point, yet I think its presence might be dispensed with, as I have seen perfectly good results where it was not present. When the ligature is employed I think the presence of the clot is of more importance than when acupressure is used, as under the former it may serve to diminish the risk of secondary hæmorrhage run by the ulceration consequent on the separation of the ligature, while with acupressure there is no such risk; indeed, this comparative absence of risk of secondary hæmorrhage seems to me to constitute the great superiority of acupressure over all other Surgical hæmostatics.

The time of appearance of the clot after the obstruction of an artery is a point which does not seem to have been satisfactorily determined. Travers seems uncertain of it, and inclined to set it down as occurring much later than I think is probably correct. I have seen a perfect clot five and a half hours after the application of an acupressure needle, but I think it may be formed much earlier than this; indeed, under favourable circumstances I think it may be formed in a few minutes, more especially if the internal coat be divided.

The further process of obliteration after acupressure does not differ from that which is gone through after the ligature, and no better description of that process can be given than that of Roche and Sanson, of which the following is a translation:—

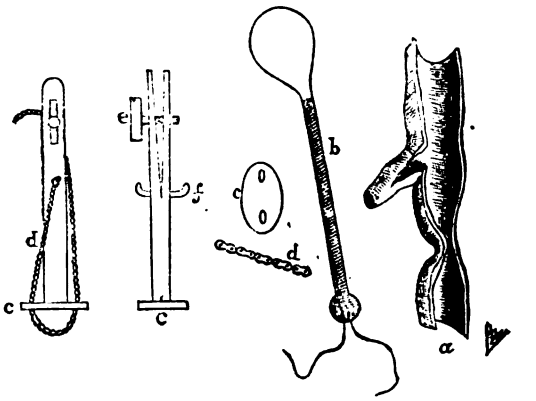
"At the point where the ligature is applied the cavity of the artery represents an inverted cone, the base of which is turned towards the heart, the cavity is filled by a clot of blood which extends from the point of ligature to the nearest collateral branch. The clot gradually becomes more compact and more adherent to the walls of the vessel; and in a period from eight to fifteen days, when the part embraced by the ligature is detached, it is quite sufficiently solid and attached to the walls of the vessels to afford effectual resistance to the force of the blood. By degrees the part of the vessel occupied by the clot becomes gradually diminished in calibre, then becomes a simple cylinder, and ultimately disappears, so as scarcely to be distinguished from the surrounding cellular tissue." The only circumstance omitted to be mentioned is that the clot becomes organised and loses its colouring matter just as the clots do elsewhere.

The adaptation of the principles of temporary metallic compression for the obstruction of arteries in the cure of aneurism would, I think, be an improvement on the present use of the ligature. That the ligature in such operations is not entirely safe on account of the necessarily consequent ulceration, is well known.

Porter, speaking of the separation of the ligature after such operations, says:—"This process takes place at different periods of time, according to the size of the vessel; it separates from the subclavian about the twenty-second day after the operation, from the femoral about the sixteenth, and from the brachial so early as the twelfth or fourteenth. Unfortunately, matters do not always proceed thus favourably, and the separation of the ligature is the commencement of a series of evils to the patient and of embarrassment to the Surgeon that can scarcely be paralleled in the practice of Surgery. It has been found, however, by experience, that a ligature placed on an artery that has been fairly divided is more rarely followed by those ill consequences than when the continuous tube is tied, as in operations for aneurism. . . . ."

Now, it appears to me that it would be much safer could a temporary obstruction be placed upon the artery, which would cause no injury to the coats and no ulceration, and which could be removed at will,—in fact, something to act just like external compression, but more accurate and circumscribed in its application. That none of the present forms of acupressure would safely fulfil these indications seems to me very evident; at least, I think Surgeons would hesitate to thrust needles under textures which they could not be sure of accurately enclosing. No method would, to my mind, be safe which would not require the same careful dissection as does the ligature. Some time ago I saw a contrivance devised, as I understood, by Mr. Aveling, of Sheffield, which, I thought, would have answered the purpose. It is shown at b, Fig. 5. It

Fig. 5.



consists of a piece of wire which would have to be passed round the artery by means of an aneurism-needle, then both ends passed through a fine tube from one to four inches long, made by coiling fine wire round a mandril. This tube has a perforated lead drop at the distal end, by biting which, the wire, after being drawn tight, may be kept so. This instrument I found to be of easy application, but when I came to remove it I had great difficulty in doing so; and besides, it injures the internal coats. To obviate these defects I devised a modification of Deschamps *serre-artere*, represented in Fig. 5. It consists of a slender silver rod one inch and three-quarters long, split at the top, and provided with a pinch-screw (e). Near the middle are two small covered pins (*f*) in the same axis as the pinch-screw. At the bottom is a flat oval button (c), about $\frac{1}{16}$ths of an inch in length, and $\frac{3}{16}$ths in breadth, and provided with two oval apertures; the button represents the needle in the ordinary forms of acupressure, being the means by which the pressure is made flat, a condition which I think is of great importance in retaining the integrity of the coats. The other part of the instrument is a fine steel chain (d), such as is used as the fuse chain in watches, and made just like the chain of an écraseur; it can be had of any thickness, and is very cheap; it must be electro-plated. It is to be passed round the artery by means of an aneurism needle, then the ends passed through the apertures in the button (c) and the end provided with a small hook is to be fixed to one or other of the pins (*f*). The other end is then to be pulled tight and secured in the slit by means of the pinch screw (e). The whole instrument need not weigh fifty grains, and I have found it to be easy of application and as easy of removal, and the chain does not injure the coats. At (a) Fig. 5 is represented a condition where such an instrument would prove serviceable. By removing it at the end of thirty-six or forty-eight hours effectual occlusion of the artery would be obtained, and the risk of secondary hæmorrhage be reduced by a considerable percentage.

Illumination of Paris.—In presenting to the Académie des Sciences the third volume of his edition of the works of Lavoisier, M. Dumas observed that among its contents was a prize essay which had never been published upon the different modes of lighting large cities. In the time of Lavoisier, it seems that Paris was lighted by 6000 candles, and at the present time it has 30,000 jets of gas, which, supposing that each jet only represented twelve candles, would give a total of 360,000 candles.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

TWO CASES OF DISEASE OF THE TARSUS TREATED BY PIROGOFF'S AND SYME'S AMPUTATIONS RESPECTIVELY.

(Under the care of Mr. HENRY SMITH.)

The subjoined cases may well be compared together, as, although the foot was removed in each for extensive disease of the tarsal bones, in the first case the ankle-joint itself was chiefly involved, and accordingly the operation of Pirogoff, which is in all respects superior to that of Syme as a conservative measure, could be adopted; whereas, in the second case, the disease had chiefly attacked the astragalus and body of the os calcis, so that amputation of the entire foot at the ankle-joint was of necessity put in force. The rapid recovery in each instance is worthy of notice. This fact was due in a great measure to the age of the patients, as well as to the circumstance of the disease being produced by a local cause.

PIROGOFF'S AMPUTATION FOR DISEASE OF TARSUS—RECOVERY.

J. W., aged 26, admitted July 27, 1863, with extensive disease of the right ankle-joint. Last October he had a kick from a horse on the joint. It was not very bad at first, and he could go about his work till March, 1863. His ankle then became very much swelled, and too painful for him to do his work. He was admitted into the Hospital at Woolwich, where incisions were made into the joint.

On admission, the ankle-joint was very much swollen and inflamed; there were several sinuses leading into the joint. Mr. Smith, while making an examination, passed a probe right through the joint. There was no anchylosis; but when the foot was extended a grating sound was heard, as though the articulation was bare.

August 8.—Chloroform having been administered, Mr. Smith made a lunated incision across the foot, from one malleolus to the other; below the foot a similar incision was then made, over the dorsum, and, the flaps having been dissected back, the ankle-joint was opened in front, and the saw being applied through the os calcis, the foot was removed, and the malleoli were subsequently sawn through and the cut surfaces brought into apposition. The flaps were next brought together by sutures and strapping, and water dressings applied.

10th.—Pulse 100; tongue red, particularly at the edges; says that he is very comfortable; wound looking very healthy.

12th.—Pulse 108; good deal of pain in stump; stitches taken out.

17th.—Pulse 89; tongue clean; going on well.

21st.—Wound healing well; stump well shaped; lotio rubra.

September 28.—Wound quite healed, with the exception of a small place on either side. He can bear nearly the whole weight of his body on the stump. Discharged cured and in excellent health.

This man presented himself at the Hospital in March of this year. He had an apparatus fitted on to his leg, and he could move about nearly as well as though nothing had been done.

EXTENSIVE DISEASE OF TARSUS—AMPUTATION OF FOOT BY SYME'S METHOD—RECOVERY.

T. W., aged 21, strumous, admitted September 1 with disease of the os calcis. Eleven months ago he sprained his ankle, which soon became very much swollen, and abscesses formed, leaving sinuses. He was admitted into the Bristol Infirmary, where a sinus behind the inner malleolus was laid open, and some pieces of dead bone removed. After this operation an abscess formed behind the external malleolus, which was opened. He left the Hospital for a few weeks, and was then re-admitted with sinuses on each side of the joint; and some more dead bone was removed from them.

On September 4, after a short stay at the seaside for his health, he was admitted, under Mr. Smith, at King's College Hospital.

On admission, there was a sinus on each side of the joint between the malleoli and tendo Achillis; great swelling behind and below the joint. The movements of the joint did not seem much impaired. On passing a probe through the sinuses, dead bone could be felt in the os calcis.

On October 1, Mr. Smith enlarged the opening on the inner side, and scooped away a considerable amount of dead bone from the os calcis and astragalus.

5th.—Doing very well. Wound stuffed with lint steeped in myrrh lotion.

11th.—Wound on outer side nearly healed; inner wound granulating freely. Dressed as before.

24th.—A close-fitting gutta-percha splint was applied to each side of the foot and leg; and he was discharged relieved.

On April 26, 1865, he was re-admitted under Mr. Smith, with large fistulous openings communicating with the articulation, and discharging freely. On examination, it was found that almost the whole of the os calcis was diseased, and also the lower surface of the astragalus.

May 24.—Chloroform having been administered, Mr. Smith performed Syme's amputation, by laying open the ankle-joint in front and dissecting out the os calcis. The ends of the malleoli were sawn off smoothly, and the wound closed by sutures.

The stump healed very rapidly, and he had not a bad symptom of any kind, and the bearing pad for the weight of the body was excellent, and there had been no loss of integument. He was discharged perfectly well June 21, 1865.

REMOVAL OF THE ENTIRE SCAPULA FOR MALIGNANT DISEASE—CASE NOW UNDER TREATMENT.

(Under the care of Mr. FERGUSSON.)

In the *Medical Times*, No. 750, p. 62, we recorded the case of a young woman from whom the greater portion of the scapula was removed for a fibroid growth (which growth has since returned, and is increasing rapidly in size). In the present case the whole of the scapula was removed, the tumour in this instance being medullary and of unusually rapid growth.

S. H., aged 25, a very healthy looking young man, had noticed the present tumour for six weeks only, and it had been growing very rapidly up to the present time. It caused him no pain whatever, and the motions of the joint were not in any way affected. He complained that he felt a sense of numbness in his arm and hand owing to the pressure of the tumour upon the nerves in the axilla. The integuments covering the tumour were not affected, and were freely moveable over it.

The patient being placed under chloroform, Mr. Fergusson first made an incision over the neck of the acromion process at right angles to it. The bone being exposed, a small saw was introduced and the process detached. An incision was then made along the spinous process, and a third almost at right angles with this along the posterior border of the scapula. The flaps included by these incisions were next reflected, and the tumour was exposed, the muscles covering it being implicated in the disease in a great measure. Mr. Fergusson next seized the spinous process with the "lion forceps," and lifted up the mass in order to expose and cut through the capsular ligament of the joint. When this had been effected, the forceps were applied to the axillary border of the bone, and it was thus lifted from off the walls of the chest, and the muscles cut through. A considerable amount of hæmorrhage occurred at this part of the operation, owing to the division of the subscapular and dorsalis scapulæ arteries. The mass was still firmly held by the muscles attached to the coracoid process; these and the coraco-clavicular ligaments were divided, and the diseased scapula was removed. The articulation was perfectly healthy. The bleeding vessels were tied, the flaps brought together by sutures, strapping and a large pad placed over the wound, and the patient removed to bed.

In some after remarks, Mr. Fergusson said that he had left the small portion of the acromion as an attachment for the deltoid and trapezius muscles, and that the spinous process being thus divided more room was given for manipulation and for command over the scapula during the operation. He had, moreover, left the attached muscles as entire as possible, and not cut them short round the joint. By the use of the forceps, first on the spinous process and afterwards on its external border, a great amount of purchase was exercised on the scapula, and the tissues were thus put upon the stretch, and their division more easily effected.

The tumour involved the dorsum, lower part of spine, and under surface of the body of the scapula, the bone being completely perforated by the growth, the subscapularis muscle

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being a mass of medullary cancer; it was a process from this that caused the pressure on the axillary nerves.

Up till the present time (July 14) the patient has been doing well, and the wound nearly healed.

We shall give particulars of the progress of this case.

TUBERCULAR DISEASE OF BRONCHIAL GLANDS —PERFORATION OF AORTA.

(Under the care of Dr. JOHNSON.)

[Reported by R. C. Powles, House-Physician.]

J. W., aged 31, admitted in King's College Hospital, under care of Dr. Johnson, on June 27, 1865, with hæmatemesis. Had vomited a large quantity of dark blood immediately before admission; continued to bring up large clots of blood; was treated for hæmatemesis with ice and turpentine; died twelve hours after admission, having passed a large quantity of blood per rectum shortly before death.

Of his previous history little could be obtained. He had suffered for a long time with a bad cough; had at times spat up phlegm streaked with blood, and had suffered from much pain in the region of the stomach.

Post-Mortem Examination Thirteen Hours After Death.—Head not examined. Thorax: Lungs very emphysematous; some puckering of left apex, and hypostatic congestion of left base. Bronchial glands very large; several as large as a French walnut; on section white; consistence soft; under microscope irregularly-shaped granules and oil globules; in front of the trachea a large mass of calcareous matter. Œsophagus, at a point about opposite the sixth dorsal vertebra, was much diseased, the mucous membrane being much thickened and ulcerated. The œsophagus at this point was adherent to the aorta, apparently from a gland in this situation having undergone softening and suppuration. At this spot was an aperture about the size of a crow-quill, forming a communication between the œsophagus and aorta. There was no disease of the coats of the aorta. The other viscera were healthy.

MIDDLESEX HOSPITAL.

CLINICAL REMARKS ON THE PRESENT EPIDEMIC OF DIARRHŒA.

(Cases under the care of Dr. GREENHOW.)

Dr. Greenhow said that he regarded the existing prevalent diarrhœal disease as due to the great heat, drought, and exceptional character of the present season, which, in several respects, resembled that of former years, in which diarrhœa or cholera had been epidemic. He was not prepared to pronounce decisively how excessive heat produced an epidemic of diarrhœa, but of the fact that it did so there could be no question, diarrhœal disease being much more prevalent in hotter than in colder climates, and in hotter than in colder seasons. He had himself, from the character of the early part of the present season, expressed his expectation of the occurrence of a considerable epidemic of diarrhœa during the autumn, and his anticipations had been so far verified by the event at an unusually early period of the year, for the mortality from this disease during the past week had been greater than during any corresponding week of the last twelve years; more than double that which took place during the corresponding weeks of any one of the years 1857, 1858, and 1859, when diarrhœa also caused a very large mortality; and more than five times as great as that during the same week of either of the years 1853 and 1854, in which the last epidemic of cholera occurred. This excess of mortality from diarrhœa several weeks earlier in the season than usual obviously corresponded to the unusual heat of the spring and early summer of the present year, and it seemed to him only too probable that, unless a considerable change should take place in what had been aptly termed the constitution of the year, the existing prevalence of diarrhœa might be only the beginning of a very serious epidemic of this disease, or possibly, even, of cholera. He remembered a similar observation made some years since by Mr. Thorn, an Indian Surgeon of great experience, who had devoted special attention to the influence of season and weather in the causation of disease. Writing at Kurrachee (Scinde), in the autumn of 1846, Mr. Thorn said that, observing from the weekly report on the meteorology of London published in the *Medical Gazette* that the season there as well as in India was an unusually hot one, he should expect to hear in consequence of an unusual prevalence of diarrhœa in London during the autumn. The correctness of this prediction was strikingly proved, for at the very time it was made diarrhœa was prevailing extensively in London, and actually caused in that year a much larger mortality than during any previous year since the commencement of the present more accurate system of registering the causes of death.

Autumnal diarrhœa had been often ascribed to errors of dict or to checked perspiration. Doubless errors of diet were often the immediate exciting causes of such attacks, especially during an epidemic period, but they could not be the only or even the principal causes of the disease, or it would prevail more equally during the autumnal seasons of different years. Neither could checked perspiration be a general cause of epidemic diarrhœa, inasmuch as the prevalence of this disease waxed and waned with the rise and fall of the thermometer, was greatest when a high atmospheric temperature was associated with deficiency of atmospheric movement and with a high reading of the barometer, and was diminished instead of being aggravated by any fall of temperature. Whether, on the other hand, heat alone could produce an epidemic of diarrhœa might be a question; he himself believed that whenever the intensity of this disease was great a miasm arising from the decomposition of certain animal matters by heat was the chief cause. Whether this decomposition could proceed in water as well as in air, he had not yet been able to satisfy himself; but he had had positive proof that water could absorb the miasm, and thus frequently become the means of introducing it into the system.

In the cases of diarrhœa which he had lately seen, and especially in those among children, the purging had for the most part been profuse, watery, and attended by much prostration. The pallor and anæmia which ensued even after a brief attack were indeed very remarkable. He had seen no case as yet this season to which the term malignant or Asiatic cholera could properly be applied; but in a few instances there had been vomiting and cramps, and the cases resembled what was called by Sydenham cholera morbus, and had since been termed summer cholera. Generally, the diarrhœa had been unattended by pain; but there had also come under his care a few cases of dysenteric character—that is to say, of diarrhœa attended by tormina and tenesmus, in which the stools were mixed with mucus, and in a few instances with blood.

As regarded treatment, his usual course in the severer cases among adults was to give a mild mercurial, such as two grains of calomel or four grains of grey powder with one of opium at bed-time, following it up with a dose of castor oil next morning. Meantime, by way of allaying the purging and the sickness, if present, he gave at intervals of three or four hours a draught consisting of an ounce and a-half of lime water with ten grains each of nitrate of bismuth and carbonate of magnesia and twenty drops of aromatic spirits of ammonia. Under this treatment the diarrhœa usually disappeared rapidly; but the patients remaining anæmic, and sometimes dyspeptic, he was in the habit of prescribing a warm vegetable bitter, such as infusion of gentian or chyretta with compound tincture of cardamoms, in combination with either nitro-hydrochloric acid or bicarbonate of potash, according to circumstances, to be taken two or three times a-day until convalescence should be established. He objected to the use of chalk mixture and of powerful astringents in these cases, although it was true that they often speedily checked the diarrhœa, because he had found the complaint more apt to recur and to be followed by an intractable form of dyspepsia after the use of these remedies than in cases which had been treated in the manner he had described. He had also found diluted sulphuric acid, which was so much recommended for epidemic diarrhœa, less efficacious than the before-mentioned remedies, and moreover objectionable on the score that, even when given in combination with opium, it frequently caused griping pains. When the diarrhœa assumed a dysenteric character, he had adopted with success the same general plan of treatment, but had found it necessary to repeat the mercurial and castor oil doses for two or three successive days. In cases in which this form of the disease proved obstinate, he had substituted for the lime water draught the nitrate of bismuth with small doses of morphia in the form of pills with the most satisfactory results. In all cases he had directed a rigid adherence to a milk and farinaceous diet during the continuance of the diarrhœa.

CASE OF LITHOTOMY—A VERY ROUGH OXALATE OF LIME CALCULUS.

(Under the care of Mr. HULKE.)

This case is interesting on account of the unusual roughness

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of the stone and the shortness of the period—only a few weeks—during which the symptoms had been noticed, though, from its size, the stone must have been forming much longer.

A boy, aged 11, with a thick complexion, a dull manner, and somewhat deaf, was admitted into Percy Ward November 21, 1864. His urine was thick, and sometimes bloody. He had great pain at the end of the penis, was obliged to micturate very frequently, and the stream was sometimes interrupted. On sounding, a rather large rough stone was felt.

On the 23rd Mr. Hulke removed, by lateral lithotomy, a nearly spherical oxalate of lime calculus about an inch in diameter. It consisted of a small globular central mass, from which very rough coral-like branches radiated in every direction.

He was discharged December 22, with the wound soundly cicatrised.

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Medical Times and Gazette.

SATURDAY, JULY 22.

"COULDN'T HELP IT."

Common sense has established the doctrine that men must answer for their deeds; and this rests on the axiom that they are free to do, or not to do, any given action. Whoever is under the control of influences which he can't resist, can hardly be considered answerable.

Let us say, in passing, that the doctrine of Mesmerism, if it could have been made good, would have gone a great way towards abolishing any notion of responsibility. If one human being by an effort of his will, which is said to be the essence of Mesmerism, could cause another to feel, talk, think, and do as he chose, any person might plead this kind of force from without, in excuse for any crime whatever. We are not arguing for or against the truth of Mesmerism, but merely stating what must be accepted as an inevitable consequence, if it be true.

Putting this aside, the influences which impel man to wrong are part of himself. The impulse to acquire property, to defend himself from violence, to revenge himself on any one who injures him, and to gratify his animal appetites are conditions of which every man is conscious; whilst he cannot help finding out for himself, even if he have no instruction in morality, that he must keep them in check, and have some regard to the equal rights of others, if he would escape getting knocked on the head. Moreover, common experience shows that a man who knows that he shall be knocked on the head if he does a given thing, usually does not do it.

All this is so true as to be truism. Man has passions, but has the power to control them. The teaching of morality consists in developing this power, and enforcing the duty of exercising it. That this exercise requires effort, is palpable from every one's self-consciousness, no less than from the names that have been given to it: as *virtue, i.e., manhood*, or *ghostly strength* (we quote from the Bible). Like all other forms of strength, it is increased by the habit of exercising it, and decreased by indulgence. This, too, is perfectly clear to any one who has ever attended to what passes within himself. The common instinct of mankind, too, teaches us to honour a man who has this strength, because we feel that it cannot have been obtained without the merit of struggle and self-denial. Common instinct leads us equally to despise a man who is weak, because weakness comes from selfish indulgence.

Mankind, at large, then, is quite justified in asserting that any man can keep himself from doing a given act if he takes the trouble. And if any criminal raise the plea "I could not help it, and, therefore, am not answerable," the burden of proving this rests upon him.

Some cases there are in which this plea is accepted. For example, where a man slays another in a sudden gust of passion in the effort to resist an outrage. It is also accepted in the case of insanity.

With regard to the last plea, the sane part of society justly refuses to accept the atrocity of any act, or apparent want of motive, as a proof of insanity. Any sane man, if he give the rein to his temper and passions, may do a mad act; but every mad act is not the work of a madman. Show us that a man is mad, and we will let him off; but this must be made clear by collateral testimony, and not by begging the question.

But with regard to strong passions, and more especially those of the selfish kind, such as love, jealousy, hate, and the like, let them be as strong as they may, society is justified in insisting that they are to be controlled, and in refusing to accept them as proof that a man "could not help it."

If they were to be so taken, where are we to stop? Could Pritchard help debauching his maidservants and poisoning his wife? Very likely not. So if a man were had up for furious driving along Piccadilly he might plead that he could not stop his horses and prevent them from killing the passengers. The answer would be that he ought to have held the reins tightly at first, and not have let his horses get into a gallop.

But there is a kind of unctuously sentimental philosophy afloat, according to which young women about the age of puberty "cannot help" committing any wildly wicked and extravagantly cruel act that may enter their imaginations. We are told that chaste and delicate young women, suffering under a disturbance of natural functions, have become delirious and uttered obscene expressions—a curious argument to prove that a young woman who is not delirious is irresponsible for any mad act she may do. We are also told that a "bewildering sense of the new existence" of womanhood may impel young girls irresistibly to the most fiendish acts. In fact, we are taught, first, that young women near puberty, as a rule, are subject to the most fiendish, cruel, and abominable imaginings and impulses; and, secondly, that these impulses are irresistible, and themselves not answerable for anything they may do in consequence. We deny this doctrine as contrary to physiology and to morals; and affirm the contrary doctrine of the power and duty of self-control, without which civilised society could not exist.

First, with regard to the alleged insane imaginings or impulses. If these are to be held an excuse for crime, no family can be safe. There is not the least doubt but that the wildest and most chimerical imaginings and the strongest passions do exist in every child's mind. A child's mind is a compound of passion and imagination. The former is, or ought to be checked by the earliest training; the latter is fed. Ghosts, fairies, ogres, giants, necromancers, tales of wonder, all that can excite imagination is naturally sought and greedily devoured. The love of the romantic and sensational in one girl may ally itself with notions of beneficence and self-sacrificing love; in another with dark revenge or cruelty. This depends on temperament. One girl's dreams may picture her to herself as sacrificing herself in devotion to a man whom she fancies she loves; another in exacting a terrible and unheard-of revenge on some one who, as she fancies, has injured her. The question is, shall the existence of such imaginings and the accompanying impulse be accepted as an excuse for any deeds that may follow?

In the name of all that is sacred and manly and stedfast, and on behalf of the sober and innocent part of the population, we admit no such plea as "couldn't help it." Exuberant imagination, love of the horrible, and impulse to revenge must be checked at any cost. Self-control must be upheld as the most sacred of duties, whether as to thought, word, or deed. With regard to the case of the unhappy Constance Kent, we do not assume her guilt; guilty or no, we think the days of capital punishment for women are gone by, and we are ready enough to consider the extenuating circumstances of hereditary weakness, bad education, and bad example. Yet, for all this, the law of self-control must be upheld, and persons of even the strongest and wildest imaginations and passions must not for an instant be let think that they are to be held excused from the consequences of their own moral negligence or weakness.

DR. PATERSON'S DEFENCE.

We publish elsewhere a letter written by Dr. Paterson to the *Glasgow Daily Herald* in defence of his conduct in the case of Mrs. Pritchard, and of the evidence which he gave at the trial of her poisoner. We hoped to have been spared the disagreeable task of referring again to the manner in which Dr. Paterson played his part in the scenes of the awful tragedy which has occupied the public attention during the past fortnight. We should have been happy could we have withdrawn the censure on Dr. Paterson's conduct which we have deemed it our duty to pass. We have read Dr. Paterson's defence with great attention, and we are sorry to avow that it has in no degree altered our opinion on the matter in question. The Profession of Medicine is a high and noble one, because the individuals who compose it undertake most grave and weighty responsibilities. When a member of the Profession openly shrank from those responsibilities, and paused through timidity or caution in the clear path of his duty, seeking then to shield himself under an appeal to the etiquette of his calling,—that unwritten but well understood law of courtesy amongst Medical men, which is based solely on the great purpose for which the Profession exists, the welfare of those committed to their care,—we could not permit such conduct to pass unnoticed, and as little can we admit the validity of a defence such as that with which Dr. Paterson has appealed to the public.

Dr. Paterson seems to consider that having written to the Registrar refusing to certify the cause of Mrs. Taylor's death, he had done all that in him lay to save Mrs. Pritchard's life. We can only say that we think Dr. Paterson must have given the Registrar considerable credit for sagacity and perspicacity. What single word was there in his letter which could have roused the suspicions of that functionary that another woman in the same house was dying under the effects of a particular poison which Dr. Paterson asserts he recognised? Dr. Paterson told the Registrar that he had seen Mrs. Taylor for only a few minutes a very short period before her death, that she seemed to be under some narcotic, and that her death was sudden, unexpected, and to him mysterious. This, no doubt, was sufficient to awaken the attention of the Registrar, but how it could be expected with any certainty to save Mrs. Pritchard's life, we are at a loss to understand. Dr. Paterson swore that he recognised antimonial poisoning in Mrs. Pritchard; he knew that if her life was to be saved the nefarious process must be at once and for ever arrested; and yet he trusted to the slender thread of probability that the Registrar would be influenced by his suspicions; that he would refuse the certificate which Dr. Paterson stated in his letter Dr. Pritchard might give, and which, in fact, he did give; that a post-mortem examination and chemical analysis would be the result; and that as a collateral effect the poisoner would be scared from his purpose. The value of a human life was thus gaged on the flimsiest tissue of possibilities, none of which came to pass; and this was the only effort made by Dr. Paterson. Knowing that Mrs. Taylor was quietly buried, that the process of antimonial poisoning in Mrs. Pritchard had been, and probably was, going on steadily and surely, he folded his hands and remained an impassive and silent spectator, paralysed and spell bound by personal fears and—"the etiquette of the Profession."

The second part of Dr. Paterson's defence might raise a smile of pity and contempt, were not the whole matter of so serious a nature. Is, then, the jealousy between the Universities of Edinburgh and Glasgow so dominant a passion in the minds of their respective graduates that it can be supposed to render them blind to the plain clinical facts which Dr. Paterson tells us he recognised, and deaf to the dictates, not only of relationship, but of the commonest humanity? A defence must indeed be forlorn which requires to be supported by such an inconceivable assumption. We can scarcely trust ourselves to express the indignation which we feel when such a charge is made against Medical men of high character and probity. We simply dismiss it as being as unworthy of refutation as it is damaging to its inventor.

There were at least two courses open to Dr. Paterson, either of which would in all probability have saved Mrs. Pritchard's life, and would have entitled him to the gratitude of all right thinking men. The extraordinary sagacity which enabled him to recognise antimonial poisoning at a glance seems suddenly and fatally to have failed him, or he must have taken one of them. He might simply have told Dr. Pritchard that there were symptoms in his wife's case which could not be reconciled with the hypothesis of gastric fever or of any known disease, and then have firmly demanded a consultation with Professor Gairdner, to whom in strict Professional confidence he might have stated his suspicions and their grounds. An examination of the urine and other excreta could not have been refused, and the whole case would have been cleared up. Or at his second visit to Mrs. Pritchard he might have mentioned to her his suspicions, obtained from her a portion of urine for analysis, and have insisted either upon her removal or upon her having other attendants and nurses. All this, it must be remembered, might have been done without making the slightest charge against any individual. Once that the proof of poisoning was in his hands in the shape of an antimonial deposit obtained from the urine, it would have been his bounden as well as his perfectly safe duty to give notice of the fact to the authorities. It may be that to have stated his suspicions to Pritchard would have required more courage than Dr. Paterson was possessed of, although we believe that in such a case it would be possible to do this in a manner sufficiently pointed to deter the poisoner, without making any explicit charge. But we do not insist on this plan of action, although even it would be incumbent on a Medical man who saw that he could only by such a course save his patient's life. If necessitated by their duty, any danger, whether to property or person, must be faced by the representatives of Medicine, whether it be the contagion of a fever, the bullet of an enemy, or the chance of a lawsuit. But in this case, as we have shown, courses which involved little or no risk were open to Dr. Paterson, but his caution and respect for "the etiquette of the Profession" prevailed, and Mrs. Pritchard's chance of salvation was allowed to ebb away, whilst the Physician who with such rare and brilliant skill had diagnosed antimonial poisoning made no sign.

We do not know, and we really have little concern who the Professional men may be with whom Dr. Paterson states he consulted on the 3rd of March. Their advice as to the letter to be written to the Registrar was acted upon, and the letter which was sent on the 4th of March failed in its object. On the next day ("On the evening of Sabbath, the 5th,") Pritchard called on Dr. Paterson, and told him that his wife was going on well, and was benefited by his prescription. Dr. Paterson

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then, believing that Mrs. Pritchard was under the influence of poisonous doses of antimony, and that her husband was poisoning her, seems to have been quite as well satisfied to receive that husband's account as he would have been the report of an ordinary Medical attendant whose word was not to be doubted, and congratulated himself "that he had done his duty, as far as he could do with safety or propriety in the circumstances." Mrs. Pritchard died on the 18th of March following, and Dr. Paterson saw her on the evening of the 17th. Meanwhile, from the 5th to the 17th of March he had lived in the same street—195 yards from the house—without the slightest effort to ascertain the real condition of the poisoned woman he had left in the hands of her murderer, and—we have his word for it—his conscience tells him that he has done his duty to the very utmost of his power.

ROUGH NOTES ON SYPHILIS.—No. III.

SECONDARY OR CONSTITUTIONAL SORES UPON THE PENIS.

Of the existence of these we have long been cognizant. They are not commonly mentioned in books, and are very likely to be mistaken for chancres. Not long ago we saw a case in which a large induration formed upon the prepuce, and, ulcerating at the surface, it possessed all the characters of a Hunterian chancre. Yet the patient had been in Hospital for some time under treatment for secondary syphilis, and other indurated tumours appeared in the subcutaneous tissues of other parts contemporaneously.

These *constitutional* lesions may be ranged, according to our experience, in two groups. 1. A dull reddish or purplish spot appears upon the mucous membrane of the penis, the epithelium degenerates and desquamates, the part becomes moister than natural, and a circular or oval patch of "rawness" is left. 2. A circumscribed swelling of the skin or mucous membrane ensues, which rapidly increases until the part becomes elevated into a rounded or oval-shaped tumour of very firm consistence; the surface assumes a red or violet tint, and acquires some elasticity. The indurated mass then softens, its surface inflames and ulcerates, and then you may have all the characters of a primary Hunterian sore mimicked.

The first variety commonly accompanies one of the more superficial cutaneous syphilides (roseola, lepra, etc.), and it is, in all probability, only a part of the skin affection, modified by the characters of the mucous tissue. The second, sometimes occurs among the earlier secondary manifestations, the induration being slowly built up during the second or third month after the primary disease. Sometimes these are the concomitants of the large syphilitic papules, or of the syphilitic tubercle or gummata, the evolution and phases of which play so important a part in the history of some cases of syphilis.

Now, it is not pretended that these are other than rare occurrences; still, we have witnessed their development under circumstances which left no doubt of their nature. It will be obvious that these indurations might very easily be the cause of an erroneous diagnosis, and, no doubt, they are mistaken for indurated chancres.

Cases Illustrative of the Transmission of Syphilitic Disease.

J. McG., treated October, 1863, for a chancre upon the external aspect of the penis, which was nearly healed; firm, elevated base; inguinal glands symmetrically enlarged; tonsils and palate injected; (a) sub-occipital glands large; somewhat emaciated and of pallid aspect; roseolo-squamous eruption over trunk. Treatment: Mercurials and iodide of potass. Discharged November 27, 1863.

In June, 1864, M. A. McG. (wife of the above), was found to have an oval, raised, flattened induration on the inside of the right labium, which was slightly eroded on its surface. Local treatment. Confined August 3, 1864; child healthy, but delicate-looking. On September 14, infant in very cachectic state, evidently the subject of inherited syphilis,(b) of which it died. The woman had lost her health, and suffered from the secondary manifestations, with alopœcia and uterine leucorrhœa for some time afterwards. The infant received no mercury.

L., treated February, 1862, for an indurated sore in process of healing. He suffered from "secondaries" afterwards, and was treated with mercury, but for a short time only. Early in December, 1864, his wife gave the following history (condensed):—Married one year. At five months aborted; she thinks from a "strain." After this, health became much affected; "got inflammation of the womb;" lost her hair a good deal; since suffered from leucorrhœa and disturbed menstruation; had sore throat (query, from cold); spots never appeared on the skin, she says; looks rather anæmic; now complaining of leucorrhœa; pain over the left ovarian region. December 14, 1864.—The husband examined. He gives a very clear account of his health and symptoms since 1862. His description leaves but little doubt of his having suffered from slight manifestations of constitutional syphilis in 1863.

S.-M. D., in February, 1860, suffered from an indurated sore, for which he was treated with mercury for thirty-two days. Secondaries, if any, not observed. He married a healthy young woman within a year after this. His wife has miscarried four times. The man has no family, but he looks healthy.

An officer suffered from *severe* and protracted manifestations of syphilis. He was treated, over a very long period, with mercury, and kept under its influence for some time. He had not exhibited any syphilitic symptoms for upwards of six months before the date of his marriage. His wife went the full time, and was confined of a fine child. The infant exhibited some symptoms *suggestive* of syphilis, I heard, but it is now well and healthy-looking. The father is perfectly well, and a remarkably strong, well-nourished man.

A Surgeon can be consulted on no more difficult or responsible question than this one, as to the safety of marriage. You cannot give a man who brings the history of a previous attack of syphilis any *positive guarantee* that his future offspring or wife will certainly escape; yet we know that a very great many men who have contracted syphilis have subsequently married and had healthy offspring.

In forming a judgment there are a great many things to be taken into account—the distance of time at which the primary syphilis was contracted; the nature of the constitutional symptoms which followed, as indicating the strength of the virus to which he has paid tribute; the frequency and nature of the recurrences of the syphilitic manifestations; the date at which these last appeared, and the subsequent condition of his health. Cases differ so very materially in their severity that each one must be decided on its own merits. In a case of an average kind we should not, personally, dissuade from marriage under the following circumstances:—If more than three years had elapsed since the date of the "primaries," and upwards of one year's good health had been enjoyed since the last syphilitic manifestations. We must say that our own experience would lead us to think better of that case in which a mercurial treatment had been used for the constitutional manifestations.

It is perfectly well known that a syphilitic father may sometimes beget healthy offspring and yet have a diseased child subsequently born to him; also, of two syphilitic fathers, the one may beget healthy and the other infected children. We are strongly inclined to believe that the solution of these difficulties may be generally traced to the fact that the fathers of the diseased children were labouring under some *manifestations* of syphilis about the period of their procreation.

(a) The condition of the throat, as an early secondary symptom, according to our experience, is marked by an efflorescence with a layer of mucus on it—"the snail-tract throat," as we have heard it appropriately termed.

(b) A mixed papular and squamous syphilide; sores on lips, tongue, and buccal membrane; tubercles on perinæum, and great emaciation.

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M. Diday's book on infantile syphilis may be consulted on the above points with much practical advantage.

A few Selected Cases of the Stage of Incubation (interval between exposure to and appearance of primary lesion).

J. C., hard chancre and enlarged chain of inguinal glands; subsequent secondaries (well marked). The chancre appeared five weeks, he says, after sexual intercourse.

B. L., admitted February 9, 1863. Infecting sore and "secondaries." Primary disease appeared ten days after last intercourse.

G. A., in January, 1863, admitted into Hospital for infecting sore and secondaries. Sore followed fourteen days after exposure.

A. R., infecting sore outside skin of penis; untreated; concealed disease. It followed, he says, one month after last sexual intercourse. Secondaries severe.

An individual went to town at a certain date, and was there exposed to contagion. One day, after taking exercise, he felt one of his groins enlarged, and at the same time he called attention to an ulcer upon the prepuce. He thought it could not be syphilitic, because it began fifty-six days after his visit to London. He said he felt certain that it both appeared and was discovered fifty-six days after connexion.

It would be easy to add to this list many cases in which the patients have positively asserted that intervals of from one o five weeks had taken place between the date of exposure and the manifestation of infection. We do not believe, however, that an interval of upwards of seven days *invariably* takes place. The exact nature of those sores which appear a few days after exposure to contagion as suppurating ulcers, and gradually acquire peripheral induration, has yet to be worked out. One thing is clear, nevertheless, that sores which are the precursors to general syphilis contrast, as a rule, remarkably with the local soft sores in this respect. The latter class follows very quickly after exposure to contagion.

We have now seen many cases in which a man has presented the two affections—the soft and local and the indurated nfecting chancre—at the same time, and it is a curious fact that the two diseases followed separate courses. The soft sores appeared very soon after the exposure, and preserved the characters of the soft sore; while the infecting chancre did not follow quickly, but appeared after a period of one, two, or four weeks' incubation as a papule, which became an induration. This last might have its seat upon the same structure as the soft sore, or a different one, or it might occupy the exact site of the soft sore. We should term these instances of double contagion: two seeds sown at the same time.

THE WEEK.

OVARIOTOMY ABROAD.

Mr. Spencer Wells has just performed ovariotomy at the great Hospital of Brussels, and upon a Swiss lady at Zurich. We mention the fact as of some interest in showing how British Surgery is rising in estimation abroad, and also as indicating the progress of ovariotomy in the estimation of the Profession. Mr. Wells has promised us that both cases shall be published in full in these columns.

PROGRESS OF THE CHOLERA.

A medical friend in Smyrna writes, on the 9th inst., as follows:—"We have the cholera here again, brought by the pilgrims from Mecca to Alexandria, and from thence here. As all things move by steam, I suppose it will not be long before it arrives in England. On its visit to Smyrna in 1832 it took off 13,000 victims; on its second visit, in 1848, about 3500; on its third visit, in 1856, it lingered among us for three or four months, and only killed about 1500. It seems inclined to act this time as last, as it has only taken off five or six daily since arriving fifteen days ago. Still, those who are attacked are taken off just as quick, and with just the same violent symptoms as its early victims. All who have passed into collapse have died."

FROM ABROAD.—SALT AS A DISINFECTANT—ELECTROLYSIS IN SURGERY—LESIONS PRODUCED BY ALCOHOLISM.

The importance of disinfecting agents in the treatment of wounds, and the inefficacy of those in use, is shown by the frequent proposition of new ones. The last of these, of an eminently simple character—viz., a solution of chloride of sodium, has just been brought into public notice by M. Dewandre, who has had ample means of testing its efficacy in an institution of bad hygienic condition—the Pauwels Hospital at Antwerp. The solution he first uses is made with about twenty-five drachms of common salt, and three pints and a-half of water; but after the patient has been accustomed to the use of this for a few days, he easily bears a saturated solution, care being taken that, in applying this, none of the undissolved salt come in contact with the wound. With this solution the suppurating surfaces are kept constantly moist, using syringing or the douche in cases in which these means seem called for. It should not be applied at the early inflammatory stage, but only when the suppuration has become thoroughly established. Then its effects are most remarkable in combating with great rapidity the fœtidity of bad sores and ulcerations, to the great relief of the patient himself and his neighbours. Another effect is also at once produced—viz., the reddening of the black, vitiated, decomposed blood lying amidst the solution of continuity. The coagula which adhere so firmly to the tissues, and are so difficult of separation by mere irrigation without sponging, under the use of the salt water separate readily, leaving a clean reddened surface. The patient is sensible of a sensation of local cold with prickling or itching, and even slight pain, which is very supportable; so that he soon becomes accustomed to the application. The wound is, however, from time to time, syringed with simple water. The quantity of the suppuration undergoes rapid diminution, and however sanious and infected at first, it soon takes on a laudable character, even when diseased bone may be present. As may be supposed, this marked local improvement is accompanied by a corresponding improvement in the general condition of the patient. Another great advantage obtained from this application in a Hospital where there is not much space at command, is that patients need not be kept in an isolated condition. The eulogium of M. Dewandre is founded upon a now considerable experience, not only with respect to the improvement of foul ulcerations, but to the prevention of this occurrence. He reports that having received into the Hôpital Pauwels, which is in a bad sanitary condition, more than 400 patients suffering from all kinds of wounds, besides practising most of the great operations, he has met with purulent infection only in one case, and has not had a single case of tetanus or Hospital gangrene while the salt water has been in use. Patients bear its application for various periods, from twenty to forty days, and in exceptional cases even for seventy or eighty days, without any inconvenience manifesting itself.

M. Scoutteten, in a memoir read at the Academy of Medicine upon the application of electrolysis in Surgery, observes that Faraday first used the term to distinguish the decomposing action of electricity from analysis obtained by purely chemical procedures. He gives an account of eighteen operations which he has performed by its aid, and concludes as follows:—The effects of electricity are of three kinds—1. Electrolysation, that is, decomposition of the elements of the tissues without disorganisation; 2. Accumulation of acids and alkalies at each pole, i.e., chemical cauterisation or disorganisation of the tissues by these bodies; 3. Physical cauterisation, produced by the caloric developed by a galvanic current passing through a homogenous metallic thread. These two latter actions are secondary effects of electricity, which

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may be replaced by other agents, as caustic alkalies or the actual cautery. 4. The electrolytic method is perfectly applicable to all soft tumours containing decomposable liquids, the cysts of the wrist, hydrocele, liquids within or around the joints, soft ganglions of the neck, soft goitre, arterial or venous tumours, and perhaps ovarian cysts. It should be rejected in the treatment of cancer, and fibrous or indurated tumours, unless of a very small size, and destructible by slight cauterisation. Neither is it suitable for the treatment of lipoma, and all non-encysted tumours in which the fatty element prevails.

In a paper communicated to the same Academy by M. Lancereaux, on the changes produced by the abuse of alcohol, he observes that since 1858 he had been engaged in tracing out the specific anatomical characters due to the action of certain agents. Last year he did this with regard to the poison of syphilis, and now he gives the results of his investigations on alcohol. Accidental or acute alcoholism is found connected with special forms of ordinary affections. Thus Tardieu has referred to its agency certain cases of hæmorrhage of the membranes and ventricles of the brain and of the lungs; and some of the inflammations with rapid suppuration of the lungs and liver, and more rarely of the brain, derive their rapidly fatal character from the absorption of too much alcohol. But it is to lesions connected with prolonged abuse of this fluid that M. Lancereaux especially directs attention, and these he thinks may be conveniently considered under two principal heads. In one of these the organic connective tissue is principally concerned, giving rise to affections analogous to the adhesive inflammation of Hunter: and in the other special modifications of the functionary element are produced, giving rise to lesions generally known as fatty degeneration.

The first of these alterations spares but few organs, invading the recesses of the parenchyma or developing itself on the surface of the membranes; but the liver, brain, kidneys, and serous membranes are the portions of the frame especially attacked. The liver may be taken as the model organ for exhibiting its effects, and the changes operated in it have been characterised by the English writers under the term cirrhosis. In thirty-five cases M. Lancereaux has always observed precisely the same characters, differing only in their degree of evolution. A very analogous alteration is observed in the brain, this organ diminishing gradually in size, the convolutions undergoing atrophy, especially at the upper portion of the hemisphere, the brain also becoming colourless, and acquiring a firmer consistence. The arachnoid and pia mater are usually at the same time infiltrated, thickened, and strewed with whitish points or plates. The kidneys sometimes exhibit a condition analogous to that of the liver; but M. Lancereaux has not observed the condition of chronic pneumonia described by Huss. The mucous membranes of the stomach and cæcum are especially characterised by injection and hæmorrhagic punctuation, appearances also observed in the bronchial and especially the laryngeal mucous membrane. Finally, the coats of the vessels which especially come into contact with the products of absorption exhibit deposits capable of contracting or even obliterating their cavities. This is the case with the vena portæ and the pulmonary artery.

The alterations of the second class are characterised by the presence of fatty degeneration; and here, too, the liver is especially the organ affected, assuming an augmented size, but in its antero-posterior direction, which gives it a cubic form distinctive from other forms of fatty degeneration. The kidneys, pancreas, the salivary and gastric glands, the bronchial epithelium, and even the spermatic canals, may all exhibit this degeneration; the muscular fibre, bones, and cartilages participating in the change. The relative frequency of the two orders of alterations is not constant; for while fatty degeneration may be said to be constant in certain organs, as the liver, chronic adhesive inflammation has only been met with thirty-five times in 130 cases; but one point is observable, that while the adhesive inflammations have for the most part been observed in persons pursuing laborious callings, fatty degeneration has almost always been met with in the sedentary. With respect to the mode of production of these different lesions, it may be suggested that the adhesive inflammations are due to the more direct action of the alcohol on the tissues, the effect of which is not very different from that produced by the injection of alcoholic fluids into the tunica vaginalis. The chief seats of the lesions would seem to support this view, since the organs which are most directly influenced, as the vena portæ, liver, and pulmonary artery, are also those which are oftenest attacked. The fatty degeneration would seem to be dependent on the impaired nutrition, itself connected with the diminution of the exhalation of carbonic acid.

"An important point to be noticed is the resemblance which this latter alteration bears to that consequent on the progress of age. In the drunkard as well as in the aged we have progressive atrophy of the brain, increase of the cerebro-spinal fluid, fatty degeneration of the minute vessels, of the substance of the heart, and of most of the anatomical elements, dilatation of the pulmonary vesicles, ossification of the costal cartilages, and a substitution of fatty for osseous substance. So close is this resemblance that it may be stated without exaggeration that, in the majority of cases, alcoholism produces an anticipated senility. What is true in physiology holds good also in pathology; for in the course of most diseases, and especially of acute diseases, there are exhibited in the drunkard and the aged person but few differences in the mode of action of the nervous system and in the power of the economy."

THE PRITCHARD MURDERS—LETTER FROM DR. PATERSON.

To the Editor of the Glasgow Herald.

SIR,—I should certainly have preferred that I had been spared the necessity of reverting to this very painful and melancholy case; but from some very pointed remarks made by the Lord Justice-Clerk in his charge to the jury, and which reflected particularly on myself, I consider I am called on, in justice to my Profession and the public in general, to make some remarks; and I shall be obliged if you will kindly indulge me with a space in the columns of your widely-circulated paper. I am sorry that my communication must necessarily be a long one; but from the deep interest which the case has excited throughout the whole country, you will perhaps kindly excuse me for intruding upon you, and bear with me while I take you back to that never-to-be-forgotten night of February 24, and introduce you to that mournful bedroom in which were lying on one bed two helpless, unsuspecting females—a mother and a daughter—one of them just dying from foul play (as I suspected), and the other—to my Professional eye—being under the continued influence and the depressing effects of antimony. The thoughts which in quick succession thrilled through my mind at the sight before me, no one can thoroughly conceive; and it is little to be wondered at, though I may have displayed some slight bitterness of feeling, when in the witness-box I had to stand face to face with the prisoner at the bar, and to connect him with that scene of horror—with those deeds of darkness and of death.

The Lord Justice-Clerk, in commenting on the part that I had acted in this dreadful tragedy, said—"I care not for Professional etiquette, for Professional rule. There is a rule of life, and a consideration which is higher than rule, and that is the duty which every citizen of this country—which every right-minded man, owes to his neighbour to prevent the destruction of human life, and in that duty I cannot say but that Dr. Paterson failed."

His Lordship may pardon me for returning to him the compliment, when I tell him that, as a distinguished officer of justice under the British Crown, as an impartial judge upon the Bench, he most signally failed in doing his bounden duty to me, in keeping back part of my evidence on this point, and laying the fault, the gross carelessness of the Registrar, on my shoulders, and holding me out as to a great

extent responsible for not trying to prevent the destruction of human life, when the blame in this case lay entirely upon the district Registrar! Permit me to place before you part of my evidence on this point. When cross-examined by Mr. Andrew Rutherford Clark, I was asked if I had done nothing to try and save Mrs. Pritchard's life, when I suspected that she was being poisoned. I said I had written to the Registrar, directing his attention specially to the subject of Mrs. Taylor's death, and that I had three motives for doing so. Mr. Clark, for reasons best known to himself, said he did not want to hear my motives! But I think it due to myself, and for the satisfaction of the public, that those motives should be made known.

My first motive or object was to do what was in my power to save Mrs. Pritchard's life; second, to guard my Professional reputation; and, lastly, if possible, to detect the poisoner. To accomplish these ends, I at once refused to certify the cause of Mrs. Taylor's death. I at the same time wrote the following letter, which was recited in court, and which, had it been acted on, as it ought to have been, would in all probability have effected those objects I had in view:—

"6, Windsor-place, 4th March, 1865.

"Dear Sir,—I am surprised that I am called on to certify the cause of death in this case. I only saw the person for a few minutes a very short period before her death. She seemed to be under some narcotic, but Dr. Pritchard, who was present from the first moment of the illness until death occurred, and which happened in his own house, may certify the cause. The death was certainly sudden, unexpected, and to me mysterious. "I am, dear Sir, yours faithfully,

"James Paterson, M.D.

"To Mr. James Struthers, Registrar."

How any Registrar ventured to destroy such a letter without showing it to the authorities, I am at a loss to understand. Had he done so, as he was bound in duty to do, there would have been a post-mortem inspection of Mrs. Taylor's body; and if so, as I stated in my cross-examination, it is more than probable that the drugging with antimony would have gone no further, and thus poor Mrs. Pritchard's life would have been preserved. Now, this letter has been altogether ignored both by the Solicitor-General and the Lord Justice-Clerk. The Registrar was never asked one question about it further than that he had got it, and was sorry he had destroyed it! Was the ignoring of this letter not intentional on the part of the Crown authorities? To say the least, it does not look well, and it was both unfair and cruel on the part of the Lord Justice-Clerk to blame me in open court for not having done my duty as a Professional man and as a citizen of this country, when both he, the Solicitor-General, and the counsel for the defence were perfectly aware, from my first precognitions, both for and against the prisoner, that I wrote that letter to the Registrar after the mysterious death of Mrs. Taylor, with the express view, and for the express purpose, of scaring the poisoner, and thus arresting him in his diabolical and cursed career of slow poisoning of his unsuspecting and confiding wife. Now, let it be carefully observed that my letter to the Registrar was written and sent to him exactly two weeks before the death of poor Mrs. Pritchard. Pray what is the use of a Registrar if, when he receives such a letter as this, he pays no attention to it, but carelessly destroys it, and thinks no more about the matter? How is it that Medical men in Scotland are under a penalty if they refuse to certify the death of a patient, when a Registrar is thus simply permitted to act with impunity?

Suppose that I had been such an obvious fool as to have acted in the manner suggested by the learned counsel for the prisoner, and also by the Lord Justice-Clerk, I would have been a rash and a bold man indeed, as sensibly observed by the Solicitor-General. Had I denounced Pritchard to his face, or stated my suspicions to Mrs. Pritchard, or gone to the criminal authorities and informed them of my suspicions, what, I should like to know, would have been my position? Pritchard could have brought forward no less than three Medical friends, all Edinburgh graduates—namely, Professor Gairdner; Drs. Cowan and Taylor, not one of whom suspected that Mrs. Pritchard was being poisoned by antimony! Would the diagnosis of a Glasgow graduate have been believed for one moment when opposed by such a galaxy of Professional talent and experience in consultation? And this, too, at a time when there could be no post-mortem examination nor chemical analysis to bear me out in the correctness of my opinion. The immediate consequences would have been most assuredly an action for heavy and ruinous damages! It was all very fine for Mr. Clark to chaff me with being afraid of my purse and afraid of my person (Heaven knows my purse is light enough), when he well knew that he was purposely and designedly misleading the public and the press by making it subtly appear that it was Mrs. Pritchard's death certificate that I had refused to give, and at the same time totally ignoring the fact that it was Mrs. Taylor's, who died three weeks before her daughter, and also wilfully ignoring the fact of my letter to the Registrar, in which letter I did all that should have been required for the purpose of saving Mrs. Pritchard's life, had the Registrar done his duty. Even as it was, after Pritchard's apprehension, but before the analysis was known, the relatives characterised me as a villain, and vowed they would have me banished; and some portion even of the Glasgow press held me forth as a moral coward, a stabber in the dark, and the whole matter was regarded as a cruel piece of malignant Professional jealousy.

Perhaps it would have been better for me this day had I been an ignoramus in my Profession; had I thought when I saw Mrs. Pritchard that she was labouring under gastric fever, or been puzzled with her case, or even thought that in fact she was drunk, as one of the Medical witnesses said he did. Sure, "where ignorance is bliss, 'tis folly to be wise."

But I see it all now; and from your editorial to-day, coupled with what I actually observed in court, it is abundantly evident that there was a most decided bias against everything Professional connected with Glasgow, and an apparent feeling that it would never do to promulgate to the world that a Glasgow Medical man knew his Profession better than the three Edinburgh graduates; and as my diagnosis could not be overturned in any way, and as I was fully borne out both by the history of the case as given by the servants and confirmed by the analysis, something must be done to try to invalidate my evidence, by totally ignoring my letter to the Registrar, and making it appear to the public that I stood so much on the dignity and etiquette of my Profession that I would do nothing to save the life of a human being whom I suspected of being poisoned! Now, I appeal to my Professional brethren throughout the whole country if I have not acted a consistent and conscientious part in this unfortunate and very tragic affair. Let me ask—What Medical man would refuse to sign the death certificate of any member of a Medical brother's family whom he had seen on their death-bed, unless he suspected foul play or something radically wrong? And if he refused to certify the death, was the refusal not quite sufficient to arouse the Registrar's suspicions, even without a letter (such as he received), that there was something materially wrong, and thus caused him to make inquiry, as I fully expected he would? And had he done so, I maintain that Mrs. Pritchard's life would have been saved, and the whole of last week's painful proceedings rendered unnecessary.

I am thankful to Almighty God that I was so seldom in that wretched house. Had I gone back unasked, as the Lord Justice-Clerk and Mr. Andrew Rutherford Clark thought I was in duty bound to do, and could Mr. Clark have proved that I had done so, there might have been got up some sensational statement to allege that I was the one who had administered the antimony, when I was so sure, so positive, that it would be found in Mrs. Pritchard's body! May I not assume that the man who could place in the witness-box the poor unfortunate young children of the prisoner at the bar, with the view, no doubt, as he thought, of exciting sympathy in the minds of the jury, might not have scrupled to have availed himself of the possibility of attaching the guilt to any one who had such an opportunity as he might say had then been presented to me; and it might have been alleged that the prisoner at the bar had been made the innocent victim of Professional jealousy and spleen!

The appearance of these poor and unfortunate children when they so innocently and so simply spoke of the love, friendship, and affection that always existed between their papa, mamma, and grandmamma, up to the time of the melancholy deaths of the two latter, will never be obliterated from the memory of those jurymen, nor any one who witnessed the heartrending scene; nor will those dear children ever forget the agonising exposure they were thus called upon to make in presence of that one to whom they had hitherto looked up as their loving, doating, and affectionate father, but now standing in that dreadful dock, where he was, in a few hours, to receive that horrid doom that connects him for ever with the list of the greatest criminals that ever disgraced the annals of any civilised country on the face of the globe. The painful expo-

sure, I can assure Mr. Clark, had the very opposite effect of what he expected; and to attempt to show that the parties all lived in the most affectionate and endearing terms, only served to increase and aggravate the unmitigated guilt of the wretched prisoner, and to expose the more strongly the horrid hypocrisy and depravity of the guilty one. But, leaving Mr. Clark, I may be allowed to revert to some important parts of my own evidence, and from this it will be seen that my first visit to Mrs. Pritchard was on the 2nd of March, the day of her mother's funeral, when Pritchard was in Edinburgh. At this visit the suspicions that I formed the night her mother died were still further confirmed, and I considered it my duty the next day, that is the 3rd of March, to consult in confidence with one or two of my Professional friends, so as to have their assistance and advice as to the nature of the two mysterious cases. I went over the symptoms of both, even more minutely than I did in court when giving my evidence, and they all came to the same conclusion that I had arrived at, viz., that Mrs. Taylor had been poisoned by opium, and that Mrs. Pritchard was being dosed with antimony. I am in duty bound to say, however, that one of the gentlemen said, from my description, he had suspicions that Mrs. Taylor had been drugged with something more than opium, though the symptoms led most conclusively to the likelihood of opium or morphine. Aconite was at the time suggested, but we had no suspicion of antimony with Mrs. Taylor. Now, the sequel has proved that this surmise was correct, and has been sufficiently verified, and I would honourably mention the names of the Medical friends I refer to, were it not that the public might fix upon them as the source from which proceeded the anonymous letter sent to the authorities, and which led to the apprehension of Pritchard. We also consulted as to what steps I should adopt in the trying circumstances in which I was so unpleasantly placed, and it was thought proper that I should refuse the death certificate of Mrs. Taylor, and send the letter which I did to the Registrar, and this we considered would be quite sufficient to lead to a judicial investigation of the case. I accordingly wrote my letter as above stated, and sent it by post to the Registrar on the morning of the 4th of March. On the evening of Sabbath the 5th, at nine o'clock, as stated in my evidence, Pritchard called at my house and told me that his wife was much benefited by the medicines and treatment I had prescribed for her. I told him just to continue the same treatment, and I had no doubt she would soon be all right again. I certainly thought it strange his calling on me at such an unseasonable hour on a Sabbath evening, especially as he had no ostensible reason for doing so; but my impression was that he had got some information from the Registrar of my having refused the death certificate of his mother-in-law, and was now scared from his purpose, and that Mrs. Pritchard would be safe; that I had done my duty, as far as I could do with safety or propriety in the circumstances.

I appeal to any unbiassed person, Professional or non-Professional, if I had not a right to conclude that the Registrar had at least shown my letter to Pritchard, especially as there was no movement on the part of the authorities? How could it ever for a single moment enter my mind that the Registrar would destroy my important letter, and do nothing in the matter? My conscience tells me that I have done my duty, to the very utmost of my power, in this very sad and painful case, and if blame or censure is to be attached anywhere, it is to the Registrar, and not to me.

Allow the public importance of this matter to be my apology for intruding so long upon your time and space,

I am, Sir, your obedient servant,

JAMES PATERSON, M.D.

6, Windsor-place, July 11.

P.S.—In fairness and in common justice to myself, I call upon the editors of all those newspapers and public journals who may have reported the Pritchard case to give this full insertion, so as to counteract the false and erroneous impressions which have been propagated through their medium, that I, as a Medical man, stuck so much on the etiquette of my Profession that I would do nothing to save the life of a human being whom I suspected of being poisoned; and thus, I trust, I shall yet rise, like the phœnix, out of my own ashes from the great conflagration which some of the public journals, I hope and trust in total ignorance, have studiously endeavoured to heap upon me. J. P.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF OXFORD.

(Continued from page 45.)

CHRISTCHURCH COLLEGE.

I HAVE spoken of Dr. Richard Lower as a member of Christchurch College. His friend, Dr. Thomas Willis, also of this same College, is next perchance in position. Willis was born on February 6, 1622, at Great Bedwin, in Wiltshire. He went early in life to Christchurch College, but soon was obliged to leave, owing to domestic sorrow and trouble incidental on the death of his father. In time he returned to Oxford to find it in a ferment of war. He took side with the Royalists, and even went out, I believe, as a soldier. When peace came, and when—owing to the friendly efforts of Her Highness Mrs. Oliver Cromwell's brother-in-law, one of the Principals of that day in the University—the students once more began to return to their books and lectures, Willis was again at his seat of learning doing his best. He took out the degree of Bachelor of Medicine in 1646, and four years later his Doctor's degree. He was also nominated Professor of Natural Philosophy. It is possible, and, indeed, probable, that in the City of Oxford Willis might have lived very successfully, and have earned great fame both as a Physician and a philosopher; but he was ambitious, and aspired to the honours of London Medical life; so as soon as the restored rake had got comfortably seated on the British throne, with his hand fairly in the British pocket, our newly-made Doctor left his college, and to the metropolis he came, with a good sound loyalist reputation. He was well received at once, and in a short time was member of that new scientific bond and band of science, the Royal Society. His practice soon became very considerable, though his success as a Practitioner was called in question by the ignorants of his time. Even the royal rake himself must needs risk a joke against Willis, to the effect that he (Willis) "carried off more of his subjects than would an invading army." There is not the least reason to believe a word of this gross royal aspersion: it was one of the popular lies of the day—a lie that has been passed on every true man who has really made an advance in Physic. Poor Willis, unhappily, could not bear the sneers and taunts of his enemies. They were numerous, and he was one; they were watchful, and he was too absorbed in his great works to be always on the defensive. The result was that the pestiferous tribe of biters and backbiters worried him, not slowly, to the heart's core. He put his foot on a few of their heads, and crushed heavily; but the creatures were brainless, and he could do them no harm; they merely rose again to bite more senselessly. At last, in the prime of life, he died, and then the animals that had destroyed him ate his fame, boasted as they grew fat upon it, and left it as a fact to be remembered by their successors that they had known Willis in the flesh, and that he was a great man, whom they were honoured by having known. The picture is a sad one, and the sadder because it is a perpetual picture.

In Willis's time there existed the animal that might be entered in our natural history books as the *Sorex humanus*. Its description is that of a small and generally lean animal, nearly exsanguinous, biped, and endowed with speech, so that it is hard to tell it from the true *homo*; its jaw angular and sharp, and its nose conceitedly and pointedly repugnant to its chin, which itself falls off and carries no beard, or, if any, a soft thistledown, smooth and sparse; its voice thin and chirpy, sparrow-like, and in gentle thrills; its eye small, sharp, inquisitive, unmeaning, yet dangerous and sly; its civilised externals those of a male, but its general build compatible with either sex; its manners at first bland and mild, but in time captious and punctilious; its temper desperately inquisitive and officious, leading it to inquire into, and interfere with the business of every one with whom it comes in contact; its approach stealthy and by measurement, with so many taps at every door, according to the nature of the man the other side the door; its discourse the empty of empties, but inflated in proportion to its emptiness, and charged with obscure terms abbreviated beyond obscurity; its chief mental action that of a pump, its prey living brains; its ideas of etiquette severe, its own etiquette intensest self; its tendency, when caught gingerly, to bite sharply and poisonously, and when caught firmly, to escape by peeling, leaving a wound

capable of being turned to account, as proving an injured *sorex;* in fine, a nasty little *sorex* altogether, haunting every society, and proclaiming the truth of the theory, once called Esopian, now called Darwinian, *quoquoversum*.

Sorex humanus, so inimical to our friend Willis, is not yet extinct. I have seen specimens of the race, and have been obliged to converse with them in way of what may be called business. The last but not the least *sorex* I saw honoured me with a morning call, putting his nose without being invited into the waiting-room to see, in passing, how many patients were there. His introduction, which was his own composition, delivered by himself, aimed to be at one and the same time moral, admiring, patronising, reserved, and friendly. On his own proud position, which gave him the opportunity of securing the acquaintance of many eminent men, he spoke with reverence, and he shook hands with himself in a style that was as humble as it was edifying. He complained of the wear and tear of Professional life, and quoted incorrectly a line from Tupper. He had read some papers of my own on over mental work which suited his case, and he thanked me, on the part of the public generally, for them. He told me that he was very "precise" in his work, and that he never lost a case; that the demands on his time were enormous; that he was giving himself up to a volume of fifteen hundred pages "On a New Point of Practice;" that he had been somewhat neglected by his compeers, who were naturally jealous of him, but that he forgave them (he was a Christian *sorex*), because they had not faculty enough to understand him; he asked me if I did not think the Royal Society "a curious body," and before I could reply he asked whether the College of Physicians was not also, in my opinion, "a very singular body?" When I squeezed in the monosyllable *no*, he re-echoed "No" with a tendency to go to sleep, and then added—"You think not?" From this part of his discourse he suddenly swept over the Channel, and said they did things better in France, and even in Prussia; and having closed this lamentation by a *sotto voce* opinion that the English school was infinitely superior to the French, and that Claude Bernard was a vastly overrated man, he returned to England by magnetic telegraph, to communicate his hopes that Government would one day find professorships for English physiologists and pathologists, and specially a first and lucrative chair for one whom he could not name lest he might be considered a flatterer. When he had gnawed his way to this point, *Sorex* extracted from his cold bosom a scroll of questions, historical, practical, experimental, pathological, chemical, physiological, physical, and even poetical. The answers were all required for the book "On a New Point of Practice," with full and proud acknowledgment of the services rendered by the answerer, and the questions were put with such gentle suction, that a man out of healthy humour might have exhausted himself before he saw that *Sorex* was in danger of bursting. For my part, in mere fun, I gave *Sorex* so many references from my masters, that he forget them all in trying to remember them, and next day, rolling about the City in a gigantic cage with another victim, he expressed his deep conviction that Claude Bernard was the only physiologist living, and his hope that the English Government would bring Bernard over here to extinguish English physiologists and pathologists generally, but specially one who pretended to know something of history, physiology, pathology, physics, and indeed the whole subject-matter of a coming important volume "On a New Point of Practice."

To return to Willis, he had his gifts and was helped by Heaven to many gifts rich and rare, but he had not the faculty of reading character, nor yet the faculty of laughing off annoyances; he could neither see a rat, feel a rat, nor smell a rat. On the contrary, he treated the *Sorex humanus* as the real *homo* and even as his own equal; he could contend with it with all his might, and hate it with all his heart; but he could not accept it as beneath his scorn, play with it as a puppet for his mirth, nor use it for the only service it is fitted for, and I think made for—good caricature. So he died, corroded by the passions of contention and hatred—passions wearing as cancer, and not less deadly. The labours of Willis were given to the world in seven distinct works, all in Latin. They would well bear modern translation, and re-editing, and would do credit to the English school. His first work on the subject of fevers is divided into two parts; those parts of it which are most interesting relate to the process of fermentation now called zymosis. Willis, in fact, first broached the hypothesis of fermentation of blood in fever, and supported with the best chemical arguments in the possession of the chemists of the 17th century. That his hypothesis was speculative is quite true; that it was an unsound hypothesis, according to our present readings of disease, is probable; but it has long held its position, and at the present moment affords the groundwork of one of our most popular nosologies. Willis believed that the blood burned, or, in better language, that it produced heat, and he looked on the process as due to the fermentation set up in the various humours of which the blood is composed by their combination in the presence of the air. He taught that in fever this fermentation is increased, and he maintained that the treatment of disease must consist in the regulation of the fermentative process.

The next great work of Willis was on the anatomy of the brain, with a description of the nerves and their uses. In this treatise we have the first real and satisfactory account of the brain—the first glance of the meaning of the nervous system. The nerves are counted, the circulation of the brain is described, the distribution of nervous fibre is considered, and experimental data are given to prove that the nerves which govern the involuntary muscles are derived from a different centre than are those nerves which govern the voluntary muscular system. He for the first time divided the pneumogastric nerve, and showed that by such division the circulation was made irregular in action, and he glanced obscurely at the division of the nervous system into nerves of sense, common sensation, and motion. He followed up this great work with essays on the pathology of the brain and nervous system, by a treatise entitled "De Animâ Brutorum," and by a book called "Pharmaceutica Rationalis." In all his works he showed the possession of a mind to which the unity of nature was powerfully revealed. He had obscure glimpses into the wholeness of things, but no half views on anything. It might be proved of him that he laid the first steps of the scientific comparative anatomist, that he anticipated Gall, and that, had his thoughts been brought out in their fulness, we should at this time have been a century in advance in our knowledge of the nervous system and of the pure physics of life. Willis died in London, on November 11, 1675. The whole of his active work as an original inquirer was compressed into the short space of fifteen years. I write the fact with shame at thinking how little, by comparison, I have done in that same measure of time. I recommit him to the dark past lovingly, reverently; and while I have strength to guard his remains *Sorex humanus* had better not aim at their desecration.

Following, in connection with Christchurch College, there rises before us the figure of John Freind, M.D., F.R.C.P., F.R.S, and M.P. some time for Launceston. Atterbury Freind he was called once, because he got let in for that famous plot to which Bishop Atterbury lent his influence, in favour of the so-called Pretender. Freind was a Northamptonshire man, born in 1675 at Croughton. He went first to Westminster School, and thence to Christchurch. At Oxford he was directed in his studies by Aldrich, and became a very distinguished student. He graduated in Arts, as Master, in April, 1701, and on the 21st of June, 1703, was passed as Bachelor in Physic. In the following year he was elected Professor of Chemistry in the University of Oxford, but soon left his post to become Physician to the army in Spain, under the Earl of Peterborough. Returning to Oxford, he took up the degree of M.D. on the 12th of July, 1707. He was elected F.R.S. in 1711, under the presidency of his friend, Sir Isaac Newton. Next year, he was in the army once more, as Physician, during the expedition to Flanders. On the 9th of April, 1716, he was chosen Fellow of the Royal College of Physicians, and was successively Gulstonian lecturer, 1717; Censor, 1718; and Harveian orator, 1720. His fame world-wide in Physic, he competed as member of Parliament for Launceston in 1722; he secured the largest number of votes, but was unseated for two years on a technical objection—at last he gained the House. In 1726, he was made Physician to the Prince of Wales, afterwards George the Second, and later to the Princess Caroline, and he continued to attend on their Highnesses when they became their Majesties. But he died the next year, viz., on the 26th of July, 1728, from what was then called a fever, the nature of which is not recorded.

Freind comes before us in many characters: he was a fierce politician of the Tory school, a good practitioner, a chemist, and a profound scholar. One cannot commend all his political career, for he defended the scamp Sacheverel and joined the hopeless Atterbury plot without much reason. At the same time, he must have been practically honest, or he could not have retained, as he did retain, the constant friendship of Richard Mead, perhaps one of the most determined

Whigs who ever lived to support a party. For the Atterbury business Freind got into a scrape which led him into the Tower on the 15th of June, 1723, whence he had not escaped so easily in the following November but for his Whig contemporary. In fact, Mead became surety for Freind, and, it is said, refused to leave his chariot to visit Minister Walpole, who was sick, until an order of release was granted. On that night of release Freind, Mead, Arbuthnot, and other Fellows of the Royal College of Physicians met at Mead's palatial residence in Great Ormond-street, and kept it up till a late hour. "We must keep him from this time in better order," said Mead to Arbuthnot. "Aye," replied Arbuthnot, "we must."

Freind wrote many minor works, and joined Mead in supporting the view that, in order to prevent the secondary fever of small-pox purgatives were required. In this contest Dr. John Woodward came in for a fair share of attack, which clung to him, as I think, very undeservedly for many years, for Woodward was a most able man, though rather impetuous and out-spoken. While in the Tower Freind conceived the design of his greatest work—viz., "The History of Physic from the time of Galen to the beginning of the Sixteen Century, chiefly with regard to Practice: In a Discourse written to Dr. Mead." It is impossible to speak too highly of this admirable treatise: it is so clear, so accurate, so wise. Any one who wishes to see how "modern" improvements in our art have been forestalled had better read Freind before he ventures on what to him is the unknown. To my mind "The History of Physic" is a standard work, which in this day ought to be republished at a cheap price, and ought to form a book from which candidates should show knowledge at the examining board.

Freind did not forget his College. He left to Christchurch the sum of one thousand pounds to found a lectureship in anatomy, and perchance would have done more, but at his death he was only fifty-three years of age. He was buried at Hitcham, in the county of Buckingham, a good old Tory in good old Tory soil. Mr. Disraeli should see to his monument.

Dr. Matthew Lee, to whom reference has been made already as a benefactor to Christchurch, was one of the Physicians to George the Second, after Freind. He left to the College the noble endowment of £20,000 for a lectureship in anatomy, whence the title of Lee's reader in anatomy. Lee died on September 26, 175-, and was buried at Linford, in Buckinghamshire.

Dr. Richard Frewen, M.D., is a local celebrity whom it would be unjust not to name. Dr. Frewen left a fine collection of books to the Radcliffe Library and his own herbarium, still in good preservation. He also left many benefactions. Frewen was born in the year 1677, and died on May 29, 1761. There is a fine portrait of him in Christchurch.

When I began to speak of Christchurch College I named four men of note as its children in Physic. What was I about when I forgot to add to the roll of Lower, Willis, and Freind the name of John Locke, M.B.? It is not too late to supply the omission, but it must be in brief terms. Locke entered Christchurch from Westminster School in 1651, when Dr. John Owen was principal. He graduated as Bachelor of Arts in 1655, and as Master in 1658. Then he followed up Medicine as a study, and took his degree of Bachelor of Medicine in 1674. He practised Medicine in Oxford for a few years, but made little of it. In truth, he loved the science, but disliked the trade; and in the end he left the trade, but never the science. We claim Locke as ours, the metaphysicians claim him as theirs; but our claim is so much the stronger for that, while we call metaphysics a part of our science, we see that Locke only became the metaphysician on and through the Physician. In his case, Physic made metaphysic. I must not venture to follow the life of Locke, but I commend his works in their entirety to every student of Medicine. They make free men, and they infuse power in a manner not understood without trial. Moreover, they are easy to read and easy to digest. Locke died on October 28, 1704, at Oates, near Ongar, and is buried hard by there.

I have nothing more to add to the history of Christchurch College in its Medical aspects. It is a college we may all be proud of, whether we be of Oxford or elsewhere. May its future be as bright in our annals as its past is luminous!

Trinity College.

Trinity College was laid in the year 1554 by Sir Thomas Pope, a wary politician and an eminent scholar. Pope was the friend of good Sir Thomas More, and was selected by Henry the Beast to convey to More the sad tidings of execution. Pope undertook the office, but was much affected, and was cheered by his less fortunate friend with many and consoling words. At last, these failing, More, his ruling passion for a joke strong in the very face of death, called for a drinking-glass. Having received the goblet, he used it, as the old books have it, "after ye manner of an urinale." The vessel nearly filled, More held it up to the light, and, with the knowing look of one of the water Doctors of those days, said, in imitation of their manner, "Master Pope, this man must have lived longer if it had pleased the King." Trinity College maintains a President, twelve Fellows, and twelve scholars. There is also a scholarship called the Blount Scholarship, and a Tylney Exhibition. The College is not famous for its Medical scholars: in 1664, one Ralph Bathurst, M.D., F.R.S., and priest, was made President, and remained in office until his death in 1704: one of the Gresham Professors, Dr. Thomas Warton, was also a member of the College. Their histories are exclusively local.

St. John's College.

St. John's College was given to Oxford by Sir Thomas White, a merchant tailor of the City of London. It was built in 1557. It originally belonged to the monks of St. Bernard. St. John's has a President, eighteen open Fellowships tenable for life, five open scholarships, and twenty-eight appropriated scholarships, tenable for five or seven years, by persons under twenty years. The last-named scholarships belong as follows:—Twenty-one to Merchant Tailors' School, two to Coventry, two to Bristol, two to Reading, and one to Tunbridge. Four Fellowships were added to the College in 1854 by Dudley Fereday. St. John's is one of the first colleges in which botany was systematically taught. Wm. How, a Physician and botanist, flourished here, and Dr. Sherard, a member of the College, and an eminent botanist, brought hither to teach botany the distinguished Dillenius, the friend of Linnæus, and the first Botanical Professor on the foundation of Sherard. Linnæus himself paid a visit to Oxford, and was entertained by Dillenius.

A Physician named William Brewster, M.D., a Fellow of St. John's, was a benefactor of the College. He left it a legacy of £2000, with which in the year 1718 three rectory livings were purchased. Two Physicians are on the list of presidents—viz., Ralph Hutchinson, M.A. and Physician, elected President on June 9, 1590, and in office until his death on January 16, 1605; and William Levinz, M.D., elected on October 10, 1673, and in office also until his death in 1697.

There is one Physician famous rather than great, who sprang from this college. I refer to Dr. Robert James, the inventor of the well-known and still much-used James' powder. James was a Staffordshire man, born at Kinverston in 1703. He studied at St. John's 1724-26, and then went to practise in Lichfield. Later he opened in Birmingham, and ultimately he settled in London. He took the M.D., not from Oxford, but from Cambridge, and throughout life he was a very successful Practitioner in every sense. His contemporaries give him position as an able man. He wrote "A Medical Dictionary," a "Practice of Physic," a "Dispensary," a treatise on "Fevers," an essay on "Diseases of Children," and a paper on "Canine Madness." There is nothing very original or great in any of these works, but they are passable, and it is not wonderful that in their day they were popular. We attach a sort of stigma to Dr. James for having preserved the secret of his powder. We ought, however, not to be unjust, and we should not measure our own pure ways of this day with the ways of his day. In fact, it was quite etiquette in James's time to possess a secret remedy, and the man who had a remedy which did good was thought to be what my Lord Dundreary would call "an arthenine" if he did not keep it to himself and protect it. Thus John Hunter commended Jenner to keep a remedial measure secret, and to secure it. Thus Mr. Cockle, when he started his pills, gave no offence to any one, but did what every other fellow then would have done who had the wit to invent so good a pill—viz., make the most he could out of it. Of course, I do not defend the practice adopted by James and Cockle and recommended by Hunter, but I say we ought to be fair to them. We consider ourselves in these days spotless of such offences: that is our way of reading what we do, and it is exceedingly nice and consolatory as a reading. But what if in the next century it were to be considered disreputable for any Medicus to advertise a book? Shall our great and little advertisers be condemned wholesale, and for ever, because

they did as did their fellows? I think that would be unjust of next century, and for that reason I would be fair to last century.

Dr. John Munro, the Psychologist, was a member of St. John's College 1733-40, and the last Medical celebrity of it I have to name.

Jesus College.

Jesus College was founded by Hugh Price. It was chartered by Queen Elizabeth in the year 1571. Price's object was to leave a college at which certain scholars of Wales might be educated. By the present ordinance there is a Principal, thirteen Fellows, and eighteen Scholars. It is ordered that one half of the Fellowships are to go to Welshmen or Monmouth men, but what is to be done with the odd Fellow deponent sayeth not.

Wadham College.

Wadham College was the gift of Nicholas Wadham and of his good wife Dorothy, both of Merifield, Somerset. It was founded in 1613. The college now consists of a Warden, fifteen Fellows, fifteen scholars, two chaplains, two clerks, and ten Hody exhibitioners. There are also eight special exhibitions, one of which is for botany, and two for Medicine. The first Medical exhibition is for a Fellow, and is worth £90 a year; the second is for a Scholar, and is worth £10 a year. The Medical exhibitions were left by the Rev. Dr. John Willis, D.D.

One great name in Physic attaches itself to Wadham College—I mean that of the immortal John Mayow, LL.D., M.D., F.R.S. The details of the life of this remarkable man are deficient; but we know that he was born in London on September 17, 1621, and entered at Oxford in 1640. He studied for the law, and graduated as LL.D., but soon took to Physic, and practised Physic alternately in Bath and in London. He was made F.R.S. in 1678, and died on September 16, 1679. He is buried in St. Paul's, Covent-garden. John Mayow left in one pair of covers the "Tractatus Quinque Medico-Physici." Of these, the first is on the nitro-ærial spirit; the second, on respiration; the third, on the respiration of the fœtus (in utero et ovo); the fourth, on the motion of the muscles and on the animal spirits; and the fifth, on rachitis. Of these treatises, that on the nitro-ærial spirit is the most important. In it Mayow virtually discovers oxygen, and discloses the true relations of man and animal to the air. His mind, in fact, first distinguished the animal fire, saw where the fire was lighted, and conceived what it performed as the originator of force in the living body. His was true genius struggling through densest error and expounding truths which yet we have not fully discerned, near though they lie to us.

Pembroke College.

Pembroke College was the foundation, in 1620, of Thomas Tesdale, of Glympton, Oxfordshire. It maintains a Master, not less than ten Fellows, and not less than twelve scholars. All the Fellowships are open, and all are comparatively rich. One Fellow on the "Sheppard Fellowships" is bound to proceed to the degree of D.M.

Sir Thomas Browne, author of the "Religio Medici," was a member of Pembroke 1623-27. The reader who will do me the kindness to turn to the Medical History of Norwich will find Sir Thomas there described, and the inquirer who would see the remains of him will find his skull in the Norwich Hospital museum. He is the only notable Doctor of Pembroke: he was born in London on October 10, 1605, and died on October 19, 1682.

Worcester College.

Worcester College existed under the title of Gloucester Hall from the year 1283, but it was not transformed into a college until 1714, when Sir Thomas Cookes, of Bentley, in Worcestershire, endowed it, and secured for it a collegiate charter. The college has a Provost, fifteen Fellows, elected without preference to any particular place, fifteen scholars, each receiving £70 a year, and seven exhibitioners.

A Physician, by the name of Dr. John Maplet, was Provost or Principal of this college when it was Gloucester Hall, from the year 1660 to 1662. We must also claim from its students as belonging to Physic that strange eccentric knight Sir Kenelm Digby. Sir Kenelm would form a better subject for a romance than for a tame biography. He was born in London in 1603, and when very young pursued his studies at Oxford. He served in various positions—as politician, soldier, and chirurgeon; but I cannot discover that he ever graduated in Medicine or in Surgery. He wrote various essays of a metaphysical character, together with a discourse on the "Vegetation of Plants;" "Receipts in Physic and Surgery;" "Choice Experiments and Receipts in Physic and Chirurgery;" a book called "The Closet Opened, with a Discovery of Several Ways for Making Metheglin and Cherry Wine, with excellent Directions for Cookery;" and a memoir entitled "Medicina Experimentalis." The most curious of all Digby's Medical hypotheses had reference to the sympathetic powder which he invented, and upon which he descanted in a separate work. The powder was made by calcining vitriol, and it was used in one of two ways for the cure of wounds. It was either to be applied to a piece of linen, coloured with the blood derived from the wound, or the weapon with which the wound had been inflicted was to be covered with an ointment and dressed with the sympathetic powder three times a day. Meanwhile the edges of the wound itself were simply to be brought together firmly, and the wound was under no pretence to be touched *for seven days*. When the wound was unbound, at the end of seven days, it was usually found to be quite healed. At the period when Sir Kenelm Digby flourished wounds were treated by being left open, or by being charged with tow or flax covered with "healing" ointment. By the so-called sympathetic method the wound was left to nature, and the patient was cured, though the powder were applied to linen or weapon a hundred miles away. Of course, Sir Kenelm was at sea in regard to the sympathetic influences, but his mystical practice had the effect of calling the attention of the Chirurgeons to the natural curative powers of nature, and perhaps, as Dr. Paris has suggested, it gave origin to the mode of treatment afterwards designated "healing by the first intention."

Sir Kenelm Digby died in London on July 11, 1665.

In what has been written I bring to a conclusion the report on the colleges of Oxford. A line or two more must be devoted to the "*Halls*."

The Halls.

The Halls were originally Inns or Hostels where the students were lodged. In the time of the first Edward there were three hundred halls in the city. One by one they dwindled away as the colleges rose to supplant them, and now only five remain—viz.: St. Alban Hall, St. Edmund Hall, St. Mary Hall, New Inn Hall, and St. Mary Magdalen Hall. These halls are, in fact, small colleges. They are governed by a principal. In St. Mary Hall there are six Dyke scholarships, left in 1677 by Dr. Thomas Dyke, M.D. In 1858, Sir Thomas Dyke Acland left a benefaction for two more scholarships to belong to the same hall.

Of the Medical men educated in the halls, I may name Dr. George Bate, 1626-30, and Sir Richard Blackmore, M.D., both of St. Edmund Hall. Bate is notorious for having played his cards so well as to be in turn Physician to Charles the First, Oliver Cromwell, and Charles the Second. He wrote a history of the civil war, a book of not much account; he was a man of low power, and of lower cunning. To curry favour with Cromwell he cursed the first Charles, and to curry favour with the second Charles he let it pass that he finished the Protector by an overdose. The sooner we have done with him the better. Blackmore was Physician to William the Third, who conferred on him knighthood. He was a poet was Blackmore, who had the facility of fixing on the noblest subjects for his muse; but opinions widely differ as to the merits of his compositions. In his own day he was considered a sort of harmless literary lunatic, but in after days both Johnson and Addison commended him. He was a violent opponent of Lady Mary Wortley Montague in her endeavours to introduce the practice of inoculation. Sir Richard lived to the age of nearly ninety years. He entered at Oxford in 1668, and he died on October 6, 1729.

St. Mary Magdalen Hall claims Sydenham as one of its scholars, and an anatomist of some eminence named Dr. Edward Tyson, 1666-70. Tyson was a Fellow of the Royal Society, and at the closing part of the 17th century was lecturer on anatomy at Surgeons' Hall. He wrote an essay on the anatomy of the porpoise. He was evidently a good teacher, and commanded general respect: he died in London on August 1, 1708.

Private Halls.

By a statute of 1855, private halls may be opened in Oxford by any M.A., or other member of convocation, of not less than 28 years of age, who has been resident for one of two or two of five years, or who may have assisted in the tuition of the University during three of the ten previous years.

LIBRARY OF THE UNIVERSITY OF MICHIGAN

The master of the private hall to obtain a license must present testimonials from the head of his house and from a member of the Hebdomadal Council. The hall must not be more than one and a half mile from the Carfax, and the Vice-Chancellor must give his sanction to it before it can be opened. The private hall system has not as yet been very successful; at all events, only one has been established. The plan, however, is liberal and sound.

REVIEWS.

The Laws Relating to Public Health—Sanitary, Medical, Protective—including the legislation to the end of the last Session of Parliament connected with Adulteration of Food, Alkali Works, Apothecaries, Arsenic, Bakehouses, Baths and Wash-houses, &c., &c. By THOMAS BAKER, Esq., of the Inner Temple, Barrister at Law, author of the "Laws Relating to Burials." London: Maxwell, Sweet, Stevens, and Hayes. 1865. Pp. 698.

FEW things are more desirable either for society in general or for the Medical Practitioner in particular, than a consolidation of the laws relating to public health, as making clear to all their duties and responsibilities in connexion therewith. Such a consolidation it is not improbable would enable a private individual or a Medical man to learn what are his duties and his responsibilities, as by law laid down; but it is a task which in view of the labour which it involves, it is not probable will be taken in hand for many a session to come, supposing it to be practicable in the hands of our legislators. It has, however, been practically effected in a work now before us, which sets forth, in a form accessible and intelligible to all, the exact position of each as regards the "Laws Relating to Public Health." Mr. Thomas Baker, in the work in question, to which he has evidently devoted great pains and attention, has set out in the most ready form the statutes relating to the question, bringing the legislation upon the subject down to the present day, and illustrating every doubtful section by the citation of cases in point. A great boon is added in that the cases in question are not merely presented with a title and a series of confusing numerals which leave the inquirer to ramble through "Adolphus and Ellis" or the "Queen's Bench Reports" till he turns up what he wants, involved in a mass of superfluous matter, but are set out, so far as they relate to the code in point, in a clear and precise digest. Practical utility is given to the whole by a copious index and an alphabetical reference to the cases quoted.

The author is already known to the legal profession for his work on the "Burial Acts," and the favourable reception which that found may be accepted as a guarantee that the present volume will not be found wanting in any of the requirements of a thoroughly practical guide through the intricacies of the "Laws Relating to Public Health."

On Some Malformations of the Organs of Generation. By WILLIAM TURNER, M.B., London, F.R.C.S.E., Senior Demonstrator of Anatomy, University of Edinburgh, Edinburgh. Oliver and Boyd. 1865. Pp. 18.

THIS is a little pamphlet, in which Dr. Turner describes four cases of malformation of the genital organs. Case 1 was that of a male, in which the left testicle was retained within the abdomen.

The body and globus minor of the epididymis were present, but the globus major was absent, and thus the epididymis had no direct communication with the testicle. The vas deferens ended in a *cul de sac* behind the bladder. The left kidney was atrophied, and the left ureter opened either into the utriculus or into the urethra at the margin of the mouth of the utriculus.

The interesting point about this case is that it seems to confirm the views recently brought forward by Drs. Cleland and Banks, that the globus major of the epididymis is formed from a body which is at first quite unconnected either with the testicle or with its efferent tube. Case 2 was one of uterus unicornis. The right cornu of the uterus was developed, while the left cornu was atrophied. The left ovary was thin, and destitute of scars (the subject was past the middle period of life), but the left Fallopian tube was two inches long, and ended on the one side in a fimbriated pavillion, on the other in a *cul de sac*. As has been observed in some other cases of one-horned uterus, there was renal anomaly—the left kidney was absent. Cases 3 and 4 are described by Dr. Turner as uteri bicornes unicolles, a term used by Kussmaul to denote those cases where the horns of the uterus have united at a lower part than usual, and yet not so low as to separate the cervix uteri into two cavities.

CAUTION TO MEDICAL PRACTITIONERS RECEIVING LUNATIC PATIENTS.—At the Home Circuit, Hertford, July 14, before Mr. Baron Pigott, James Quilter Rumball, a Medical Practitioner at Harpenden, was indicted for a misdemeanour in taking charge of a lunatic to board and lodge without having a licence or certificate. Mr. John Clerk and Mr. Poland appeared for the prosecution; Mr. Serjeant Ballantine and Mr. W. A. Clerk were for the prisoner. The prisoner, by the advice of his counsel, pleaded "Guilty," but protested that he had received the patient under a certificate of delirium tremens. Mr. Baron Pigott, after taking time to consult his learned colleague in the commission, said that it was necessary to inflict a sentence, because it was of great importance it should be understood that the salutary provisions of the statute in this respect could not be disregarded with impunity. However, as it appeared that the defendant had no intention to violate the law, and had supposed that as the patient was only suffering under an attack of delirium tremens it was not a case of lunacy within the Act, and as, moreover, it was represented that the defendant was not in circumstances to pay a large fine, he should only impose a fine of £20.

NEW ST. THOMAS'S HOSPITAL.—The Governors of St. Thomas's Hospital have now under their consideration, and will probably determine on Tuesday, the designs prepared by Mr. Henry Currey for the new Hospital proposed to be erected on the south bank of the Thames, and which are set forth in twenty-two drawings, including one very large and very good perspective view, showing the aspect the building, or rather pile of buildings, will present from the river, along which it will extend 1200 feet. It comes close up to Westminster-bridge, on the right hand side (when going towards Astley's), and shows towards the river seven separate blocks, four stories high above ground, connected by corridors and service-buildings, the pavilion principle being, of course, adopted. The pavilions are placed at a distance of 125 feet from each other, the centre court being increased to 200 feet, which distance will admit of ample sunlight and air to every block. The wards are designed to be 28 feet in width, by 120 feet in length, and 15 feet in height, and will accommodate 28 beds, giving a cubic capacity for each patient of 1800 feet. The beds are placed at distances of 8 feet from centre to centre, and the windows are arranged alternately with the beds at a level to enable the patients to look out of them. The number of beds will be 538. The water-closets, lavatories, and bath-rooms attached to each ward are projected from the main building, and are cut off from the ward by intercepting lobbies, with windows on both sides. The water-closets and lavatories have also windows on all four sides to provide for thorough ventilation, with a view to prevent the escape of any noxious effluvia into the ward. The arrangement here seems very satisfactory. The chapel is placed in the centre of the building, communicating with the corridor of one-pair story, with convenient access for both sexes, and is designed to give 300 sittings. The museums, school-buildings, lecture-theatres, &c., are proposed to be placed at the southern end of the ground, as indicated on the plans, but the detailed arrangements of this department are not completely matured. The building is designed to have fire-proof floors throughout, formed with wrought and rolled iron joists, and concrete. The windows go up to the ceilings of the wards. The floors will be of oak, and the wall surfaces finished with Keene's or Parian cement. The terrace towards the river is proposed to be kept 4 feet above the public footway. This, with the height of a parapet, 3 feet 6 inches, will prevent any overlooking by the public. The style adopted may be called, broadly, Italian. Mr. Currey's approximate estimate, the walls being of brick with stone dressings, is £330,000. If the whole building be faced with stone, the cost would be about £30,000 more. The estimate includes a bed of concrete, 10 feet thick, under the whole surface, and some idea is given of the size of the area covered when it is mentioned that for every additional yard in depth of concrete the extra expenditure will be £4,000.—*Builder.*

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PROVINCIAL CORRESPONDENCE.

IRELAND.

DUBLIN, June 27, 1865.

AT the south side of the nave in the International Exhibition will be found many cases of elegantly-constructed microscopes and other philosophical instruments. Among the houses represented in this section are those of Crouch, of Bishopsgate-street; Dallmeyer, of Bloomsbury-street (who exhibits a very extensive collection of splendid instruments); R. Field and Son, of New-street, Birmingham; J. Spencer and Son, Aungier-street, and Yeates and Son, Grafton-street, both of Dublin, etc., etc. Of these instruments I shall select for more special description the very ingenious and elaborate optical saccharometer of the Rev. John H. Jellett, Professor of Natural Philosophy in the University of Dublin, of which, through the kindness of the inventor, and with the permission of the Council of the Royal Irish Academy, I am enabled to add a diagram from an electrotype plate of the original wood-cut published in the *Proceedings* of the latter learned body.

On June 25, 1860, Professor Jellett brought under the notice of the Royal Irish Academy a new analysing prism, a description of which will be found in the seventh volume of their *Proceedings*, p. 348.(a) On January 26, 1863, he read, before the Academy, a paper, in which he stated that his attention had been directed to the possibility of applying the prism in question to the construction of a saccharometer capable of giving more accurate results than those obtainable by means of the instrument of Soleil. Of this saccharometer, constructed by the Messrs. Spencer, "to whose ability, both in carrying out the instructions given to them, and in suggesting methods for overcoming practical difficulties," the author expresses his obligation, the annexed diagram (Fig. 1) is a representation.

FIG. 1.

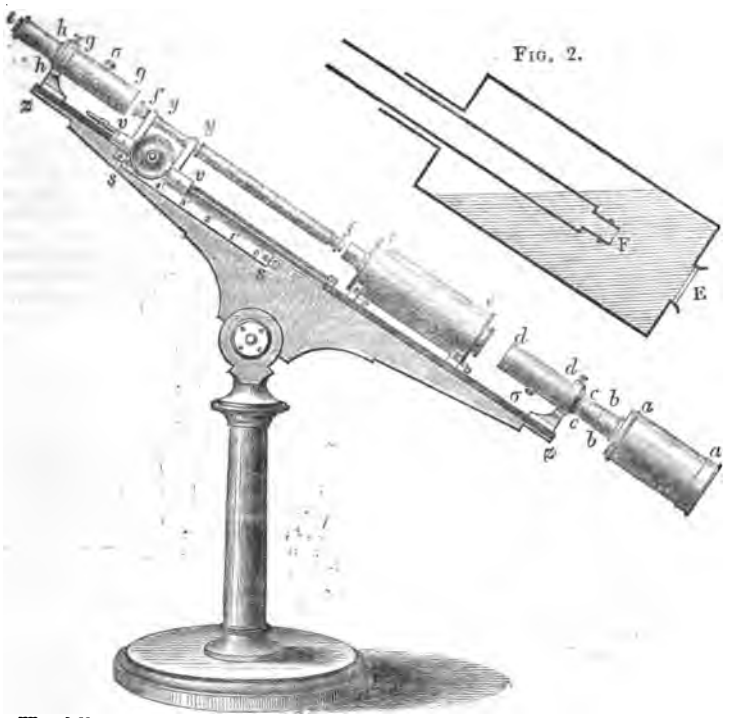

FIG. 2.

The following description of the diagram I quote from the *Proceedings* of the Academy, vol. viii., p. 279:—

"*a a* is a short tube containing two large lenses, serving to condense the light of a lamp, which is placed as nearly as possible in the principal focus of the lower lens. *b b*, *c c* is a short tube, carrying at one extremity a lens, *c c*, and at the other extremity a diaphragm, *b b*, pierced at its centre by a very small hole, *O*, which is situated in the principal focus of the lens *c c*, and also, when the instrument is adjusted, in the principal focus of the upper lens *a*. By this arrangement a beam of light is obtained emerging from *c c*, sensibly parallel to the axis of the tubes. This beam is polarised by being transmitted through a Nicol's prism, contained in the tube *d d*. *e e* is a vessel, pierced at the lower end by a circular hole, which is closed by plate-glass. This vessel contains a fluid possessing a rotative power opposite to that of the fluid under examination. This latter fluid is contained in the tube *f f*, which rests on the two upright pieces, *y y*. These pieces are attached to the transverse piece, *v v*, which carries a vernier, whose divisions correspond to those of the scale, *s s*, which is attached to the bar, *z z*, which carries all the parts of the instrument. The transverse piece, *v v*, is capable of sliding along *z z*, this motion being produced by a chain attached at both ends to *z z*, passing round a spindle with a matted head attached to *v v*. By these means a motion can be given to the tube, *f f*, parallel to its own axis; and, by a very simple arrangement, the zero of the vernier is made to coincide with the zero of the scale, when the extremity, *f*, of the tube is in contact with the piece of glass covering the lower aperture in the vessel *e e*. It is plain, then, that the numbers read on the scale, which is graduated so as to be read to 0 inch ·001, will denote the length of the column of fluid, *E F* (Fig. 2), interposed between the bottom of the vessel and the bottom of the tube. *g g* is an analysing prism, constructed as before described.(b) *h h* is a lens, and *l* a diaphragm with a small hole, at which the eye of the observer is placed. The polarising and analysing prisms are fixed in their places by small screws, *σ σ'*, each passing through a transverse slit in the outer tube, so that when partly unscrewed they allow the prisms to turn through a small angle round the axes of the tube. In using the instrument, the polarising prism may be set in any position, the analysing prism being then carefully adjusted, so that the tints in the two halves of the circular spectrum(c) may, when there is no fluid interposed, be exactly equal.

"Suppose, now, that the object is to ascertain the strength of a given solution of cane sugar. In this case, the fluid to be used in the vessel *EE* may be French oil of turpentine. A certain quantity, the amount of which depends on the strength of the solution to be observed, having been poured into the vessel, the tube (*f f*) is then filled with a solution of sugar, whose strength is accurately known. The tube is now replaced in the upright pieces, and the zero of the vernier made to coincide accurately with the zero of the scale. The milled head is now turned so as to draw back the tube until the tints on the two parts of the circular image, seen through *l*, become equal. The number on the scale corresponding to the zero of the vernier is then noted. Let this reading be *R*, and let *S* be the strength of the known solution.

"Now, let this solution be removed from the tube, which is then to be filled with the solution whose strength is required. The same process having been gone through, let the new reading be *R'*; then the strength required is given by the equation—

$$S' = \frac{R'}{R} \cdot S.$$

"If the experiment be carefully conducted, and if there be no error in the strength of the standard solution, the error in the measurement made, as above described, ought not to exceed 0 grs. ·02 per cubic inch for a single experiment. If the mean of a number of experiments be taken, the error would, of course, be still less.

"The author has given to this instrument the name saccharometer, derived from one important use to which it may be applied. This, however, is but one of its applications; and there are many others, at least as important. It may generally be defined to be an instrument by which the ratio of the rotatory power of any transparent fluid to that of a standard fluid may be accurately determined."

(a) The analysing prism above referred to is thus constructed:—"A rhombic prism of Iceland spar, whose longitudinal edges should have a length of about two inches, or a little more, is cut by two planes perpendicular to those edges, so as to form a right prism. This prism is divided by a plane parallel to the edges, and making a small angle with the longer diagonal of the base; one of the two parts into which the prism is thus divided is then reversed, so as to place the base uppermost; the two parts are cemented together, with the surfaces of section in contact, and the ends of the prism thus formed are then ground and polished."

(b) *Proceedings* of the Royal Irish Academy, vol. vii., p. 348.

(c) *Ibid.*, p. 349.

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I have thought that a description, accompanied by an illustration, of the above-mentioned very accurate instrument might not be uninteresting to your readers, and that it might serve to call the attention of those who may during the summer visit the Exhibition to the admirable collection of philosophical apparatus to be found at the corner of the south side of the nave adjoining the Italian Department. For, although it must be acknowledged that in estimating the strength of a saccharine solution the specific gravity of the fluid will, generally speaking, be a sufficient guide, still it is well that the Physician should be acquainted with those more precise means of investigation which science has placed at his command; and, moreover, as is indicated in the concluding paragraph of the foregoing quotation, other, probably still more important, applications of the instrument in question remain to be developed.

GENERAL CORRESPONDENCE.

FEVER AND WORKHOUSES.

LETTER FROM DR. J. S. BRISTOWE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Owing to several circumstances, among which may be enumerated the long-continued prevalence of typhus fever in London, the alarm created by rumours of outbreaks of epidemic diseases in Russia and other parts of the Continent, the extension of typhus fever in workhouse infirmaries, and the mismanagement which has been shown to exist in one or two at least of these latter institutions, two questions have of late been brought prominently under the notice both of the public and of the Medical Profession—one, in reference to the best mode of dealing with typhus when that disease is, as now, epidemic; the other in reference to the improvement of the Hospitals attached to workhouses.

I, amongst others, have given a good deal of thought to these questions, and I have arrived at certain conclusions in regard to them. Some of these conclusions are certainly not novel, perhaps none are so; some have certainly been forestalled in the report on workhouses which has recently appeared in the pages of your contemporary—the *Lancet*; but in many respects they run counter to the practices, if not to the opinions, which now generally prevail; and as it is most important that these questions should be thoroughly discussed with a view to the determination of the best practicable means of dealing with the matters to which they relate, I do not hesitate to ask permission to contribute towards such a discussion by the expression of my views in the columns of your journal.

The two questions may seem at first sight to be perfectly distinct from one another, and I shall in great measure discuss them separately. I believe, however, and hope to show, that they are intimately related.

It is well known that typhus is essentially a disease of the lower classes; that it is among them that it originates, among them that it commits its ravages; and that it is, therefore, to the disease as it occurs among them that the question, "How shall typhus be best dealt with?" practically relates.

The conditions under which the poor live (in towns especially) render it next to impossible to treat any cases of typhus in their dwellings either with benefit to the patients themselves or with safety to the other inmates. The want of proper accommodation, the want of good nursing, and the impossibility in their absence of the judicious administration of food, of stimulants, and of medicines, make it most important in the interests of the patients themselves that they should be treated away from home. In the interests of the healthy such removal is still more important, since in the presence of overcrowding, filth, and want of proper ventilation such cases become almost of necessity the centres of local epidemics of typhus. These considerations show how essential it is, in the case of the poor, that those who become affected with typhus should be conveyed at the earliest possible moment to suitable institutions, and should be detained there during the whole period of their sickness.

There are none, probably, who would be disposed to dispute this conclusion; and many would doubtless add that in our general Hospitals and in the Fever Hospital we have precisely the institutions best suited for the purpose. Yet notoriously they have failed to arrest the epidemic; and it would not be difficult to show that they have failed necessarily, and without any fault of their own. Indeed, I maintain we have no right to look to them to do more than give a helping hand when epidemic diseases prevail.

In the first place, as regard the general Hospitals. Of these institutions there are at the present time in London about a dozen. But their income and accommodation are alike limited, and all have their ordinary duties to discharge, as well during the prevalence of epidemics as at other times. Now, without serious neglect of these other duties, it is utterly impossible that these Hospitals can admit for treatment more than a certain limited proportion of typhus cases—a proportion regulated by their own capabilities, and not by the requirements of the epidemic itself. But in considering the duties and capabilities of general Hospitals in this matter, it must not be forgotten that whether it is right to admit typhus cases at all into them is a question of considerable difficulty, and one which many distinguished Physicians have on no paltry grounds answered in the negative; neither must it be forgotten that several of these Hospitals are from their construction wholly unsuited for the reception of fever, and that its reception into them would be altogether unjustifiable. Nor, again, should it be forgotten that all the Hospitals but three—St. Bartholomew's, Guy's, and St. Thomas's—are in great measure private charities, supported by voluntary subscriptions, and that the general public has little claim upon them beyond what the subscribers and governors choose to allow; so that there are three only in regard to which the public have a clear right to demand that typhus cases shall be admitted for treatment; and as regards these the public could clearly insist on nothing more than that which is already and ever has been granted by them—the appropriation, namely, of a certain proportion of their beds for the treatment of this disease. On the whole, I think it must be admitted that general Hospitals, at all events, as at present constituted and supported, are altogether unequal to cope with an epidemic of typhus.

Next, as regards the Fever Hospital. This, beyond all doubt, is an admirable institution, admirably conducted, and does a vast deal of good. Yet, although constructed and maintained for the express purpose of receiving the typhus cases which occur among the poorest of the population, its means are precarious, and depend, like those of most of the general Hospitals, on donations and annual subscriptions, and, as has been recently shown, are quite inadequate to meet the demands made upon the institution. But if the Fever Hospital is to be a receptacle for all the cases of typhus occurring amongst the poor of London, it would need, in the height of an epidemic, to comprise not so much hundreds as thousands of beds. But the funds to support an institution of such magnitude would, even during the prevalence of an epidemic, be quite unattainable from the usual source; and it is quite certain that in the intervals between epidemics, when not more, perhaps, than fifty beds are needed for constant use, the mere maintenance of the then superfluous buildings, etc., would be altogether ruinous. But an objection of equal importance to the maintenance of a single fever Hospital for the whole of London is that patients have to be brought to it from great distances—they come now from Greenwich and from Woolwich,—and that the fatigue of such journeys is not unfrequently fatal to them.

What is needed is clearly a number of institutions scattered at such intervals over the metropolitan area as that no applicants need undergo a dangerously long journey to reach them—a number of institutions at which all typhus applicants shall be freely admitted—a number of institutions the funds of which are not dependent on the caprices of benevolence, but admit of increase or decrease in accordance with the demands which from time to time are made upon them. Such institutions already exist in our Metropolitan Workhouses. These already provide, in the infirmaries attached to them, Hospitals for paupers and for those whom sickness pauperises; these already acknowledge their liability in the matter by themselves dealing with the cases of fever that come under their notice, or by sending them with payment to the London Fever Hospital; these already stud (and far more conveniently than general Hospitals do) the surface of the Metropolis; and these alone have the power by law of regulating, by means of rates, their income by their expenditure, and of calling for extraordinary funds to meet extraordinary demands.

It seems to me, then, that each Workhouse Infirmary should be provided with separate fever wards or buildings, or, at all events, should be so constructed as to allow of the cutting off of a portion of its space for the purpose of receiving fever or

other infectious cases. But it would not be inconsistent with my views if, under certain circumstances, two or three contiguous parishes were to unite in the erection and maintenance of a common Hospital or fever-house. If the plan which I advocate were adopted, the London Fever Hospital might conveniently be the fever Hospital for the parishes in its immediate neighbourhood; or, if still supported by voluntary contributions, might remain as an independent institution, dispensing benefits according to the views of its governors and Medical officers; the general Hospitals which are dependent on voluntary subscriptions might still admit or refuse fever cases according to their several circumstances; and those general Hospitals,—the endowed Hospitals—on which the public have a direct claim, might still be required to admit, together with other cases, a certain proportion of fever cases; but the chief duty of dealing with typhus epidemics, and the chief expense, would fall, as it ought to fall, upon the parochial authorities and, through them, on the rate-paying public.

Why, indeed, it may be here asked, should the charitable few be made, through the agency of general Hospitals, to pay for the performance of those duties which it interests us all—charitable and uncharitable alike—to have efficiently performed?

I acknowledge freely that at the present time very few Workhouse Infirmaries are in a condition to receive for treatment either typhus or other infectious diseases; and I think, therefore, that, under present circumstances, the Poor-law Board has, on the whole, acted judiciously in recommending the parochial authorities to send such cases to the Fever Hospital. But, clearly, Workhouse Infirmaries ought to be fitted for the reception of all forms of diseases, and clearly it is the duty of those who manage them, and of those who overlook them, at once to take measures to have them re-arranged or re-constructed with that object in view. This, however, leads me to the second question,—that in reference to "the improvement of the Hospitals attached to workhouses,"—a question which, with your permission, I will discuss on a future occasion.

In conclusion, I may point out that the arrangements made in regard to typhus would be equally available in the management of other epidemics; and, further, that no plan of dealing with typhus, however well devised, can avail to arrest its spread, unless at the same time power be given by law to remove the sick from their homes, and to place them in the institutions prepared for them. I am, &c.

J. S. Bristowe.

2, Queen-square, Westminster, July 12.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, June 7.

Dr. Barnes, President.

Dr. J. Braxton Hicks showed a uterus from which a large fibrous tumour had been expelled in a sloughing state a few days before death.

Dr. Hicks also read a case and showed a specimen of Extra-uterine Fœtation, the abstract of which will appear in our next report.

Dr. Robert Barnes read a paper on

THE DYSMENORRHŒA, METRORRHAGIA, OVARITIS, AND STERILITY ASSOCIATED WITH A PECULIAR FORM OF THE CERVIX UTERI, AND THE TREATMENT BY DIVISION.

The Author described and figured the form of cervix uteri which projected into the vagina as a conical body, the vagina appearing to be reflected off at a point nearer the os internum than normal. The os externum was usually minute, scarcely admitting the uterine sound. This (the os externum) was the real seat of constriction. The os internum normally was a narrow opening; and in these cases of dysmenorrhœa and sterility it was commonly found to be of normal calibre. It was therefore unnecessary to divide it. It was, moreover, dangerous to divide it, on account of the close proximity of the large vessels and plexuses running into the uterus on a level with it. The Author maintained that this form of cervix was a cause also of retro- and peri-uterine hæmatocele, and of peritonitis. All these consequences might arise in single women. In the married state the evils enumerated were aggravated, and new ones arose. Women with this peculiarity were generally sterile; and if they became pregnant it was early in life, before the further consequences were developed. These were flexions, deviations, inflammation of the cervix and body, hypertrophy. Discussing the question of treatment, the Author showed that dilatation was unsatisfactory; that incision of the os internum, as practised by Dr. Simpson's single bistouri caché and by Dr. Greenhalgh's double bistourie caché, was unsafe and superfluous. He objected to the latter instrument, especially, that it must cut as it was set—that it was too much of an automatic machine, not leaving scope for the judgment of the operator. His (Dr. Barnes's) own instrument, constructed like a pair of scissors, acted on the same principle as Dr. Sims's: it divided only the os externum, so as to open the cavity of the cervix. The part to be cut being first seized between the two blades, the operation was perfectly free from risk. The hæmorrhage was usually slight; and a good os was made. He had performed the operation many times, both in Hospital and private practice, and was well satisfied with the results. One advantage of incision over dilatation was, that it relieved the engorgement and inflammation. In illustration of the behaviour of the conical cervix uteri under labour, two cases were narrated. In one, the cervix and the os uteri had returned to their original state, although a fœtus of four and a-half or five months' development had been expelled through them. In the other case it was necessary to open the cervix artificially by means of the Author's cervical dilator and incisions in order to deliver a full-grown child. In both cases pelvic cellulitis followed labour.

Mr. Baker Brown thanked Dr. Barnes for having brought the subject forward. He agreed with most of what had been stated in the paper; was opposed to dilatation as being inefficient and temporary. He described his mode of operating, which was to place the patient in the lithotomy position, and, having introduced a bent speculum, he seized the os with a pair of forceps, and divided it with Simpson's hysterotome. He never divided the internal os; always used a plug of oiled lint to prevent hæmorrhage. He regretted that the operation had lately been condemned by a high authority, but believed it was the only efficient and permanent remedy for these painful affections.

Dr. Greenhalgh was surprised to hear the President's opinion that the seat of stricture in these cases was mostly at the external os. He (Dr. Greenhalgh), on the contrary, expressed his conviction that in the great majority of cases the stricture is situate at the internal os, and consequently he recommended division of the internal as well as the external os. After division he usually introduced one of his bilateral expanding stems, which keeps up steady dilatation and prevents contraction. As regarded hæmorrhage, which some appeared so to dread, he had never but once met with it, though he had operated in nearly one hundred cases. He always used his own bilateral instrument, which cuts both sides at once. The advantages of his plan of operating were, he believed, extreme exactitude, facility, painlessness, and the avoidance of any personal exposure. He expressed his surprise at the remark of Mr. Brown that he had never divided the internal os, when he (Dr. Greenhalgh) had seen him on several occasions freely incise the internal os in the cases under consideration.

Mr. Baker Brown, in answer to Dr. Greenhalgh, said that that gentleman must be mistaken in what he had seen at the London Surgical Home. He repeated that he never in cases of dysmenorrhœa cut through the internal os. Dr. Greenhalgh was evidently confounding this operation with that for fibrous tumour, retroversion, retroflexion, etc., of the uterus, in which he (Mr. Brown) incised freely, and generally through the internal os.

Dr. Routh fully confirmed Dr. Greenhalgh's view. For his own part, he believed in by far the majority of cases the obstruction was at the inner and not the outer os; although he did not deny that in some cases of conoid cervix it was present at the external os. He agreed with Dr. Gream in believing that Dr. Sims's plan of operation would occasionally leave a deformed cervix for life; and he did not think it was necessary to cut through the entire cervix. The instrument Dr. Greenhalgh had invented obviated all danger from hæmorrhage. The same was true of his (Dr. Routh's) instrument, which he, however, preferred, because of the bend, and, therefore, more easy of application in flexion cases. A little bleeding was salutary. In most of these cases there was a

complication of congestion which the very incision by the subsequent hæmorrhage relieved. But there was no doubt that such incisions, however freely made, had a tendency to contract again. Hence it was necessary to keep the cut made patent by some internal uterine pessary, and for some time, it might be for months, so as to allow it to become properly lined with mucous membrane and incontractible. He knew several persons now walking about London with these. In other cases their removal had been followed by conjugal relations and pregnancy, though previously sterile for years. Of the use of sponge-tents and other modes of artificial dilatation, in these cases, he spoke disparagingly. He had seen cellular abscess and death follow their use. They should be used with the greatest caution. He also believed cases of dysmenorrhœa were more common than was generally supposed. Not only was the seat of obstruction more frequently at the internal os than the external, but, indeed, in many cases, the external os was patent and abnormally so, as shown by Dr. Henry Bennet. And there were many and by far more numerous cases of dysmenorrhœa which were in no way due to stricture at either os. As these cases were not, however, referred to by Dr. Barnes, he did not allude to them further.

Dr. Savage laid before the Society an injected preparation of the Virgin Uterus, and detailed with great minuteness its several dimensions and the shape of the various parts. The vaginal portion varied considerably in length and size, the orifice sometimes scarcely admitting a probe; at others being a considerable slit. He then described the arrangement of the vessels, and drew the following deductions from an examination of the preparation:—1. Except in cases of irregular vascular distribution, which happen far from seldom, the vaginal portion of the cervix could be divided without risk of hæmorrhage; division beyond this would endanger the lower cervical arteries. 2. An incision laterally deeper than one-eighth of an inch at any part of the canal of the cervix would be unsafe. 3. An internal os surrounded by a ring of muscle, as asserted by Mr. Wells, does not exist; it is surrounded by muscular fibres subjacent to the mucous membrane, but the complete identification of the latter with the rest of the uterus, and the extremely oblique decussation of the former, could not contribute to the formation of a so-called inner os. The uterine isthmus could never form a stricture. 4. The instruments vaunted for Surgical dilatation, most fortunately for operator as well as patient, did little else than divide half through the vaginal portion of the cervix, and even this not efficiently; the complete division of the vaginal part of the os required the scalpel or scissors. 5. The least bending of the isthmus would cause obstruction without organic constriction. In all these conclusions he was borne out by experience. He believed the obstruction was generally due to curvature. He could not understand Dr. Sims's denunciation of mechanical dilatation, but agreed with Dr. Gream that it was quite as safe and efficacious as division. The nature of the operation which Mr. Wells had said he was in the habit of practising under the bed-clothes, unless it were the same as that introduced by Dr. Simpson or Dr. Greenhalgh, Dr. Savage said the preparation entirely failed to elucidate. Mr. Wells did not perform them at the Samaritan Hospital.

Dr. Graily Hewitt thought that the two questions of the treatment of dysmenorrhœa and of sterility by means of incision of the cervix uteri had been too much mixed up together. He would say a few words first respecting dysmenorrhœa. He believed that in bad cases of dysmenorrhœa the condition present was frequently retention of the fluid in the uterus, and that this retention caused the pain; and he had been at some trouble to prove this. But, on the other hand, he also thought that the condition was capable of being relieved, in most cases, without resort to mechanical treatment of the cervix uteri. The great thing was to diminish the flow of blood, and this could be regulated by general measures; but that there were a few cases in which such general measures were useless he admitted. He differed from the President in reference to the most common seat of the constriction; for, although there were cases in which the os uteri was congenitally extremely small and narrow, yet in the larger number of cases of dysmenorrhœa the impediment was situated at the junction of the cervix with the body of the uterus. With regard to the best method of applying mechanical relief when such was required, he thought that cases must be treated on their own merits. Where the cervix uteri was hard and dense, the cutting operation was most indicated, the difficulty being here the greatest; but, under other circumstances, he preferred the use of tents as dilators. The sea-tangle tent was, he considered, a perfectly safe means of dilating the cervix uteri; but, he would repeat, the cases were few requiring this treatment. As to the mode of incising the cervix or os uteri, here again the operation must be selected according to the case: no one operation could be suited to all circumstances. He would next say a few words on the subject of sterility. It was undoubted that in certain cases the cure of sterility could be effected by dilating the cervix uteri, and much had been said as to the superiority of one mode of dilatation over another. The fact was, that so long as the canal of the cervix was a little enlarged, whether by incision or by dilatation, the necessary end would be served. The great object was to secure a tolerable patency of the canal at about the menstrual period, when conception was most likely to occur. Supposing the sterility to be cured, the dysmenorrhœa which might be associated with it would be also, in all probability, permanently relieved.

Dr. Wynn Williams remarked that he thought no one would deny that Surgical interference was required in some few cases of dysmenorrhœa, but that he considered they might be reduced to almost a minimum by proper therapeutic treatment. He remarked that cases were frequently operated upon without benefit, and related the case of a patient who had been so operated upon, but with no good result, the neck of the uterus forming two large protruding lips. The patient was suffering from an enlarged and congested state of the uterus due to gout. By free leeching, rest, and the injection of a weak solution of iodine and appropriate constitutional remedies she got rid of her troubles. He considered that the seat of the stricture might be in any part of the uterine canal, and that in advanced cases it was difficult to decide where the structure was first situated, as in most cases the uterus became flexed upon itself, with enlargement and thickening above the seat of flexure, which thus formed a stricture. These cases would frequently get well by leeching, rest, the injection of iodine, lotions, and appropriate constitutional remedies. In the few cases where incision was necessary, the incision should be made to commence at the seat of the upper stricture, and gradually enlarged to the external opening. Dr. Williams remarked that as no Surgeon would think of cutting through the whole of the tissues of the penis for stricture in the male urethra, so he considered it quite unnecessary and unjustifiable to cut through the tissues forming the neck of the uterus, though it may be necessary to keep the incision distended by means of tents or dilators.

Dr. Marion Sims was surprised at the great difference of opinion expressed by previous speakers as to the seat of the obstruction, but he agreed with those who thought it was at the lower orifice. He then went into some statistical details of his own practice, and laid great stress upon the frequency of curvature of the cervix as a cause of obstruction at the internal os. Though it might, he thought, lead to an actual narrowing of the canal, yet he believed this was an extremely rare occurrence. But in cases of induration and conoidity the os tincæ was abnormally contracted in every case he had seen. Indeed, a conical indurated cervix was incompatible with a normal os tincæ, the existence of the one almost necessarily implying that of the other. With regard to cases referred to by Dr. Gream and Mr. S. Wells, in which the tissue of the cervix had been too largely incised, so that the lips of the os were everted and rolled backwards, he had never seen any such after his method of operating, but had witnessed that result after the use of the metrotome caché; and he attributed it to this—because it cut deeper into the sides of the supravaginal portion of the cervix, and so divided the circular muscular fibres, which are naturally antagonistic to the longitudinal fibres. By his (Dr. Sims's) plan of operating, the incisions upwards were more superficial, though the opening of the os was about the same in both methods.

The President, in closing the discussion, said that he only directed attention to one class of cases of dysmenorrhœa—that, namely, associated with the peculiar projecting form of cervix uteri, and usually attended by sterility. This was the form that required treatment by incision. The obstruction that required division was the os externum, or vaginal portion. The os internum normally was a narrow canal. Dr. Greenhalgh passed his instrument through it as preliminary to his operation. If it admitted this instrument, the os was of full normal size, and could not require cutting. His (the President's) instrument and operation were perfectly safe and efficient. He thought, after hearing Dr. Sims's remarks, that he had underrated the importance and frequency of flexion at the neck as a cause of obstruction.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows, held on Monday, July 17, 1865, the following gentlemen, Members of the College, were duly admitted Fellows of the same:—

William Henry Octavius Sankey, M.D. Lond., Sandywell-park, Cheltenham; William Howship Dickinson, M.D. Cantab, 11, Chesterfield-street, Mayfair; Thomas Buchanan Washbourn, M.D. Lond., Gloucester.

At the same meeting, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the science and practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Robert Blagden, Stroud, Gloucestershire; Alexander Hampton Brewer, Victoria, Monmouthshire; Edward Forster Brockman, 9, Brunswick-gardens, Kensington: Thomas Armetriding Compton, Christchurch, Hants; Thomas Edgelow, Teignmouth; Edward Liveing Ferm, King's College Hospital; William Thomas Ferne, Great Malvern; Walter Anstice Harvey, South Petherton, Somerset; Henry Charles Hilliard, Shefford, Beds; David Jones, M.D. Heidelberg, 15, Welbeck-street; William Leigh, Chiswick; William George Vawdrey Lush, Wilton, Salisbury; George Paddon, Hitchin, Herts; William Pratt, M.D. Liege, Berwie, N.B.; Thomas Francis Raven, 23, Great Percy-street; Frederick William Richards, St. Bartholomew's Hospital; Herbert Tibbits, 12, Charterhouse-square; Ebenezer Fulham Turner, Upper Clapton; Henry George Walker, Hereford; Miles Ashman Wood, 1, Curzon-street, Mayfair; Thomas Arthur Wood, M.D. Edin., Peel, Isle of Man.

The following gentlemen were reported by the examiners to have passed the first part of the professional examination for the licence of the College:—

Herbert Ray Archer, William Keen, John Murray Gibbes, and Frederick William Jackson, St. George's Hospital; Clarence Henry Masiah, Bristol; George Bainbridge, Leeds; William Alexander Slater Royds, Philip Downing Hopgood, Martin Luther Heeles, Rowland Hill Coombs, Michael Perry, Frank Harry Haynes, Frederick Douglas Power, and Frederick Tickell Prince, St. Bartholomew's Hospital: George Francis de la Cœur, Joseph Groves, and Edward Moore Little, King's College; William Spratt, Guy's Hospital; James Augustus Hayden, Charing-cross Hospital; Thomas Frederick Hopgood and Thomas Charles Murphy, University College; John Bathurst Dove, London Hospital; and Herbert Henry Wilkinson, Sheffield.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 18th inst., and when eligible will be admitted to the Pass Examination:—

E. N. Edwards, J. W. Morison, F. W. Fowke, H. P. Banks, Richard Morgan, Henry Cheesman, Jacob French, and J. L. W. Ward, students of Guy's Hospital; J. M. Pringle, B. C. Appleton, and F. W. Newcombe, of Newcastle; J. B. Perrin and W. H. T. Smith, of King's College; H. W. Gostling and J. J. A. Hanne, of St. Bartholomew's Hospital; F. A. Taylor and J. D. Thomas, of University College; Tom Bates and Dixon Brownbridge, of Glasgow; E. M. Grace, of Bristol; Frederick Waterhouse, of Leeds; G. L. Clay, of Birmingham; and John Attygalle, of Calcutta.

The following passed on the 19th inst.:—

F. H. Lovell, A. S. Bostock, and John Glanville, students of St. Bartholomew's Hospital; A. L. Owen and Albert Ryan, of Dublin; E. J. Adams and J. J. Jackson, of St. Thomas's Hospital; G. F. De la Cour and H. Crew, of King's College; Thomas Bailey and J. A. Calantarients, of University College; A. F. Rossy, of Guy's; C. H. Massiah, Bristol; C. B. Sweeting, London Hospital; W. K. Stephens, of St. George's Hospital; George Collins, of Sheffield; J. K. Kenyon, of St. Mary's Hospital; and Frederick Churchill, of Edinburgh.

It is stated that out of the 65 candidates who presented themselves at the above examinations, no less than 24 were referred back to their studies for three months.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, July 13, 1865:—

Adam Linton Bogle, Hey, South Wales; John Hall, Nottingham; William Henry Ansell, Islington; Frederic Berham Nunneley, University College; John Challen Duke, Wick, near Arundel, Sussex; John Huraley, 66, Wardour street, Oxford-street.

The following gentlemen, also on the same day, passed their first Examination:—

Alfred John Leggatt and Frederick William Jackson, St. George's Hospital; Frederic Douglas Power, Rowland Hill Coombs, Philip Downing Hopgood, Michael Perry, and Frederic T. Prince, St. Bartholomew's Hospital; James Webb Booth and David Roberts Pughe, St. Thomas's Hospital; Frederic Wm. Parsons and Edward Moore Little, King's College.

QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the Senate held in Dublin Castle on Saturday, July 15, the following Examiners were elected for the ensuing year:—*Medicine.*—Robert D. Lyons, M.B. Dub., M.R.I.A. *Surgery.*—Robert M'Donnell, M.D. Dub., F.R.S. *Materia Medica and Medical Jurisprudence.*—William D. Moore, M.D. Dub., M.R.I.A. *Midwifery.*—Lombe Atthill, M.D. Dub.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

HUXLEY, THOMAS H., F.R.S., has been appointed Fullerian Professor of Physiology at the Royal Institution.

MOORE, W. D., M.D. Dub., M.R.I.A., has been appointed Examiner in Materia Medica and Medical Jurisprudence in the Queen's University in Ireland.

NEILD, Mr., has been appointed Lecturer on Forensic Medicine at the University of Melbourne.

POLLOCK, GEORGE DAVID, F.R.C.S. Eng., has been elected Surgeon to the General Lying-in Hospital, York-road, Lambeth.

DEATHS.

BAUCHET, M., one of the *agrégé* Professors of the Paris Faculty, Surgeon of the Hôpital St. Antoine, and Chevalier of the Legion of Honour, on July 14, at the early age of 39, having contracted phlegmonous erysipelas while dressing a patient.

CURTIS, THOMAS HEATH, M.D., St. And., second son of William Curtis, Surgeon, Alton, lost on board the *Athens*, Union Steam Ship Company's mail packet, in Table Bay, on May 17, aged 27.

GRAHAM, HENRY GIBBON, late Deputy-Inspector-General of Hospitals, Madras Army, at Elmhirst, near Glastonbury, on July 16, aged 62.

JOYNER, JOSEPH S., L.K.Q.C.P.I., Assistant-Surgeon Royal Artillery, at Neemuch, India, on May 30, aged 25.

ROYSTON, Dr., of Flint, on July 3.

SMITH, JAMES, Surgeon R.N., at Bridge-street, Montrose, N.B., on July 13.

POOR-LAW MEDICAL SERVICE.

RESIGNATIONS.

*** The area of each district is stated in acres. The population is computed according to the last census.

Ashby-de-la-Zouch Union.—Mr. J. A. Wood has resigned the Fourth District; area, 6861; population, 6686; salary, £45 per annum.

Blything Union.—Mr. O. W. Hoffman has resigned the Eighth District; area, 11,089; population, 2590; salary, £43 per annum. The Ninth District is vacant: area, 10 404; population, 2087; salary, £39 per annum.

Mutford and Lothingland Incorporation.—Mr. Daniel Tyerman has resigned the Kessingland District; area, 10,126; population, 4745; salary, £60 per annum.

Mere Union.—Mr. A. J. Chitty has resigned the Second District; area, 13,766; population, 3715; salary, £105 per annum.

Bolton Union.—Mr. W. H. Emmett has ceased to be Medical Officer for the Horwich District; area, 4927; population, 4426; salary, £30 per annum.

Hatfield Union.—Mr. John Ringrose has resigned the First District; area, 7990; population, 1541; remuneration, 10s. per case.

Stockport Union.—Dr. Wm. Rayner has resigned the Heaton Norris District; area, 2695; population, 23,044; salary, £50 per annum.

Worksop Union.—Mr. Alfred Beckett has resigned the Blyth District; area, 7072; population, 1660; salary, £20 per annum.

Ashton-under-Lyne Union.—The Eleventh District is vacant; area, 910; population, 4365; salary, £15 per annum.

APPOINTMENTS.

Bury Union.—John Wardleworth, L.F.P. and S. Glasg., L.R.C.P. Edin., to the Bury District.

Dover Union.—Arthur Long, M.R.C.S.E., L.S.A., to the First Division of the Hangham District; and to the First Division of the St. James's District until March 25, 1866.

Easington Union.—James C. Thomson, M.D. Edin, to the Thornley District until June 24, 1866.

Plympton St. Mary Union.—Geo. G. Bothwell, M.R.C.S.E., L.S.A., L.M., to the First District; Edwyn J. S. King, M.D. Edin., M.R.C.S.E., M.R.C.P. Lond., to the Sixth District.

Prescot Union.—Richard Gorst, M.R.C.S.E., L.S.A., to the Thugton District; Robert McNicoll, M.R.C.S.E., L.S.A., to the St. Helens District; Jas. Ricketts, L.R.C.P. Edin., L.F.P. and S. Glasg., L.S.A., to the Sutton District until June 24, 1866.

Selby Union.—Thos. Perkins, M.R.C.S.E., L.S.A., to the Drax District until June 24, 1866.

Taunton Union.—Vincent Whitgreave, L.R.C.P. Edin., M.R.C.S.E., to the Bishop's Lydeard District until June 24, 1866.

Thame Union.—Thomas Knight, M.R.C.S.E., L.S.A., to the Brill District.

Weardale Union.—John P. Snowdon, M.R.C.S., to the Derwent District until March 25, 1866.

DR. GAIRDNER'S EVIDENCE IN THE RECENT POISONING CASE.—We have received information which leads us to revert in a few words, though not for the purpose of opening up any new discussion, to the new Medical evidence in the Pritchard case. Judging, as we did, merely from the published evidence, we inferred that Professor Gairdner's connection with the facts of the domestic tragedy terminated with his writing a single letter to Dr. Michael Taylor on the 9th February. We now learn that this was by no means the case. In giving his evidence in court, Dr. Gairdner spoke under the impression that the letters, two in number, which he wrote to Dr. Taylor, of Penrith, and which were in the hands of the authorities, were to be produced, and that he would afterwards be again called to give evidence upon them, and upon other circumstances connected with them, which were fully stated in the precognitions. At the discretion of the Crown, how-

ever, this evidence, not being considered essential, was not led, and Dr. Gairdner is therefore unwilling to enter into details which could now only have the effect of giving pain to innocent persons. It appears, however, that the treatment pursued by Dr. Gairdner, and the correspondence which followed, were the result, not indeed of a formed conviction of the presence of poison, but of a strong desire and determination on Dr. Gairdner's part to secure the food of the patient from adulteration by simplifying the diet as much as possible, and absolutely withholding every kind of medicine and stimulant. It seems not improbable, indeed, that the uncompromising character of this advice may have led, indirectly, to the "prejudice" in consequence of which the unhappy victim allowed her Medical attendant to be dismissed. One fact of great importance, excluded by the peculiar management of the evidence for the Crown, but referred to in Dr. Pritchard's correspondence, is that Dr. Gairdner, through Mrs. Pritchard's relatives, had suggested the removal of the poor lady to Penrith, and that this suggestion, adopted and pressed upon her by her brother at Dr. Gairdner's request, was set aside until too late by the same unhappy fatality which led Mrs. Pritchard herself to discountenance every effort made with a view to her rescue. The letter in which Dr. Pritchard refers to this matter was written to his father-in-law in Edinburgh within a few days of his wife's death, and it was identified in Court as being in Dr. Pritchard's handwriting, but was not used as evidence.—*Glasgow Daily Herald*, Friday, July 14.

Mr. Joseph Hodgson, F.R.S.—This estimable member of our Profession, who during the past year has filled the high office of President to the Royal College of Surgeons, will, at the conclusion of the examinations next week, vacate his seat as a member of the Court of Examiners, giving the Profession the benefit of his experience as a member of the Council. It is to be hoped that this retirement of Mr. Hodgson whilst in good health and with faculties unimpaired may be followed by other gentlemen in favour of the younger Councillors. It is stated that Mr. Quain will in all probability succeed Mr. Hodgson.

Museum of the College of Surgeons.—Mr. W. H. Flower, the conservator of the above collection, submitted his half-yearly report to the Council of the College on the 13th inst., from which it appears that the publication of an annual calendar is in contemplation, to include, amongst other matter of great interest to the members, these valuable reports on the condition and progress of the Museum. The subjects which require special notice on the present occasion may be taken under the following heads:—The Pathological, Osteological, Histological, and Helminthological Collections. Of the former, thirty-six are put up in spirit, and are of considerable interest, not only on account of their intrinsic value, but from the admirable manner in which they have been mounted by Dr. Pettigrew. As especially deserving attention is a very large multilocular ovarian cyst, and others containing teeth and hair, beautifully injected by this gentleman; specimens of talipes varus, the muscles dissected; Dr. Wiblin's case of elephantiasis scroti, with hernia; a specimen of cartilaginous tumour from the thigh. In the physiological series are some human bladders, also injected by Dr. Pettigrew, showing the vessels and nerves; others everted, showing the mucous membrane. Four preparations exhibiting the structure of the furrowed skin of the throat of the fin whale or rorqual (physalus antiquorum). In the osteological series are some fine skeletons of the adult male and female gorilla and chimpanzee, purchased at the sale of the collection of M. du Chaillu, and skeletons of the red howling and negro monkeys. These are fine skeletons, and the method in which they are articulated by Mr. James Flower (the head, limbs, and portions of the trunk being easily removable for the purpose of examination and comparison) is worthy of especial notice. In the glass cases just completed, at an expense of £446 12s., are displayed a new osteological series, intended to exhibit the modifications of the homologous bones in various animals by mounting them separately and placing them in juxtaposition. The histological collection is now in thorough order, and accessible to members and visitors personally introduced by them every Wednesday between the hours of 11 and 5. A good exposition of the knowledge acquired by the modern study of helminthology, as far as it can be shown by specimens of the various internal parasites which affect man, and the principal domestic and other animals in their different stages of development, was considered an important desideratum in a museum "designed to facilitate the study of the phenomena of life, both in health and disease." The services of Dr. Spencer Cobbold were secured to remount, arrange, and form a catalogue of the specimens already in the College, as well as those now being sent in as donations. Amongst the general contributors to the collection since the last report are Messrs. Hilton, Busk, Paget, Partridge, Christy, Spencer Wells, Wiblin, Wormald, Fergusson, Quain, etc. Reference is made to the retirement on a pension, as we know, well earned, of Mr. George Learson, the first Museum porter, an old and valued servant of the College of thirty-three years' standing. The preparations will remain on view for a few days in the theatre of the College, and will well repay a visit, before being dispersed through the large collection.

Bradford Eye and Ear Hospital.—The beautiful and commodious new Hospital erected in Hallfield-road was publicly opened on Friday. Mr. J. H. Ransley, the hon. secretary, read a report, stating that the Bradford Eye and Ear Hospital had its origin in a private institution, and then gave a statement as to the financial position of the institution, the estimated cost of which was £5251 2s. 3d.; amount paid, £3179 14s. 3d.; cash and securities in hand, 1185 10s.; subscriptions not yet paid, £391 12s.; conditional donations promised, £150; leaving a deficit to be still covered of £344 6s. By the first report issued in January, 1858, that during the first three months of its existence the institution had cured and relieved 538 persons; in 1858 they amounted to 1215; in 1859, 1304; in 1860, 706: in 1861, 902; in 1862, 650; in 1863, 914; in 1864, 1056; making a total from the 1st of June, 1857, to the 31st December, 1864, of 7015 persons who had enjoyed the benefits of the institution. The Vicar said that in all large towns increasing as this was, it was not merely necessary to have a general Medical institution, like the Infirmary, but there were certain complaints and maladies to which human nature was subject which required distinct treatment and distinct premises. If they looked to London, and most other large towns, they would find that diseases were classified, and they had gradually acquired for themselves distinct Hospitals and Practitioners. Perhaps one of the most important of these subdivisions was now placed here in a local habitation of its own, in an institution for diseases of the eye and ear. He was happy to bear his testimony to the great skill and ability of the Medical men who presided over that institution. In dealing with the class of people that a Medical man had to deal with in an institution like that, skill was not enough, nor was perseverance enough; in order to bring the class of patients requiring treatment at such places to appreciate their advantages, they must honestly see that a little tact was required—something of popularity—something in the way of winning people; and that could alone be done by getting a proper man in the proper place. If this was the case in such an institution it was sure to prosper and to flourish. Very few had had better opportunity of testing the popularity of Dr. Bronner. He had heard many persons speak of him in terms of deep gratitude. In disease, they all knew there was a certain irritability of feeling and a morbidness of temper, and if a Medical man could overcome these, there was a good prospect of his effecting the cure of the patient. They all knew that in that Profession (as in all others) faith had great power in effecting the desired result. He could bear his testimony to Dr. Bronner's ability in this respect. Mr. J. Behrens said: One of the greatest difficulties we had to contend with was the fact that we had no other Hospital of this kind which we could take as our model. There are in this country and on the Continent a great number of ophthalmic institutions, but very few, if any, possess premises expressly built for their use. We had to consult the plans and descriptions of the newest general infirmaries, and it was our aim to combine their best features with the peculiar wants of an institution devoted to the cure of diseases of the eye. For this purpose perfect ventilation was to be combined with a complete command of the light admitted. We hope that both purposes have been accomplished by allowing to each patient 1500 cubic feet of breathing space, by having large sash windows, open fire-places, by warming only the corridors by hot water, and by providing each window with close-fitting shutters, Venetian and common blinds, so as to regulate the light according to the directions of the Medical officers. This Hospital possesses an advantage over every other similar institution, in this airy and convenient room,

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which is intended for a day-room, to be occupied by patients sufficiently recovered to be no longer confined to their beds and yet not allowed to go home. The washhouse under the building is completely separated from it by a brick arch, filled up with concrete, preventing every escape of steam and unpleasant smells into the part occupied by patients. A hoist connects the coal cellar with the kitchen, the scullery, and the upper storey. The waiting, consulting, and ophthalmoscopic rooms, with the dispensary, are very conveniently situated, and we flatter ourselves that you will be pleased with the general arrangements. I have had the privilege of showing Dr. Macturk over this establishment. He expressed his regret that he could not be present on this occasion, being called hastily away to the sick-bed of a relative. After looking over this building he authorised me to say that Bradford might well be proud of possessing two such building as the General Infirmary and the Eye and Ear Hospital adding that he believed that Bradford might challenge the whole country for the possession of two such perfect institutions.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Royal College of Physicians.—We understand that the President and Council are inquiring into the matter. If a fraud has been practised on them by the suppression of part of a candidate's name, we should suppose that legal proceedings would be taken by the College to annul the license granted.

The Volunteer Surgeons at Wimbledon.—We are sure that no slight was intended to the Volunteer Surgeons either by the Council of the National Rifle Association, or by the Government, or by the Director-General, in claiming from the Government the appointment of a Surgeon-Major and two Assistant-Surgeons to the force assembled at the camp at Wimbledon. It must be remembered that there is a considerable detachment of the regular army in the camp; that these claim the services of an adequate staff of Medical officers, and that in that camp, as elsewhere, the chief responsibility must rest with some one man, whom the Government were not only justified, but compelled to select. But whilst saying this, we should be ready to denounce Government and the Medical Department if there were the slightest attempt to treat the Volunteer officers in an inferior or derogatory manner. On the contrary, we believe that, whilst Government have most liberally supplied Hospital tents, medicines, and supplies of all sorts, the Volunteer Medical officers have the freest use of them, and that unfettered control over the treatment of their own men which follows from the existence of the most gentlemanly feeling and strictest regard for Medical etiquette on the part of the Army Department. It is a pity that any formal question or grievance was allowed to arise even by hypothesis.

Pritchard's Place of Medical Education.—The following correspondence has appeared in the *Times* of Friday and Saturday last:—

"*To the Editor of the Times.*

"Sir,—It has gained currency that Dr. Pritchard was educated at our Medical school. I notice also that this is so stated in the Medical Directory. I beg to assure you that there is no foundation for this statement. For our credit I am glad to say we know nothing of him. You will please give this denial a place in your journal, and oblige

"Yours obediently, for the Dean of the Medical Council,

"King's College, July 12. "S. Matheson, Sub.-Sec."

"*To the Editor of the Times.*

"Sir,—As the statement of your correspondent, signed 'S. Matheson, Sub.-Sec. of King's College,' calls in question the correctness of the Medical Directory, in the interests of that work I beg to enclose for your perusal the return of the convict himself in his own handwriting, which gives, as you will perceive, a brief biography of his Professional career from student life to his final settlement in Glasgow. This return has been, as far as possible, verified by ourselves, especially his studentship at King's College, London, in which fact I see no discredit to that Medical school, as your correspondent appears to do, for though now so fallen it is possible he might in his early days have been a most zealous and honourable Medical student. His subsequent acquirements and literary labours show clearly that he was far beyond mediocrity. "Yours obediently,

"The Editor of the Medical Directory.

"11, New Burlington-street, July 14."

*** A letter has since appeared in the *Times* from the Dean of the Medical Faculty of King's College, disclaiming all acquaintance with Mr. Matheson as an official of that College, and stating that there are no such offices as Sub-Secretary and Dean of the Medical Council.

The Dignity of Dress.

To the Editor of the Medical Times and Gazette.

Sir,—At the recent meeting of the Royal College of Physicians, when Dr. Acland delivered his Harveian Oration, I was somewhat surprised at observing that no Fellow present was robed in his scarlet gown, except the orator himself; and on inquiring into the reason, I was still further surprised to hear that "an order" had been given that no scarlet gowns be worn on the occasion, although the President and Censors wore their official robes. What would the Vice-Chancellors of Oxford and Cambridge have said to a similar neglect of academic costume on the part of graduates or undergraduates had either of them summoned a meeting of the University? Surely the man who appeared without a "white tie" would have been deemed to be a delinquent, but much more so he without the cap and gown? I am not now considering so much the propriety of wearing academic dress as the unnecessary trouble given to those who took their gowns to the College, and then brought them away without using them. Had the notices for the meeting contained "the order," such inconvenience might have been saved. I am, &c.

M.D. Cantab., F.R.C.P., etc., etc.

A Fee Question.

To the Editor of the Medical Times and Gazette.

Sir,—You will greatly oblige me with your advice in the following case:—"A few weeks since I received a magistrate's order, written and given to me by himself, to visit and examine a young woman residing eight miles from my house, and who was suspected to have been recently confined, and had concealed the birth of her child. I made the required visit and examination, and sent a written report to the magistrate. Will you kindly inform me what ought to be the amount of my fee, and to whom I must look for the payment of the same? I am, &c.

July 17. Rusticus.

*** Two or three guineas. Send in your claim to the Clerk of the Magistrates in Petty Sessions.

Kumis in the Treatment of Phthisis.

To the Editor of the Medical Times and Gazette.

Sir,—The employment of kumis, fermented mare's or cow's milk, in phthisis is, I believe, not new to the Profession, and the only novelty that Dr. Schnepp can claim is the name he has manufactured for it—*galazyme*. Its use by the nomadic tribes in Central Asia is not confined to the treatment of this disease, but it is with them a common beverage. Dr. Grieve, our countryman, when in Russia in the beginning of this century, employed kumis in the early stage of phthisis; and it is a popular drink in this disease in Norway and the Orkney and Shetland Islands. There is no reason to suppose that it is more nourishing than milk, for there is nothing added by the process of fermentation; the alcohol is developed at the expense of the sugar, and whoever should trust exclusively to its use for the cure or relief of phthisis will be disappointed. As an addition to our list of dietetic drinks it will be found useful. In conjunction with kumis might be placed "Liebig's soup," a very nourishing dietetic drink in phthisis and in impaired digestion from other causes. This soup, which is now a good deal used for young children and infants, is prepared from malt flour, wheat flour, milk, and bicarbonate of potash, as explained by Liebig in an article in the *Popular Science Review* of January last. Here we have an actual addition to the amount of nourishment contained in the milk, and in a form most easy of digestion. For invalids I have directed the soup to be made with oatmeal instead of the wheat flour, the former containing a greater quantity of the nitrogenous or flesh-forming substances, whilst with arrowroot and milk the malt flour makes a lighter and more easily digested drink.

In your promised report on Food and Drink I hope you will not omit kumis and Liebig's soup. I am, &c.

"Tretane."

Dr. Paterson's "Etiquette" in Mrs. Pritchard's Case.

To the Editor of the Medical Times and Gazette.

Sir,—I cannot avoid believing that, in now addressing you, I am only giving expression to an opinion as widely spread as is the knowledge of the facts in the above case. Nor do I suppose it to be necessary that I should here say one word to prevent the following remarks being construed as implying an indifferent estimate of the real importance to be attached to "etiquette" in our intercourse one with the other or with our patients. So long as rules and forms are necessary to prevent greater evils than their absence would induce, "Medical etiquette" will be justly esteemed. But, sir, the true use of a good rule does not sanction its gross abuse; and that the necessary etiquette of the case was thus abused by Dr. Paterson, I wish to say plainly and unequivocally. Scotchmen are generally, and, perhaps, as truly, held to be cautious to a fault; and I admit that, in the case of my countrymen, this virtue too frequently deserves more the name of selfish circumspection than disinterested prudence. Dr. Paterson's conduct affords a too melancholy illustration of this remark. It is, of course, quite true that, as a rule, the consultant has, as he said, no right to repeat his visit, unless asked; but did he not see that Mrs. Pritchard's case was one of those exceptions which imperatively demand a departure from routine? It was not even necessary that he should have repeated his visit, though unasked; but his duty to his Profession (and hence to himself) and to his patient and society did solemnly claim that, on that very instant of his being impressed with the strong suspicion of foul play, he should have communicated that suspicion, in whatever language, to the Medical attendant of the patient. Can any one, or does any one, doubt that, if such a communication had been made to Dr. Pritchard, and in a manner which needed not to have been offensive, but must have been earnest and unmistakeable, two lives at least would have been saved? If Dr. Pritchard had been thus given to know that one man at least suspected, and more than suspected, the terrible scene that was being enacted, is it to be doubted that common regard for his own safety, because as upon himself alone could this suspicion fall, would have stopped him? But Dr. Paterson refrained from giving any such warning, because "it was none of his business," and would not "have been a very safe matter to have done that!" I do hope, Sir, that Dr. Paterson stands unenviably alone in such a view of his duty. The truth is, and this conclusion is forced upon us by the very first blush of the case, Dr. Paterson preferred keeping himself (legally) safe to running the chance of giving offence to a brother Practitioner, even though such a chance involved the saving of his patient from death and his brother Practitioner from persistence in a terrible crime.

The Lord Justice-Clerk has already marked his opinion of Dr. Paterson's conduct; it remains with the Profession as a body to unequivocably show that such "etiquette" is indignantly repudiated and condemned by it. The explanation of Dr. Paterson's conduct advanced by the *Times* of yesterday is to me simply absurd. His own words of defence ought to have prevented any such hypothesis being given as that of supersensitive regard for the good name of his fellow-Practitioner. I am, &c.

Hanley, July 13. John Fairmann.

P.S.—Ere this appears, your readers may have seen Dr. Paterson's letter in his own vindication. Its utter worthlessness is equalled only by its

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length. It was a feeling of jealousy, forsooth, among the Medical men of Edinburgh towards their Professional brethren of Glasgow, that has originated and extended all this clamour against himself! I would suggest the propriety of the several (local) Medical Societies throughout the kingdom convening themselves for the purpose of giving forth to the public a declaration, which could not fail to be unanimous (and perhaps as necessary), that such conduct and notions of etiquette as Dr. Paterson follows are indignantly repudiated by the Profession at large. J. F.

Local Subcutaneous Injections and the Hypodermic Method.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Dr. Alexander Wood has called your readers' attention to certain passages in his paper of 1855. I beg to call their attention to the following passage from the same paper:—"I have tried this mode of using narcotics on some other cases not so appropriate. I am quite satisfied that in those not unfrequent cases where the disease has a central, not a centripetal origin, it is quite useless, unless from the power which it may for the time exercise on the imagination."

Upwards of three years later Dr. Wood brought his method before the meeting of the British Medical Association in Edinburgh. Here, although he had practised this means of administrating medicines for a considerable time, he confines it to the local treatment of neuralgia, and contrasts it with the plan of M. Valleix. His paper is entitled "Narcotic Injection in Neuralgia."

Mr. Hunter, by observation and experiment, has discovered and taught that central diseases—as delirium tremens, acuto mania, acute melancholia, chorea—are to be cut short and cured by this method.

This discovery Dr. Wood terms "a slight modification of the details" of his own! I am, &c.

3, Clarges-street, July 17. G. Fielding Blandford.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have to thank Dr. Wood for admitting that I have on all occasions allowed his claim as the "introducer" of the practice of the local injection of narcotics in the various forms of neuralgia.

In his previous communication to your journal he appeared to ignore that I had always given him that credit, which he has known I have done from the first moment of my writing on the subject. I say he has known, unless Dr. Wood has forgotten that, in a letter he wrote me in December, 1858, he said:—"I read your paper in the *Med. Times (sic)* with much interest, and intended," etc. That letter was the first I wrote "On Narcotic Injections in Neuralgia," and began:—"Sir,—In the two following cases of neuralgia, the local treatment by narcotic injection into the part, proposed some years ago by Dr. A. Wood, has been employed." (*Medical Times and Gazette*, October 16, 1858.) Then, again, in the *Medical Times and Gazette*, in 1859, I fully gave him his due in the paragraph I quoted in my last letter to your journal (July 1, 1865).

But Dr. Wood now hankers after more credit. He now says:—"My complaint against him (that is *now*) is, that he limited my invention to its local effect, and took to himself credit for discovering this method of producing 'general medicinal effects.'"

Dr. Wood is really asking too much. He may have every atom of credit as regards the local treatment of neuralgia by subcutaneous injection, but I do not admit that he is the introducer of the practice of hypodermic or subcutaneous injection with the general medicinal and remote effect in view.

The value of the hypodermic injection in non-local affections was first practically demonstrated by myself. It was I who first publicly advanced the view (whether a correct one or not is another matter) that the localisation of Wood in neuralgic cases was unnecessary. I advanced that view from practical experiments, made at St. George's Hospital, which I was led to make, having found local irritation to follow repetition of the injection, *à la* Wood, in the neuralgic site. These cases of neuralgia, treated with equal benefit, not *à la* Wood, were detailed by me in the *Medical Times and Gazette* of October 30, 1858. I even wrote to Dr. Wood inquiring how to obviate the irritation, etc., induced through localisation. His reply on December 13, 1858, above alluded to, apologised for having taken so many weeks to answer mine; it gave me no information; it told me he had read my first paper with interest, and then said that he "intended pointing out in a short note to the journal what I believed to be the reason that you had met with such untoward results; but these I must now defer till I have more leisure."

And now, after a lapse of more than six years, Dr. Wood has found leisure,—not to give me the information I desired, but to assert that my discovery of 1858 and 1859 was made by him ten years ago.

Now that I have practically demonstrated in a series of papers the many uses of the hypodermic injection—in non-local affections—in diseases in which the localisation of Wood could not have been employed,—now that I have for some years established a theory which I always opposed to the local theory, Dr. Wood writes:—"But, after all, whatever credit be due for the introduction of this new practice ought surely to be his who showed the plan of using the cellular tissues as a medium for the introduction of remedies into the system." (*Medical Times and Gazette*, June 17.) For my own part, I must still call in question Dr. Wood's claim to be the "introducer of the practice of general injection," which, he says, "has never been called in question till now."

I called it in question in 1858 when I wrote to Dr. Wood, and in 1859, when I proposed the "hypodermic treatment" as a term for the general use of the syringe, so as to allow Dr. Wood to retain his credit of the local application of it under what I called the "method of Wood." Surely then was the time for Dr. Wood to have asserted his right as discoverer of the general application of the syringe, if he had that right. My private letter of inquiry and my published papers equally gave Dr. Wood opportunity to establish his claim. Surely this is not the time, after the lapse of so many years, during which I have from time to time made communications upon the subject to various journals. Take, for instance, the following passage which I wrote two years ago (*Lancet*, October 17, 1863):—"In 1858 and 1859 papers were communicated by me to one of the Medical journals establishing the application of 'the puncture' to the treatment of diseases affecting the organism generally, or at points far remote from the point of medicinal introduction. The truth of this, and the special value of the method in subduing cerebral and spinal excitement, were rendered manifest by the series of cases I submitted to the Profession; and the credit of opening this new path to the treatment of disease, and of non-local affections, was accorded to me by Scanzoni, Ogle, and a few others, of the many who speedily furnished the journals with their experience of the hypodermic treatment."

Thus there have been many opportunities when Dr. Wood ought, if he had fair ground, to have made his claim to have discovered that which I discovered in 1858, which I have often written about, and "*my* claim to be the introducer of the practice has never been called in question till now."

Upon what evidence does Dr. Wood now claim the credit of having been the introducer of the syringe for general treatment? Simply, to use his own words—"1st. That Dr. Wood's first paper showed the general effect as well as the local; 2nd. That in the same paper its application to other classes of remedies besides narcotics was suggested."

The application of remedies in that paper was, Sir, as you may observe, only suggested—that was not practically introducing the subject. That paper I have never seen, and would thank Dr. Wood to inform me where I can get it. That paper was written three years before Dr. Wood's other paper, which is the only one I have seen (*British Medical Journal*, 1858). And there, far from Dr. Wood having developed his suggestion, which was only an hypothetical one, with a note of interrogation after it, he never alludes to it. Dr. Wood says his first paper showed the "general effect as well as the local." This means that when he locally injected he observed that some general effects were likewise produced. No one could help observing them. It is to me, therefore, all the more extraordinary that although Dr. Wood had been continually observing general effects to follow his local injections, and that for fifteen years, that he should not have introduced the syringe with a general object in view, and independently of a local one.

When next, therefore, Dr. Wood feels inclined to claim the discovery of the "general use of the syringe," let him remember, first, that although he may have made a brief and vague allusion to such a general use of it in a paper written ten years ago, that his suggestion, if such it was, had not been accompanied by any practical results at the time when I first investigated the matter in 1858.

2. That Dr. Wood was well aware of my attention being given to the subject. That he promised in that year to show me, in your journal, the causes of untoward results when local injections in neuralgia were repeated. That he has never done so yet.

3. That I practically originated and showed the value of the treatment of non-local and non-neuralgic affections by means of the hypodermic injection. That if Dr. Wood had done so before my paper appeared, he should have stated as much in 1859, and not now, after more than six years after I had originated an idea and experimentally proved its practical value, to endeavour, by alluding to an hypothesis written ten years ago, to claim the credit of my investigations. I am, &c.

Wilton-place, Belgravia, July 10. Charles Hunter.

*** We have now permitted both of these gentlemen to vindicate their claims, and can admit no further correspondence on the subject.

COMMUNICATIONS have been received from—

Dr. Bullar; Dr. Stainthorpe; Apothecaries' Hall; Dr. Meadows; Dr. Aldis; Rusticus; T. Fielding Blandford, Esq.; J. Fairmann, Esq.; E. Arnold, Esq.

BOOKS RECEIVED.

On the Presumption of Survivorship. By J. Bell Pettigrew, M.D. Reprinted from the *British and Foreign Medico-Chirurgical Review*.

*** The following is Dr. Pettigrew's recapitulation:—Firstly, the term presumption has been referred to its origin, and the various meanings attached to it in the phrase "presumption of survivorship" pointed out. Secondly, the laws framed for the regulation of questions of survivorship have been traced from the earliest time, their insufficiency, in many instances, having been clearly established. Thirdly, the scarcity of positive law, especially in Britain, has been shown to be the source of much dissatisfaction to surviving relatives. Fourthly, an attempt has been made to frame, on physiological grounds, such a code of laws as will fairly meet the majority of cases. Fifthly, the difficulty attending such an attempt has also been explained, and abstracts given of the more celebrated cases in which the interference of positive law would have been beneficial. Sixthly, and lastly, the chance of survivorship in death by parturition, by wounds, by suffocation, by starvation, by cold, by sunstroke, by lightning, and by burning have been considered at length, and the precautions to be taken in arriving at a correct diagnosis specified.

The Book of Prescriptions, containing more than 3000 Prescriptions collected from the Practice of the most Eminent Physicians and Surgeons, English and Foreign. By Henry Beasley. Third Edition. 1865.

*** This work is too well known to require an extended notice. Suffice it to say that "in this third edition other prescriptions have been inserted, and the new medicines lately introduced into practice and the preparations of the British Pharmacopœia for 1864 have been mentioned in their places. The weights and measures with their well-known symbols are still those of the London Pharmacopœia of 1851."

Sympathetic Ophthalmia: its Symptoms, Diagnosis, and Treatment; with Illustrative Cases. By George Lawson, F.R.C.S., Assistant-Surgeon to the Royal London Ophthalmic Hospital, and to the Middlesex Hospital.

*** This is a very able pamphlet, and its subject is of great Surgical interest. The reasoning is careful, the cases are well reported, and the conclusions are clearly stated. The Author thinks that wounds in the ciliary region are most likely to produce sympathetic irritation. He deprecates operative interference whilst the eye is inflamed.

Strictures on the Administration of Affairs Pertaining to the Huddersfield Infirmary, in a Series of Seven Letters. By T. R. Tatham, M.D. Nottingham: T. Forman.

An Address to the Governors of the Huddersfield Infirmary. By T. R. Tatham, M.D. Nottingham: Shaw and Sons.

*** However righteous Dr. Tatham's cause may be, the publication of these letters cannot possibly advance it, since those who have not heard both sides, and thus, like ourselves, are not in a position to form a fair judgment, are certain to be unfavourably impressed by the personalities Dr. Tatham indulges in, and the bad temper which his "Strictures" and Address manifest in every page. We know nothing of Dr. Tatham or of the parties whose conduct he impugns, but we would tender him the friendly advice to suppress the further publication of these pamphlets, which can damage no one so much as himself.

Observations on Hay Fever, Hay Asthma, or Summer Catarrh. By W. Abbotts Smith, M.D. London: R. Hardwicke.

*** Reprint from the *Medical Mirror*.

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Tariff of Medical Fees for Manchester and its Suburbs. Issued by the Manchester Medico-Ethical Association.

*** On the whole, just. It is based upon the principle that a Medical man's advice is that which should be paid for, that he should be remunerated according to the means of his patient, and that, in the absence of any better mode of determining the latter point, the sort of house he occupies may be taken as an index of his pecuniary position.

A Handbook of the Practice of Forensic Medicine, based upon Personal Experience. By J. L. Casper, M.D. Vol. IV.—Biological Division. Translated from the original by G. W. Balfour, M.D. New Sydenham Society.

*** Will be reviewed shortly. This volume is prefaced by a short biographical memoir of the author.

Physiology and Medical Jurisprudence: a Contribution to the Prospective Reformation of Several Erroneous Doctrines in Relation to Human Reproduction. By John M. Casanova, C.M.D., etc. London: Headland and Co. 1865.

*** Simply disgusting and beastly. Two things only astonish us, the one that any publisher could be found bold enough to place his name on the title page, and the other that any author could have impudence enough to forward such a book to a respectable journal for review. The whole edition should be burned by the common hangman.

Journal of the Scottish Meteorological Society for the Quarter ending ending December 31, 1864.

*** Contains a paper in which Dr. Ottley compares the climates of Pau and Biarritz. He says that the air is both drier and more tranquil at Pau than at Biarritz. "The climate of Pau is soothing, and admirably suited to cases in which irritation exists, whether of the chest or stomach, and for weak children, as in them irritability of the system almost always accompanies their various ailments. Biarritz, on the other hand, is warm and bracing, and suits well persons enfeebled by residence in the tropics or who desire to avoid the damp and cold of the rather sunless winter of Britain."

On Radiation. By John Tyndall, F.R.S. London: Longman and Co.

*** Few men possess the remarkable faculty of making abstruse subjects connected with natural philosophy comprehensive to ordinary untrained minds in the same high degree as the author of this lecture. It is an admirable exposition of the present state of our knowledge as regards radiation, and will be read with profit by all who desire to become acquainted with the subject.

Remarks on the Antecedents and Treatment of Consumption. By C. Drysdale, M.D., etc. London: McGowan and Danks.

*** There is nothing remarkably new in this paper. We fear the writer, in adopting some of the views of Malthus and Mill, with the object of applying them practically to the suppression of some of the causes of phthisis, shows up his philosophy as somewhat shallow.

Inconsistencies of the English Census of 1861 with the Registrar-General's Reports, and Deficiencies in the Local Registry of Births. By William Lewis Sargant. 1865. [From the *Journal of the Statistical Society of London.*]

*** Without endorsing all that Mr. Sargant has written, we give the principal conclusions which he believes he has arrived at, viz.:—

"1. That the census of 1861 is not to be implicitly trusted, but requires further investigation.

"2. That the male infants below 1 year old are underrated by 36,546, or 12 per cent., and the female infants by 30,831, or 10½ per cent.; that in the second year of life the deficiencies are 11½ and 11 per cent.; in the third year, 2 and 1 per cent.; and in the first five years taken together, 6½ and 6 per cent

"3. That this difference of error between male and female infants is probably owing to the better registration of male births, and not to the worse enumeration of males in the census.

"4. That the males and females together, of all ages *under* 20, are apparently underrated by 510,440, but that some considerable deductions have to be made from this number.

"5. That the males and females together *of all ages* are probably underrated by more than half a million.

"6. That the deficiency in the census is far greater in some districts than in others.

"7. That the registration of births is very imperfect in some places, Liverpool and Hull appearing to be the worst, with London, Cheltenham, Plymouth, and Portsmouth following in order of demerit.

"8. That we have but few materials for comparing the census of Scotland with calculations made from the registers of births; but, as far as we can judge, the Scottish census is as inaccurate as the English one."

On the Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart; with Physiological Remarks. By James Bell Pettigrew, M.D. Edin.

*** An abstract of the more salient points in this important anatomical paper will be given shortly.

A Treatise on the Construction, Properties, and Capabilities of Smith, Beck, and Beck's Achromatic Microscope. By Richard Beale. Van Voorst. 1865.

*** A very useful book.

The Climate of San Remo and other Winter Stations of the Mediterranean, including Nice, Mentone, Cannes, and Hyères. By Prosser James, M.D. 1865.

*** Reprinted mostly from the *Medical Mirror.*

Memoir of John Stearne, Founder and First President of the College of Physicians, Dublin.

*** An interesting contribution to Medical biography.

Epidemiological Society. Report on the Question submitted by Dr. Farr to the Council Concerning the Classification of Epidemic Diseases. 1865.

*** A subject of national importance, which we shall revert to on an early opportunity.

The Edinburgh University Calendar for 1865 6.

*** Contains the last examination papers.

The Nineteenth Report of the Commissioner in Lunacy. 1865.

*** Will be noticed soon.

Register of the King and Queen's College of Physicians in Ireland. Dublin: Hodges and Smith.

Edinburgh Medical Journal for May, 1865.

*** Contains an important paper by Dr. Laycock upon Fœtid Bronchitis and other Lung Diseases with Fœtid Breath, which we recommend to the perusal of our readers.

Transactions of the Epidemiological Society of London. Vol II., Part 1. 1865.

*** Contains some very important and interesting papers, which we shall notice shortly.

Journal de Médécine Mentale. Nos. 2, 3, and 4. Paris: V. Masson et Fils.

Bulletin de L'Académie Royale de Médécine de Belgique. No. 11, 1864. Nos. 2 and 4, 1865.

Annual Report of the Sussex County Lunatic Asylum for 1864.

Quarterly Journal of Microscopical Science. July, 1865.

The Glasgow Medical Journal. July, 1865.

L'Art Médical. No. 7. 1865.

Fourteenth Annual Report of the Dispensary for Skin Diseases, 63, John-street, Glasgow.

The Dublin Quarterly Journal of Medical Science. May, 1865.

The Declaration of Students of the Natural and Physical Sciences. London: Simpkin, Marshall, and Co.

Berliner Klinische Wochenschrift. No. 26. 1865.

Laws, etc., of the National Association for the Promotion of Social Science, 1864-5.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 15, 1865.

BIRTHS.

Births of Boys, 981; Girls, 944; Total, 1925.
Average of 10 corresponding weeks, 1855-64, 1715·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	775	617	1392
Average of the ten years 1855-64	589·2	541·5	1130·7
Average corrected to increased population..	..	..	1244
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	2	6	2	3	5	4	36
North ..	618,210	6	6	4	..	5	22	84
Central ..	378,058	..	3	11	1	6	3	23
East ..	571,158	2	4	15	..	7	17	53
South ..	773,175	2	7	5	3	9	23	71
Total ..	2,803,989	12	26	37	7	32	69	267

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·733 in.
Mean temperature	61·4
Highest point of thermometer	85
Lowest point of thermometer	47
Mean dew-point temperature	52·8
General direction of wind	WSW. & SW.
Whole amount of rain in the week	0·10 in.

APPOINTMENTS FOR THE WEEK

July 22. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

24. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

25. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

26. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

28. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES
ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.
Physician to St. Mary's Hospital and Lecturer on Medicine.

LECTURE I.

(Continued from page 56.)

Chorea frequently affords examples of direct paresis both of the intellectual and motor centres, which we can hardly regard in any other light than as being essentially the results of failure of nervous power apart from organic disease. I make no question that, in some cases of extreme severity, proving ultimately fatal, the specific gravity of certain parts of the brain may be found lowered, or even that atrophic softening may have actually commenced; but I think there can be as little doubt that these changes are not of the essence of the malady, and that they are consequences and not causes of the morbid condition. The marked efficacy of treatment, the nature of the "juvantia," the age of the patients, the conversions of the disorder into epilepsy or hemiplegia noticed by Dr. Prichard, and the well known effect of fright in inducing it, seem to me fully to justify this conclusion. The paretic character of the phenomena, on careful examination, becomes very evident. Trousseau states that, with rare exceptions, all choreic patients experience more or less impairment of the mental faculties. Lads at college, who had stood at the head of their class, fall to the bottom. As they recover, however, they regain their former ability. The same observer remarks that the sensory faculty is disordered in almost all instances. There occur formication, pricking, and anæsthesia, which is always most marked on the side most affected by the chorea. Motor paralysis is often very evident, and sometimes, as in a case related by Trousseau, to a great extent replaces the choreic convulsion. Dr. Todd mentions in his Lectures the case of a boy, aged 9, who was brought to him with well-marked signs of left-side hemiplegia; he dragged the leg, and had but very feeble power of the arm; the muscles were quite lax; the face was slightly paralysed. He had recently had chorea, which still existed in a very slight degree. With iron, shower-baths, and exercise of the limbs, he was almost well in eight days, and recovered perfectly. In such a case as this, it seems to me inconceivable that any such change as white softening could have existed, which Dr. Todd seems to regard as the most probable morbid state. Repair of actual organic lesion would surely have required a much longer period than eight days.

The hemiplegia which ensues on attacks of epilepsy is stated by Dr. Todd to be very analogous to that which occurs in connexion with chorea. In both he thinks there exists a more or less exhausted state of brain, which is very apt to continue as one of weakened nutrition, in which the brain-tissue is more or less in the condition of white softening. According as the convolutions or the basal ganglia are most involved, we have failure of intellectual power, or paralysis. With these views of Dr. Todd my own very nearly coincide. The only point on which I lay some stress is, that in those instances where the paralysis is of short duration, as a few hours or a few days, it is much more reasonable to regard the cerebral substance as being in a state of exhaustion, or functional paralysis, than of atrophic decay. Even when the paralysis is much more prolonged, it is sometimes clear that it cannot depend on organic change. A boy, aged 11, has been two or three times under my care with epileptic fits, always occurring in the morning; after which he has had prolonged aphonia, extending once over three months, though he was otherwise conscious and intelligent. The movements of the tongue were perfect, so that it is most probable the aphonia was cerebral or laryngeal. Just as it is a common event in the epileptic drama that the patient remains after the fit, for a longer or shorter time, in a state of coma—*i.e.*, paralysis of the hemispheres, which cannot be ascribed to arterial spasm—so it is, I believe, with the corpora striata in cases where the paralysis is not permanent. The commotion induced in the encephalon by the violent nervous disorder inflicts a temporary shock upon the nervous tissue, which is usually more severely felt in the hemispheres than in the basal ganglia. That this view is correct seems to me to be strongly affirmed by the occurrence of what is called epileptic mania. In those who are the subjects of this affection the stupor, dulness, and want of power to collect their thoughts, which are the ordinary sequelæ of a fit, are replaced, after a longer or shorter period of depression and torpor, by a cerebral excitement or a furious delirium, which impels them to commit acts of extreme violence, as suicide, homicide, or incendiarism, of which they retain but a very dim recollection when the state of excitement has passed away. Such a condition of brain cannot possibly be the result of white softening, but it may of a perturbing shock, such as I suppose to give rise to the paralysis. There is no greater difference between these two forms of cerebral disorder than there is between the varieties of sensory disorder which occur in brachial neuralgia. The affected part is sometimes very numb, sometimes extremely tender. Both states, however, are evidently products of the same cause, and both are removed by the same treatment. In fact, it depends very much on the *quality* of the cerebral tissue whether its resentment of the shock expresses itself in the form of stupor or of delirium. M. Trousseau lays rather special stress on this influence of cerebral shock as being largely concerned in the production of various so-called apoplectic phenomena. His views appear to me so sound and important, and have so much bearing on my subject, that I shall not hesitate to quote the passage containing them:—"When a man is stricken with cerebral hæmorrhage there is sometimes a sudden loss of consciousness, and the impairment of intelligence and of motor power lasts for several hours or several days, after which the normal condition is restored, saving a slight hemiplegia, which diminishes slowly, and disappears at last after the lapse of some weeks or months. As the primary symptoms have been almost 'foudroyants,' as between the gravity of these first phenomena and the later disorders of intelligence, sensibility, and motion, there seems to be no sufficient relation, it is said that the cerebral hæmorrhage has been accompanied by congestion; that the congestion, an essentially transitory phenomenon, has produced the apoplectic symptoms properly so called; that when it was resolved there remained, however, a moderate hæmorrhage, which is the cause of the persistent paralysis." Now, Trousseau thinks the sudden unconsciousness is much more attributable to the shock which the encephalon has received than to the supposed congestion. He likens the condition to that of traumatic concussion, and proposes for it the name of *étonnement cérébrale*. In another place he cites the instances of market porters, and mountebanks who walk with their heads downwards, as proving that a considerable amount of congestion of the brain may occur without producing any injurious effects. In the cases above referred to the paresis is not quite primary; but they seem to me, nevertheless, very proving of the main point, that a nervous centre may be functionally paralysed.

Hysterical hemiplegia and kindred forms of paralysis seem to me in many, perhaps the majority of cases, to be essentially similar to choreic and epileptic. By some I know the idea is entertained that all paralyses which cannot be accounted for on recognised principles are to be referred to hysteria. Dr. Brown-Séquard says of a somewhat puzzling case of paralysis in a woman who had good general health, but who had lost the use of her upper extremities for five years, "There is no palsy of the legs, no marked wasting of the arms, and no hysterical symptoms; but as no organic cause of the malady can be detected, he held himself justified in calling the paralysis hysterical." This term, as commonly used, is so generally understood to imply more or less defect of volition, or, indeed, the practice of actual deception, that I think we should be slow to fix this reproach on any individual, unless we have good ground for believing it to be well deserved. Dr. Todd says of hysterical affections,—"They are brought on by exhausting causes, such as excessive menstruation, leucorrhœa, overwork, anxiety, or excitement, or, indeed, by any debilitating influences." I have shown in my work that the most marked symptoms of hysterical disorder may occur while there is a complete absence of mental perversion, and the converse is also true. The one practically important thing to consider in all instances where the idea of hysteria suggests itself is whether the patient is in any degree malingering, and more desirous of being an object of commiseration than of getting well. To settle this question may be difficult enough at the first interview. We must not be too ready to condemn; we must remember how sore and terrible is the strain to which the nervous system is too often subjected, and how imperfectly we may be able to judge of the actual state. If, after due inquiry, we conclude our patient is thoroughly honest, I can see no sufficient ground

for separating his or her pathological condition from that of any other sufferer from simple exhaustion of the nervous power.

The following case, I have little doubt, would be set down by many as of hysterical character, chiefly on account of the great obscurity of its causation. I cannot consider it so myself, as I think it is perfectly certain that there was not the least pretence or exaggeration of ailment on the part of the patient, and that the phenomena were purely the result of some physical disorder. The only questions with me are how far the symptoms were referable to a condition of brain similar to that which exists in some epileptiform states, and, if so, what was its real nature. One night, some years ago, about 11.30, I was called to visit a youth, aged 18, who had just come home with his sisters from spending the evening at a friend's, where he had partaken very moderately of some ordinary refreshments. While there, just after singing a song, he suddenly lost consciousness, his head fell forwards, he retched, and was sick a little. On leaving the house he fell down from the doorstep and cut his face slightly. He did not speak after this, and was supported home by two of his companions. I found him lying in bed with a cool skin, a weak pulse of 90, contracted pupils, non-distorted face, entire unconsciousness, head not hot, breathing quick. He was deaf to all questions, and insensible to pinching. His limbs were paralysed, and fell as inert masses when raised. Both irides quite unaffected by light. Health generally good; is only subject to headaches; never had an attack of the kind before; is not subject to discharge from the ears. He told me afterwards that he had felt dull and languid all that day. Not more than half an hour had elapsed from the time when he was attacked. I went to my home, which was close by, and returned in about a quarter of an hour, intent on active measures, purging, blistering the scalp, &c. To my great surprise, I found my patient sitting up in bed drinking some tea, quite conscious, and saying that he was quite right, and should be quite well in the morning. His pupils were no longer contracted, his intellect was clear—in fact, he seemed quite recovered. This marvellous improvement had begun after the mustard poultices which I had ordered had been applied to his calves. Pulse same as before. Tongue, which he now put out a little, white. He said the brandy-and-water had disagreed with him. It was now 12 p.m. I left him, thinking his disorder was at an end; but at 1.30 a.m. I was called to him again, and found him shaking from head to foot violently, the hands agitated so much that I could not feel the pulse, and quite unconscious; the pupils of the medium size, and fixed. He had vomited up two aperient pills which had been given him. I gave him liq. opii sed. ɱ. 20, spt. æth. chlor. ɱ. 15 in water; he swallowed well. The muscular agitation continued for an hour after I left him; he then went off to sleep, and was sleeping rather soundly a little before 7 a.m., when I saw him again. I roused him at last, though with no small trouble, and made him speak and put out his tongue. He was not feverish or sweating. Three or four hours later he was quite awake, rational, and sensible; had no recollection of anything since the previous evening. After this he took some quinine, and had no recurrence of disorder. I made inquiries, but it was quite clear that he had taken nothing which could account for his symptoms. The fixed state of the pupil, the complete unconsciousness, the muscular agitation in the second paroxysm, and the succeeding sopor, are phenomena suggestive of epilepsy. On the other side, we have in the first attack the absence of convulsion, and in the second a form of it, unlike what occurs in epilepsy, and also very much more prolonged. The first attack seems to have come on rather gradually, the paralysis at first could not have been so complete as it was when I saw him; recovery also ensued without any sopor. The duration of this first seizure was much longer than those of the *petit mal*, or indeed than those of the *grand mal*, and the same is true, in a still greater degree, of the second. The respiration was not disturbed, as is the case in epilepsy, nor was there any previous history of this affection. But even if we consent to rank the case under the head of epilepsy, we have still to consider what was the real pathological condition which gave rise to the phenomena. Were they the result of some primary change in the centres themselves, or of anæmiating arterial spasm affecting the hemispheres in the first attack, and the excitable districts also in the second? The latter view seems to afford a ready explanation of the symptoms, but on full consideration proves, I think, defective. Thus it is difficult to believe that the arteries of the hemispheres alone were contracted in the first attack and no others, or to understand why, if this was the case, it did not happen again in the second seizure; or why, if the excitable districts were involved in anæmia, the respiration remained unaffected? Moreover, the spasm theory seems to me quite to fail to account for the prolonged convulsive agitation of the second attack, or to explain why this was immediately succeeded by sopor, while the first was not. I am more inclined to attribute the phenomena to a primary condition of the brain-tissue itself, analogous to that which in a nerve constitutes neuralgia, and either abolishes or disorders its functional action. The possibility of such an occurrence seems to me undeniable. Dr. Todd relates a somewhat similar case in his Lumleian Lectures delivered in 1850, under the head of "Hysterical coma." The patient was a youth, aged 16, who was utterly insensible and unconscious for about two days, and continued apparently deaf and speechless for three weeks. He recovered under the influence of mesmerism, *i.e.*, spontaneously. There seems no reason to suppose any simulation of disorder in this instance any more than in my own, The phenomena were more of a cataleptic than of an epileptic character, and there was no organic disease. It might be supposed that the unconsciousness and loss of special and common sensation depended upon spasm of the blood vessels of the nervous centres, but this view is almost absolutely negatived by the fact that there were no convulsions, as well as by the long continuance of the deafness and speechlessness. If so many centres were rendered incapable of acting by anæmiating vascular spasm, it is inconceivable that the excitable districts should have escaped, or that the tissue so long deprived of blood should not have undergone atrophic decay. There can be, I think, little doubt that, while we justly attribute much importance to variations in the amount of blood supply to the great nervous centres, we must also admit that they are liable to be disordered in their actings by various influences, ponderable and imponderable, which affect them primarily and directly. Some of these produce more absolute paresis, some a state intermediate between paresis and excitement. Much depends on the original quality of the tissue.

Dr. Hutchinson (U.S.) reports the following case of (hysterical) loss of speech and hearing, which seems to me of much interest (a):—C. C., a German girl, aged 20, was admitted September 22, on account of entire loss of speech, which had occurred two days previously. Fourteen days later complete deafness supervened. Two years and a-half before, in consequence of mental excitement, she had hæmorrhage from the lungs. During the voyage to America she had several convulsions, but on her arrival she was well enough to take a situation as cook, and remained in good health, with short interruptions, up to the time of the present attack. Electricity, tonics, nux vomica, and sulphate of anilin, had been employed without benefit. He was anxious to discover whether the loss of speech and of hearing was in any degree feigned, and, with that view, had her put under the influence of ether, believing that if such were the case she would utter sounds, if not words, as she came under the influence of the anæsthetic. The result, however, was different from what he had expected. The ether threw her into a slight convulsion, from which she soon recovered, having entirely regained her hearing. Two days subsequently the etherisation was repeated. On recovering her consciousness, she was able to say "mamma," and to make various inarticulate sounds. Three days later she was etherised again, with the following curious results—viz., recovery of speech and loss of hearing. A fourth etherisation produced no immediate results; but in the course of a few days she was able first to hear loud noises, and later to understand what was said when spoken in a loud tone. The improvement after this was very rapid, and by the middle of January her recovery was complete, and continued so up to the time of her discharge, early in February. Her joy at her recovery may well (Dr. Hutchinson says) be imagined, as, in despair of a cure, application had been made for her admission into a deaf and dumb asylum. Now, is this case to be ranked with that of the young lady mentioned by Dr. Watson, whose aphonia was cured by free sousing with cold water; or that of the paraplegic girl related by Brodie, who ound the use of her legs as soon as she was forced to try to use them? I think decidedly not. Whatever was the cause of the disorder, it yielded to a material agent, and not to any moral suasion or influence that could rouse defective volition. Between the cure of the paralysis in the above instance by

(a) *Amer. Journ. of Med. Science*, April, 1864, p. 412.

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ether, and that of neuralgia by quinine or arsenic, I see no essential difference. Bodily affections are rationally treated by material remedies, whereas mental disorders require moral influences. Dr. Wilks has lately related an excellent illustration of this (*Med. Times and Gaz.*, 1864, Sept. 3). The patient, aged 22, had been speechless and paraplegic for eighteen months, but recovered perfectly under moral treatment alone.

For the following interesting case I am indebted to the kindness of my friend Dr. Stewart:—Mr. G., aged 40—45, of gouty family, and very nervous temperament, had long been subject to attacks resembling laryngitis. Just before his illness on this occasion he had been in great anxiety on account of his wife's health, had been fatigued with nursing her, and also overburdened with parochial and other cares. While going upstairs to his wife's bedroom in advance of the Medical attendants, he suddenly staggered, and would have fallen backwards had he not been caught. He was now found to be quite hemiplegic on the right side, consciousness unimpaired; speech nearly lost; face very much distorted. He was put to bed; he slept tolerably, and next morning when seen at 8 a.m., all symptoms of palsy had disappeared, but returned again after breakfast. The paralysis ceased and recurred again for several days in the same manner, but it was always free from it in the mornings. Some time after it ceased to recur any nervous excitement or extra fatigue would reproduce the disorder in a greater or less degree. Shortly afterwards he was seized with complete aphonia, and the same has repeatedly occurred subsequently, but he has twice been removed by galvanism. In the winter of 1861—62 he had a return of the paralytic symptoms accompanied with rheumatic pains in several joints, the left shoulder and muscles of neck being very stiff. In this illness he was seen by Dr. Burrows, Mr. Paget, and Dr. Stewart, who all agreed that there was no organic disease.

In this case I see no other admissible view than that an originally weakly-constituted nervous system, under the strain of undue exertion and anxiety, suffered a temporary and easily reproduced collapse. The absence of the paresis in the morning, when the nerve power had been recruited by the repose of the night, is quite in accordance with this view, and so is also the transitory aphonia, which doubtless depended on a similar paresis of the laryngeal nerves. That the disorder was in any degree feigned is quite out of the question. There was no renal disease.

(To be continued.)

ORIGINAL COMMUNICATIONS.

DIARRHŒA AND CHOLERA:

THEIR ORIGIN, PROXIMATE CAUSE, AND CURE BY MEANS OF ICE.

By JOHN CHAPMAN, M.D., M.R.C.P.

In discussing diarrhœa I shall arrange its different forms according to my conception of their causes—viz., as follows:—

1. *Diarrhœa Originated by Heat.*
2. *Diarrhœa Originated by Motion.*
3. *Diarrhœa Originated by Nervous Irritation (probably Electricity).*
4. *Diarrhœa Originated by the Mind (Emotion).*

Section 1.—*Diarrhœa Originated by Heat* comprises the premonitory diarrhœa of cholera, and the ordinary summer diarrhœa of temperate climates. These maladies, as I shall endeavour to show, are essentially the same, both in nature and origin, and are capable of being cured by one and the same treatment. Assuming their pathology to be identical, an exposition of the proximate cause of the one will of course serve for that of the other.

Diarrhœa premonitory of cholera is often the only symptom observable during two or three days immediately before the more fearful aspects of that disease present themselves, and is remarkable by the fact that it is generally painless. Hence it is that the onset of cholera, in a large number of cases, is peculiarly insidious, the patient very naturally supposing that some irritating material in the bowel is causing slight flux, which, being without pain, will probably soon subside, and calls for no especial Medical attention. Now, if the diarrhœa were really caused by irritating ingesta, it is reasonable to suppose that the reflex action induced by them would result in sensations, more or less pronounced, of the nature of griping and cholic. Inasmuch as the intestinal contractions would be most likely to be not only especially vigorous, but concentrated both in time and intensity, they would pass along the offending material with undue force, and thus originate the pains common in such cases. But in the diarrhœa of cholera, if the hypothesis which I am about to introduce be correct, the order of causation is reversed. In the majority of cases, the dorsal nervous centres and those in intimate connexion with them which directly govern the alimentary canal, become suffused with blood much more copiously than is natural by the stimulant effects of the excessive external heat in hot climates, and of temperate climates in summer, and most rapidly by the direct rays of the sun on the back of the patient. The result upon the intestinal canal may be stated as follows:—(*a*) The blood-vessels nourishing the tube receive a larger supply of nervous influence from the vaso-motor nerve centres than before, and hence, contracting more vigorously than natural, cut off to a proportionate extent the supply of blood to, and consequently the nourishment of, the intestinal walls. The bowels thus lose their wonted robustness, and so become, like a delicate lady with very little blood in her system, "highly nervous" and susceptible of being excited and thrown into excessive or convulsive activity by a stimulus which in their healthy condition would but slightly affect them. (*b*). I have pointed out in my pamphlet on Sea-sickness that when the skin of patients suffering from that malady is most blanched and bloodless sweat exudes from it most copiously. I have also, for the first time, pointed out that in the first stage of bronchitis, when the bronchial-mucous membrane is so swollen from the abnormally large amount of blood circulating in it as seriously to impede respiration, and when, at the same time, it is completely and painfully dry, the application of heat between the scapulæ, by rendering the vaso-motor nerve centres more active than before, will not only stimulate the bloodvessels of the bronchial mucous membrane to contract, thus lessening the amount of blood circulating in the walls of the air-tubes and causing respiration to become much easier, but simultaneously will cause bronchial mucus to be freely secreted. Arguing analogically, I was led to the conclusion that, when applying heat to the back, nausea is induced, the proximate cause of that nausea is the secretion of an abnormal amount of mucus in the stomach; and I was led to the further conclusion that heat thus applied will also increase the secretion of mucus throughout the intestinal canal. Acting on this conviction, I have in certain cases of constipation, indubitably accompanied and, as I believe, caused by a great want of intestinal mucus, overcome the constipation by the application of heat in the dorso-lumbar regions. Hence I believe myself justified in asserting that in the premonitory diarrhœa of cholera, the flux is considerably increased by a copious exudation of mucus in the manner here explained. (*c*) Assuming the truth of the foregoing propositions, we see not only the source of a portion of the choleraic flux, but also how the bowels have become in a condition rendering them peculiarly susceptible to that nervous influence which causes their peristaltic contractions, and thus the præternaturally frequent and rapid expulsion of their contents. Now, precisely those hyperæmic conditions of the nervous centres, presiding over the bowels, which have resulted in the two groups of phenomena already explained, also induce an excessive exaltation of the excito-motor or reflex functions of those nervous centres, and thus cause them to transmit their stimulating influence to the muscular fibres surrounding the bowels with a copiousness and intensity far surpassing the normal amount. Hence these circular muscles, enfeebled, but rendered peculiarly excitable, as explained, contract far more rapidly and vigorously than usual. The association of these three conditions, viz., enfeeblement of the muscular wall of the intestine, preternatural exudation from its mucous membrane, and excessive muscular activity, all dependent, as I have shown them to be, upon hyperæmia of the nervous centres, constitutes the premonitory diarrhœa of cholera, and, indeed, all those choleraic forms of intestinal flux known as the summer diarrhœa of temperate climates.

Summer diarrhœa is, in fact, cholera in its first stage, and only needs a further rise of atmospheric temperature to become developed into its characteristic and fatal form. Indeed, in those years when cholera prevails, diarrhœa is not only increasingly frequent, but is sometimes as fatal as cholera itself. "The largest total annual mortality from diarrhœa in England occurred in 1857, when the deaths from this cause numbered

21,189, the deaths from cholera being 1150. In 1854, when the mortality from the latter disease was 20,097, the deaths from diarrhœa amounted to 20,052."(a) Even as it shows itself in England during those summers in which no suspicion of the presence of cholera exists, it numbers many victims.

If the symptoms in every case of summer diarrhœa were carefully watched, instances would not seldom be found in which its indubitable kinship with cholera would be easily recognised. Indeed, few English summers pass in which cases of clearly attested cholera do not occur,—cases developed in different districts remote from each other, at times when what is called "epidemic cholera" does not exist either in England or in any adjacent countries, and when, therefore, the most enthusiastic "contagionist," or advocate of a "cholera miasm," is troubled to account for the appearance of the disease.

On the other hand, it is well known that in cholera-countries when cholera is rife many cases of diarrhœa which subsides, instead of developing to the full proportions of cholera, present themselves,—cases in which the patients recover when no Medical aid has been used, and which therefore cannot be regarded as cholera cut short by art, but which are, in fact, identical in all respects with the diarrhœa which prevails more or less, according to the rise and fall of temperature, in summer throughout Europe.

It is commonly believed that summer diarrhœa is mainly caused by the eating of fruit, which is, of course, much more abundant in summer than winter. It is probable that in numerous cases this is an *exciting* cause of the malady; but I venture to assert that if this exciting cause were equally operative in winter as it is in summer, it would be very far from equally *efficient*, and that its efficiency in summer depends almost wholly upon the hyperæmic state of the nervous centres generally along the back, and specifically of those presiding over the nourishment and functions of the alimentary canal. These, by the excess of blood in them, are predisposed to abnormal excitement. Then, and not until then, fruit taken into the stomach may readily become an exciting cause of diarrhœa. Moreover, thousands of persons who abstain from fruit, and who are wholly incapable of accusing themselves of committing irregularities of any kind in respect to diet, are, nevertheless, attacked with summer diarrhœa. They are at a loss to account for their sufferings; and hence ascribe them either to the influence of some mysterious, inscrutable agency, or (and indeed very commonly) to the action of the great heat in summer in some way unknown. This wide-spread adumbration or instinctive notion of the cause of the malady is almost as remarkable and interesting as the complete empirical anticipation by the Swiss mountain guides of what I have designated vaso-motor therapeutics.

If the proximate cause of the two kinds of diarrhœa now in question be what I allege it to be, the hyperæmic state of the vaso-motor nerve centres induced by the heat must effect a diminution in the amount of blood in the *peripheral* arteries —not only of the bowels, but of the whole body; for the contractile force exerted upon the arteries generally will lessen their diameters, and will thus lessen the blood currents supplying the capillary vessels throughout the system. It follows, necessarily, that the pulse will become feeble, that textural nutrition being lessened the animal functions will be impaired, and a sense of weakness and lassitude will be induced, and that as the vital chemistry in every part of the structure proceeds less rapidly than before, because the lessened blood-currents supply less chemical materials than before, the amount of heat evolved will be lessened, and consequently the temperature of the surface of the body will fall. As a matter of fact, a feeble pulse, weakness, and chilliness, are ordinary features of diarrhœa. They are summed up by Dr. Copland as follows:—"At an advanced period the pulse is usually small, weak, and somewhat accelerated: the countenance being pale, the body somewhat emaciated, the strength diminished, and the skin dry and very sensible of cold." The bowels being the chief seat of disturbance, it is intelligible that the whole of the abdominal segments of the body, including the walls of the cavity, should be especially affected. Hence not only the "very disagreeable sinking sensation in the abdomen" mentioned by Dr. Wood, but the sense of cold which is especially felt in that region, which causes sufferers to resort to the use of hot stomachic stimulants, and which in Sweden, where diarrhœa is peculiarly prevalent, has led the peasants to adopt the plan of wearing, blacksmith-like, long leather aprons, which cover the breast and reach to the knees.

(a) The *Lancet*, July 22, 1865.

Those forms of diarrhœa which, as I believe, will be most correctly denominated with reference to their several causes as follows—viz., *diarrhœa originated by motion* (as in sea-sickness), *diarrhœa originated by nervous irritation* (as in cases of dental irritation, offending ingesta, or the inhalation of noxious effluvia), and *diarrhœa originated by emotion*—I am precluded by want of space from discussing on this occasion; I can only state, therefore, that I am led, by what seem to me valid reasons, to the conclusion that though their *primary* causes are different from those of diarrhœa premonitory of cholera, and of summer diarrhœa, yet that the *proximate* cause of all the kinds of diarrhœa in question is precisely the same—viz., *hyperæmia, more or less excessive, of those nervous centres which preside over the bowels, and notably, therefore, of the superior and inferior mesenteric plexuses.*

Treatment.—Assuming the foregoing conclusion to be established, it follows logically that if we could exercise a sedative influence over the nervous centres in question by lessening the amount of blood in them, we should be able to avert or cure diarrhœa. Considering the secluded position of the mesenteric plexuses, placed as they are within the abdominal cavity, it seems, at first sight, improbable that we should be able to influence them by means of external applications. As a matter of fact, however, it is possible to lessen the amount of blood in nervous segments along the back at a considerable distance above or below those particular segments over which ice is applied. It is, indeed, a physiological fact, so regular in its recurrence that it may be denominated a law, that when one nervous segment is rendered either anæmic or hyperæmic, the adjoining one will assume a like condition, though in a lesser degree, while those further removed will in proportion to their nearness also participate in the state impressed on the one first affected. It is, therefore, easily conceivable that nervous centres placed in a direction inwards from the point where ice is applied may be influenced indirectly in the same manner as are those dorsal segments above or below the point of application. Moreover, as there is good reason for believing that the spinal cord itself and several of the dorsal segments of the sympathetic as well as the splanchnic nerves are intimately related functionally to the abdominal viscera, a direct sedative influence is, if this be the case, capable of being exerted by the application of ice along appropriate segments of the spinal region, while that influence is propagated indirectly to the mesenteric plexuses, and thus the whole nervous centres involved being supplied with less blood than before, are thereby rendered incapable of continuing those præternatural actions on which the production and continuance of diarrhœa depend. These considerations led me to treat diarrhœa by the application of the Spinal ice-bag along the lumbar and lower dorsal regions in all cases; and when the cerebral and thoracic conditions are such as to permit the exertion of a sedative influence along the cervical and upper dorsal region, to avail myself of the great additional power which may be exercised by applying ice in each cell of the bag at once along the whole spine. The application, in cases where there are no special reasons to forbid it, should be continued as long as the diarrhœa lasts, and should afterwards be repeated two or three times daily until the patient's strength is quite recovered.

I freely recognise that this method of treatment requires a long-continued trial before it can be regarded as an established curative agency of the high scientific order in which I confidently hope it will ultimately rank, and as yet my own experience in thus treating diarrhœa is comparatively slight. I have, however, as stated in my pamphlet on Sea-sickness, ascertained by experience that the diarrhœa which sometimes accompanies that malady is arrested by means of ice; this fact has been proved in several cases. I have also treated several cases of summer diarrhœa in like manner, and with like success; and the infantile diarrhœa occasioned by dentition can, as I have also experienced, be subdued with wonderful rapidity in the same way.

I append a report of the treatment of two cases of summer diarrhœa which have just occurred:—

July 22, 11 a.m., 1865.—Mrs. J., aged about 60, was suffering from diarrhœa. Her bowels had been already moved that morning four or five times. She complained of feeling excessively "low," and of slight pain in the bowels. She was remarkably pale, and looked very ill.

I ordered ice to be applied in each cell of the Spinal ice-bag, and to be continued until the symptoms should subside. Ice was applied forthwith, but only during one hour. From the time the bag was applied until 8 p.m. the bowels were never moved, and no pain was felt.

Meanwhile, she was extremely excited and troubled by hearing a piercing scream from a lady in the same house who had been seriously hurt. At 8 p.m. the diarrhœa recurred, the bowels being moved again three times. At 9.30 the patient went to bed, and again applied the Spinal ice-bag. She lay upon it, and fell asleep; it was removed when the ice had melted, and from that time she slept continuously till 6 o'clock the next morning.

July 23.—Between 7 and 11 a.m. the diarrhœa returned vehemently, the bowels being moved six or seven times; the arms and hands broke out into a cold sweat; the face was sunken; and the patient felt so ill as to be seriously alarmed, and to propose telegraphing for me from the country, whither I had gone on Sunday.

At 11 a.m. ice was again applied as before. During the first ten minutes the sense of cold which had been experienced during the morning, before the ice was applied, seemed to increase; but at the end of that time the patient suddenly became "hot." "I felt," she says, "a glow of heat all over me, which has continued ever since" (until this date, July 26, 1 p.m.). Meanwhile, she has had no return of the diarrhœa, and, except that she has been weakened by the attacks, has felt quite well in all respects.

July 24, 1865.—C. J., aged 44, has not felt quite so well as usual during the last few days, and the bowels have been open more freely than usual. This morning he had a decided attack of diarrhœa. A three-celled Spinal ice-bag was applied along the whole spine. At the time of its application he felt an urgent need of relief to the bowels by another motion; but the first effect of the ice was to cause that urgent feeling to subside. Only in half an hour afterwards were the bowels again moved; and from that time he has not experienced another unpleasant symptom.

I have not space, of course, on this occasion to develope my views concerning the origin, proximate cause, and rational treatment of cholera. I have, however, in the foregoing paper given what I confidently believe to be the key which will reveal the whole mystery of that hitherto inscrutable and irremediable disease. I hope shortly to explain my ideas on the subject, but will at once append here a summary of the doctrines which I hold.

1. That the *primary* cause of cholera is, as a general rule (liable to exceptions which will be indicated), the excessive heat of hot climates, and of temperate climates in summer when cholera prevails.

2. That the *proximate* cause of cholera is of precisely the same nature as that of summer or choleraic diarrhœa, but that it is far more developed, and consequently that its action is proportionately more powerful and intense.

3. That the general arterial contractions effected throughout the system by the vehement operation of the cause in question, viz., *extreme hyperæmia of the spinal and sympathetic nervous centres*, by depriving the capillary vessels in all parts of the body of their wonted supply of blood, induce the muscular debility, tremors, vertigo, impairment of respiration, cold breath, sense of faintness, coldness of the whole surface of the body, coldness and lividness of the lips and tongue, blueness of the entire surface of the body, the sunken and appalling countenance, and the fatal collapse characteristic of the disease.

4. That the nausea, vomiting, copious discharge of the well-known "rice-water stools," cold sweat, and peculiar odour from the body, are due to the combined action of the hyperæmic spinal cord and sympathetic nervous centres, in the same manner as they induce phenomena of the like kind, though less in degree, in cases of summer diarrhœa, and of Sea-sickness when it is accompanied with diarrhœa. (See my exposition of the pathology of Sea-sickness.)

5. That cholera is neither contagious nor infectious in any sense whatsoever, except through the depressing influence of fear.

6 That cholera may be completely averted, and, when developed, cured by the persistent application of the Spinal ice-bag along the whole spine so long as any symptom of the disease continues.

Somerset-street, Portman-square.

SECOND REPORT OF THE CASE OF REMARKABLY PROFOUND AND PROLONGED SLEEP.

By JOHN WARD COUSINS, M.D. Lond., F.R.C.S.,
Surgeon to the Royal Portsmouth Hospital.

A FULL account of this case appeared in the *Medical Times and Gazette* of April 18, 1863. My patient still sleeps as long and profoundly as ever. It is now five years since the present attack commenced, and during that period he has not once slept naturally. The general features of the sleep have not changed, and all the means at present employed have failed to arouse him. He looks pale, but his general health still continues good. His friends state that he has lately lost activity and energy, and he does not take the same interest in his business as formerly.

Tabular Statement showing the Duration of each Sleep from October 14 to December 16, 1864.

Time of falling asleep.	Time of awaking.	Number of hours awake.	Number of hours asleep.
Oct. 14, 11 p.m.	Oct. 18, 5½ p m.	3(a)	90½
,, 18, 10 p.m.	,, 21, 5 p.m.	4½	67
,, 21, 10 p.m.	,, 24, 4½ p m.	5	66½
,, 24, 10 p.m.	,, 27, 2½ p.m.	5½	64½
,, 27, 9½ p.m.	,, 31, 5½ p.m.	7	92
,, 31, 10 p.m.	Nov. 4, 5 p.m.	4½	91
Nov. 4, 10½ p.m.	,, 7, 4 p.m.	5½	65½
,, 7, 10 p.m.	,, 11, 4 p.m.	6	90
,, 11, 10 p.m.	,, 13, 12 a.m.	6	38
,, 13, 9½ p m.	,, 14, 9 a.m.	9½	11½
,, 14, 8½ p.m.	,, 15, 7 a.m.	11½	10½
,, 15, 9 p.m.	,, 17, 2 p.m.	13	41
,, 17, 9½ p.m.	,, 19, 6½ p.m.	7½	45
,, 19, 10½ p.m.	,, 22, 10 p.m.	4	71½
,, 22, 11½ p.m.	,, 24, 2 p.m.	1½	38½
,, 24, 10½ p.m.	,, 28, 2 p.m.	8½	87½
,, 28, 10 p.m.	Dec. 2, 4½ p.m.	8	90½
Dec. 2, 11 p.m.	,, 7, 3½ p.m.	6½	112½
,, 7, 11 p.m.	,, 10, 4 p.m.	7½	65
,, 10, 11 p.m.	,, 16, 5 p.m.	7	138

This table exhibits the remarkable contrast between the waking and sleeping hours. Whatever time of the day my patient rises, he always feels tired and sleepy the same evening, and returns to bed about 10 o'clock. Several times his friends have endeavoured to keep him awake all night, and once with very great effort they accomplished it. This intense desire for sleep appears to me to be a very significant feature in the case, and another argument in favour of the explanation advanced in my former paper. It is our daily experience that a general uneasiness or craving for repose supervenes after a period of waking activity; but, in the present instance, a few hours of cerebral exercise are sufficient to exhaust the nervous system, and induce unsupportable drowsiness.

On December 14 and 15 the patient slept almost naturally, but this was due to a severe attack of griping and diarrhœa which disturbed him after eating an unusually rich and hearty dinner. No doubt he was aroused by the painful sensations excited in the alimentary canal, and transmitted through the spinal system to the brain. After the frequent failure of powerful stimuli applied to the organs of sense and surface of the body, it is an interesting fact that impressions upon the cerebral organs through this channel proved sufficient to break the profound lethargy.

The *Medical Times and Gazette* of November 12, 1864, mentions a case of prolonged sleep reported by M. Blandet. The patient slept forty days, then fifty, and afterwards twelve months; but these extraordinary fits of torpidity were separated by long intervals of health. Although these occasional and prolonged attacks bear but little resemblance to the persistent nature of the affection in my case, still the phenomena observed during the sleep are very similar. Both cases are characterised by complete insensibility which no external stimuli can overcome, by a languid and feeble circulation, imperceptible respiration and the complete suspension of the evacuations.

Portsea.

(a) He awoke from last sleep at 8 p.m. on October 14, and he was up, therefore, only three hours.

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UMBILICAL HERNIA.—RADICAL CURE BY LIGATURE.

By THOS. STAINTHORPE, M.D.

W. H., aged nine months, came under my care July 22, 1862, for umbilical hernia. The parents had only resided a few days in the neighbourhood, and the information I received from the mother of the child was that she observed it a short time after the birth; that it had gradually increased in size. When I first saw it, it was as large as a pullet's egg. At first I made an attempt to keep the part *in situ* by the usual means—viz., trusses of all kinds—but without any degree of success. At length I determined to try the effect of a ligature. With the kind assistance of Dr. Pearson, Assistant-Physician of Colney Hatch Asylum, I returned by careful manipulation the protruded bowel, and kept it within the cavity of the abdomen. Dr. Pearson applied the ligature close to the abdominal wall. The child suffered some pain, but certainly not so much as I anticipated. In a few days the ligatured portion separated, and the wound healed quickly without an untoward symptom. The only treatment requisite was an occasional opiate, and the bowels were kept moderately open by alterative aperients.

The reason I have not reported this case earlier, was that I might have an opportunity of watching it. It is now three years since the operation, and, I rejoice to add, it has been most successful.

Hexham.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASES ILLUSTRATING THE ACTION OF DIGITALIS ON ENFEEBLED HEARTS.

We have already, in a previous number of this journal, called attention to the differences in opinion as to the action of digitalis. We then brought forward some evidence which tended to support the view that digitalis acts as a tonic or an "excitant" to the heart; this week, however, we have ventured to bring before the notice of the Profession the records of further experiences which may be by many regarded as unfavourable to that view, and, in fact, that they tend to support the old opinion that digitalis acts as a sedative, and not as an excitant to the heart.

The first case was that of a patient with dilated heart without valvular disease, under the care of Dr. Gull.

John L., aged 47, a ship joiner, admitted June 15, 1864, into Stephen Ward. He was a large, well-made man, with a well-developed chest. He stated that he had enjoyed good health until six weeks ago, when he was exposed to wet and cold, and sat in his wet clothes the whole day. A few days afterwards he noticed that his face was puffy, and that his breath was "short and wheezy." Shortly after this, his lower extremities, abdomen, scrotum, and penis "swelled."

17th.—Dr. Gull saw him, when the patient complained very much of shortness of breath, and stated that his breath was not short until six weeks ago. His pulse was rapid and feeble. The cardiac dulness extended from left nipple to the left third rib, and a little to the left of the nipple. There was no bruit, but the first sound was very short, sharp, and high-pitched, and had very much the quality of the second sound, so that Dr. Gull said the two sounds together have a "tick-tack" character. This was well marked both over the apex and over the base of the heart. The rhythm of the heart was irregular. Large crepitation was heard over both sides of the chest, and especially over the posterior bases of the lungs. The integuments of the loins, abdomen, and scrotum were œdematous, also the legs below the knees. He was unable to lie down, and his breathing was quick. Urine contained a trace of albumen. The liver was evidently enlarged, and felt some distance below the ribs. Ordered to be dry-cupped between the scapulæ, twice a-day. To take four ounces of gin daily, and to have Hydrargyri chloridi pulv. scillæ āā, gr. j.; ext. hyosciam., gr. ij., in pil., bis in die; tinct. digitalis, ɱxv.; potassæ nitritis, gr. x.; sp. etheris nitrici, ɱxx.; ex. aquæ camph., ʒj. 4tis hôris.

18th.—Cough had been troublesome during night.

19th.—His cough and breathing seemed easier; the bronchial tubes seemed clearer; the œdema of the extremities and of other parts had perceptibly diminished.

21st.—The favourable change still continued. The rhythm of the heart is still irregular, although not near so much so as when he first came in, and he expressed himself as feeling decidedly better. His breathing was not so quick, and he said not so short. To repeat the cuppings, also the mixture and pills.

23rd.—Still going on well; heart's action more regular, and impulse stronger.

25th.—Much less œdema of the legs; heart's action less irregular, and his breathing, he said, was much easier. To discontinue the mixture.

26th.—He died suddenly whilst in bed early this morning.

Autopsy.—The head was not examined. The heart was much enlarged on both sides; the left ventricle was very much dilated, and its walls attenuated; the mitral and other valves were somewhat thickened, otherwise healthy; the right ventricle dilated and also somewhat hypertrophied, while its walls were tough and leathery. The lungs: Emphysematous at the margins, œdematous, and congested; the bronchial tubes congested, and contained a quantity of muco-purulent matter. The liver enlarged, and had the usual "nutmeg" appearance. The kidneys appeared large and apparently fatty. Spleen: Firm, otherwise natural.

A microscopic examination of the muscular tissue of the left and right ventricles showed that it had undergone fatty degeneration. This change was much more marked in the muscle of the right than in that of the left ventricle, and, although it was well marked, yet nowhere had the degeneration reached a very advanced stage.

Dr. Gull, when speaking of this patient's case, referred to another and somewhat similar one that had been in the Hospital some years ago. It was that of a man who was supposed to be suffering from a dilated left heart. The rhythm of the heart was exceedingly irregular, the patient was very much distressed with shortness of breath, dropsy, and other symptoms. Digitalis was prescribed for him, and it appeared to do him a great deal of good. The heart's action became by degrees more and more regular, his breathing very much easier, and in every respect he was thought to be doing well, when suddenly he died.

Dr. Gull further remarked that he could call to mind about half-a-dozen cases of dilated irregularly acting hearts in which death had occurred suddenly, and it so happened that in every case the patient had been, or was at the time, taking digitalis. Yet, on the other hand, he had many times prescribed digitalis to patients with very irregular, feeble, and dilated left hearts, without valvular disease, and with such marked relief and benefit to the patient that the remedy had gained for him the greatest credit. Nevertheless, when digitalis is given in such cases, he considered that the patient ought to be watched day by day, and that this medicine should be discontinued as soon as the heart begins to be more regular and the impulse stronger. This observation Dr. Gull made particularly with reference to the case of dilated, feeble, and irregularly acting hearts. He, however, still further observed,—"I look upon it as a fact, which clinical experience has clearly and definitely settled in my own mind, that digitalis is capable of diminishing the frequency of the heart's beat and of increasing the power of the heart's impulse; indeed, in cases of disease of the left side in which the action of that organ is very rapid and feeble, if I prescribe digitalis I confidently expect that it will diminish the rapidity and increase the strength of the heart's action."

The next case was that of a patient with dilated irregular heart, no bruit, but physical signs of bronchitis, under the care of Dr. Wilks.

Mary J., aged 54, admitted April 14 into the Clinical Ward. She was a tall, well-built woman, who stated that she had usually enjoyed good health until a few months ago, when she began to suffer with shortness of breath and with a bad cough.

When admitted she complained very much of her difficulty in breathing and of her inability to lie down in bed. The apex of the heart was lowered, and the area of cardiac dulness was considerably increased. The rhythm of the heart was irregular, but no bruit was heard. The first sound, however, at the apex was very feeble—in fact, inaudible. Large crepitation was heard all over both sides of the chest. She was ordered tincture of digitalis, ten minims; decoction of senegæ, an ounce every six hours.

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April 19.—She expressed herself as feeling easier. The heart's action had improved. Her cough was very troublesome. ℞. Mist. cascarillæ co., ʒj.; sp. ether sulph., ɱxx., ter die.

After this she day by day gradually improved; her heart became more regular and her breathing much easier up to the 26th, when Dr. Wilks found her up and very much better, and she had been able within the last day or two to move about the ward, when on the 27th she was sitting on the bed, dressed, and apparently going on well. The Sister of the ward happened to say to her that if she wanted to amuse herself she might help them to dust the ward. The patient made an attempt to get off the bed, but fell back and died instantly.

The Autopsy showed the left heart dilated and somewhat hypertrophied, but, as Dr. Wilks remarked, much more dilated than hypertrophied. The lungs were emphysematous, and the lining membrane of the bronchial tubes very vascular and contained some viscid mucous and purulent matter in the tubes. The kidneys were large and granular.

The next case was also an example of dilated left heart without valvular disease, under the care of Dr. Wilks.

John W., aged 46, a farm labourer, was admitted into the Clinical Ward, June 7, 1865. He said that he had had rheumatic fever five years ago, but had been perfectly well up to a month since. He then got wet through, and difficulty of breathing and aching pain in the limbs followed. Shortly afterwards his legs began to swell, and he was then compelled to give up his work. He had been troubled lately with vomiting and purging.

He was a tall, hardy-looking man, with large bones and well-developed muscles. His features were large and regular; alæ nasi thin; upper lip long and rather thick; teeth sound and regular, excepting the molars, which had decayed. He stated that he had always been temperate.

His present symptoms were great dyspnœa with hurried, heaving respiration, 30 per minute. His countenance was distressed and turgid. His expression was such that there could be no doubt but that he was very ill indeed. His heart's action was very peculiar. It was rapid, irregular, and at times appeared to intermit. Indeed, the heart seemed to tumble about without any real rhythmical action. His pulse was extremely weak and could scarcely be felt, and it was impossible to count it. There was increased dulness over the region of the liver, extending nearly down to the crest of the ilium. His hands and feet were cold. Bowels had been open several times. Urine became slightly opalescent on boiling and after the addition of nitric acid. His feet and legs were swollen and œdematous up to the knees. ℞. Infusi digitalis, ʒj., 6tis hôris.

8th.—He had a sudden paroxysm of dyspnœa and great pain over the præcordial region late last night. His limbs became cold and his breath felt cold. He had taken one dose of his medicine, but that was now ordered to be discontinued, and brandy was administered. Hot poultices were applied over the præcordia, and he slowly rallied again.

9th.—Dr. Wilks saw him early this morning. He appeared exceedingly ill. Pulse very feeble, and could not be counted. His breathing so short that no careful examination could be made. ℞. Tincture of digitalis, ʒss. ♎ tis. hôris.

After taking two doses of this mixture he appeared to improve, and expressed himself as feeling easier.

On the 10th he died.

Autopsy.—The head was not examined. The lungs were in that condition familiarly known as "heart lungs." The heart was very much enlarged, especially on the left side. The left ventricle was not contracted, and contained a small clot and some fluid blood. This ventricle was very much dilated, and its walls did not seem to be hypertrophied, neither were they attenuated. The endocardium was thickened, but there was no valvular disease. The muscular tissue of the ventricle was pale looking, and easily broken down under the pressure of the finger. Dr. Wilks called attention to the increase in the connective tissue, extending into the muscular substance of the left ventricle, which appeared as bands or layers, extending from the thickened endocardium amidst the muscular structure. The coronary arteries were not rigid, nor otherwise diseased to the naked eye. The liver was large, and had the usual nutmeg appearance in heart disease. Spleen very firm; otherwise normal. Kidneys large and apparently highly congested; on section, looked coarse, but not exactly granular.

A microscopical examination showed the muscular tissue of the hearts of the last two patients to have undergone fatty degeneration. In the case of this man this degeneration was exceedingly well marked. The transverse striæ of nearly all the muscular fibre had been replaced by bright, sparkling granules. On section, showed the connective tissue between the bundles of the muscular fibres unusually distinctly, and it had been evidently increased in quantity. In this case the fatty metamorphosis would appear to have been due rather to the pressure of the increased quantity of the connective tissue on the minute capillaries than to disease in the coronary branches themselves.

Dr. Wilks, before ordering digitalis for this patient, remarked that, judging from his experience, this was just one of those cases in which digitalis might be expected to do good; but whether it would save this patient was somewhat questionable, considering "how very ill he was." Dr. Wilks stated at the same time that he had lately seen a case of a woman who was apparently suffering, like this man, with dilated, enfeebled left heart. There was great dyspnœa, and excessive but very irregular action of the heart. No perceptible impulse. The first sound could not be distinguished. The pulse was exceedingly feeble and quick. The patient was in the greatest distress. He recommended that half-drachm doses of the tincture of digitalis should be given every four hours. After the patient had taken a few doses she began to gradually improve, and continued to do so, and became able, although but for a time, to get about again.

Another case, under the care of Dr. Wilks, that we had the good fortune to see was that of a man who had been admitted into one of the Surgical wards for an injury, but as his breathing was so very short, and he was expectorating a quantity of bloody mucus, and as he had other symptoms indicating chest disease, Dr. Wilks was asked to see him. Dr. Wilks found that the patient was suffering from dilated and enfeebled heart; but there was no bruit to indicate valvular deficiency. The rhythm of the heart was exceedingly irregular. There was dulness and crepitation at the base of the right lung, supposed to be due to pulmonary apoplexy. The liver was enlarged, and could be distinctly felt below the level of the umbilicus, and his face and conjunctiva had a yellow tinge. His feet were œdematous, and his urine scanty and high coloured, but it did not contain albumen. The patient was ordered half-drachm doses of tincture of digitalis every four hours.

We had an opportunity of watching the patient day by day. After the second day he began gradually to improve, his heart became more regular, the first sound could be distinguished, and the dyspnœa subsided, and after a week he was very considerably better, and he quite got over the attack. The dose of the digitalis was diminished as the patient improved.

Having now briefly mentioned these interesting cases, we will next proceed to inquire how far the sudden deaths of these patients were really due to the action of the digitalis, and how far to something connected with the disease itself. And before it is possible to come to any conclusion on this point, it is absolutely necessary that we should endeavour to determine whether experience and pathology tend to teach that patients with enfeebled dilated left hearts without valvular, are liable to die suddenly.

Clinical experience in such cases tends to show that the rule is for such patients not to die suddenly, but rather to suffer with dropsy, hepatic enlargement, albuminuria, and with other complications, and that death is most frequently due to uræmia, to pneumonia, acute bronchitis, apoplexy, or some other accidental cause. Nevertheless, although such is the rule, we think that not a few cases might be collected which would tend to show that those suffering with this disease are liable to die suddenly. We have notes of one case in particular which came under our notice.

A gentleman, aged 60, was found suffering with well-marked symptoms of dilated left heart without valvular disease. His heart's action was exceedingly irregular, and there was no visible or perceptible impulse and no bruit, and the area of cardiac dulness was markedly increased. Mucous râles were heard all over the chest. There was no albumen in the urine, no marked hepatic enlargement, and but slight œdema. He was ordered to remain in bed, and five grains of ammo-citrate of iron were prescribed to be taken three times a-day.

He remained much the same for some days, but after a week the heart's action began to improve; day by day it became more regular, and at length—fourteen days after he had been first seen—finding that his pulse was almost quite regular, that the rhythm of the heart was equally so, and as he appeared otherwise much better, he was allowed to get up

and dress himself. The day after this he did not appear any worse. He was cheerful, and expressed himself as feeling better. He got up, and remained up all day, and seemed to be doing well. About 8 o'clock, however, he said he wished to get into bed; he made an effort to do so, when he fell forwards and died.

We thus see that with dilated heart death may occur suddenly, whether digitalis be given or not. We will next inquire if there is anything in the morbid anatomy or known pathology of the disease which leads us to think that such patients may die suddenly.

In by far the majority of cases of cardiac disease in which death has occurred suddenly, and that really due to the heart itself, there is evidence of degeneration in the muscle of the heart. Of course we make an exception when death is due to sudden blocking of the mitral orifice or to any analogous event.

Experience has shown that persons whose hearts have undergone fatty degeneration are liable to death from syncope; and, moreover, it has further shown that the greater the dilatation of the cavities, and especially of the left ventricle of the heart, and the less the hypertrophy, the greater the danger to the patient. Dr. Walshe, in speaking of the liability of patients with aortic regurgitant disease to sudden and instantaneous death, says that hypertrophy of the left ventricle mysteriously lessens the likelihood of sudden death.

In comparing this kind of dilated left ventricle with that which is occasionally seen as the result of acute rheumatism in young persons, we perhaps ought not to consider that the liability to sudden death is equal in both. For in the latter it is comparatively, although perhaps not strictly, a local disease, and tissue in other parts of the body is tolerably healthy; whereas, in the case of pure dilated heart in a person of middle or rather advanced age, there is degeneration in the blood vessels throughout the body, and in consequence disturbed function and atrophy in most of the organs of the body. The consequence is that while in the one patient any functional disturbance in one organ is likely to be compensated by increased functional activity in another organ; yet in the other patient the organs themselves have so much degenerated and lost their power that they are not equal to the emergency and to the sudden calls upon them; hence liability to sudden death, if exposed to certain accidental circumstances, will be much greater in one than in the other. Therefore, there seems good reason for thinking that a patient with dilated left heart, and especially if of middle or of advanced age, when, as is usually the case, there are so frequently concomitant degenerative changes in other organs, has a tendency to die suddenly.

We would here call attention to the fact that the female patient under the care of Dr. Wilks took ten drops of tincture of digitalis every six hours for five days. On the 19th it was discontinued, and on the 27th she died, so that there was a seven days' interval between the last day of taking the digitalis and the day of death.

Now when we call to mind how small the dose and the seven days' interval, it appears to us that it would be very difficult to say that the digitalis had anything to do with her sudden death, but rather to conclude that it was like the case that we have before mentioned, due to some unknown momentary impulse, which brought about death from syncope.

There is another interesting fact connected with one of these cases that it is necessary to bear in mind, and that is, one that Dr. Hilton Fagge called attention to at the time when the heart of the male patient under Dr. Wilks' care was being opened, that the muscles of the left ventricle were not contracted, but flaccid.

Now, bearing all these things in mind, it appears to us, that there certainly is no proof that the sudden death was in any way due to the digitalis; and when we consider that there are facts which tend to show that patients with this form of cardiac disease are liable to die suddenly; and moreover, as Dr. Gull has observed, this remedy is given with considerable relief and benefit to many patients with dilated, feeble hearts; it is probably right to conclude, with Dr. Gull, that, in such cases digitalis may be given, and probably the patient will derive great benefit from it; but it must be cautiously given and carefully watched; and further that in cases where a death is threatened, as in the case referred to by Dr. Wilks, by the extreme feebleness of the heart itself, and where there are symptoms of cardiac "asthma," digitalis appears to be a a very valuable remedy. And although the cases we have brought forward may seem at first glance to be unfavourable to the view that digitalis acts as a tonic to a feeble heart, yet we venture to say that a careful consideration of the whole subject, from more cases, and taking into view the whole of the circumstances, will show that digitalis can be given, not only with safety but with advantage in such cases. Such patients are liable to die suddenly, and will do so now and then whether digitalis be given or not. That this remedy does good, for a time, at least, there can, we submit, be no doubt. But the question is a difficult one, and we do not wish to dogmatise. We wish for a careful scrutiny of the whole facts of the cases. We shall take an early opportunity of recurring to this subject.

In a recent paper read before the Royal Society, by Dr. Hilton Fagge and Dr. Stevenson, will be found some important observations on the action of digitalis on frogs. The authors do not infer that the action is similar in frogs and man, but bring forward their results as physiological tests for digitalis. They show that certain effects are produced on frogs by digitalis only, or at any rate, by a limited number of other agents. As a contribution to the physiological action of digitalis on the muscular tissue of the heart—although only the heart of a frog—the results are highly interesting. The following are a few of their conclusions, slightly condensed:—

Digitaline is one of a small class of substances of which the action on frogs appears to be identical. Of these, we have ourselves experimented only with digitaline, antiar, the *Helleborus viridis* and the *H. niger*, and the *Scilla*; and we believe that we are the first observers who have recognised the identity of the action on frogs of the last of these plants with that of the other substances placed in this group. As the heart is the organ primarily affected by them, they may be called cardiac poisons, so far as frogs are concerned.

The characteristic effect of each of these agents on frogs is the production of irregularity of the heart's action, followed by complete stoppage of its pulsations; the ventricle remaining rigidly contracted and perfectly pale after it has ceased to beat; the muscular power of the animal being at this time unimpaired, and persisting as long as in frogs in which the circulation has been stopped by other means, such as ligature of the heart. The irregularity in the heart's action, which precedes its stoppage under the influence of these poisons, is peculiar. The rhythm is but little altered, and the beats are not necessarily diminished in number, as has been supposed. Sometimes, however, the ventricle makes only one pulsation for two of the auricles, the number of its contractions being therefore lessened by one-half. More frequently the irregularity consists in one or more portions of the ventricle (especially the apex) becoming rigidly white and contracted, while the remainder of the organ continues to dilate regularly. When the yielding portions are small, a peculiar appearance, as if the wall of the ventricle formed crimson pouches or protrusions, is produced.

No other substance, except those mentioned above, has been found to produce this chain of effects, even in a single experiment. We have ourselves tried nineteen different substances, consisting of vegetable extracts and alkaloids. Of these, *emetina* and the extract of the *Delphinium staphisagria* caused somewhat similar irregularity of the cardiac beats; but in frogs poisoned by these agents, the muscular power was always lost before the heart had ceased to beat, and the ventricle stopped in the dilated, and not in the contracted, state.

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(Continued from page 12.)

Case 8.—*Multilocular Tumour—Three Tappings—Ovariotomy—Recovery.*

On June 5, 1865, an unmarried housekeeper, 56 years old, was admitted under the care of Mr. Wells. She was of a dark complexion, was rather thin but not unhealthy looking; had no varicose veins nor ulcers, but after long standing her legs became œdematous. The girth was forty-three inches, the distance from the umbilicus to the pubic symphisis was ten and a-half inches, to the ensiform cartilage twelve and a-half inches, and to either ilium thirteen and a-half inches. The whole abdomen was occupied by a tumour, in which limited fluctuation was distinctly perceptible. It reached as high as the ensiform cartilage, and burrowed beneath the false ribs on each side. There was no tenderness on pressure, no bruit on

auscultation, no crepitus. The tumour could be swayed about from side to side; the abdominal parietes were only moderately thick, and were marked neither by lineæ albicantes, nor by dilated veins. The uterus was in its normal position, but its motions were somewhat restricted; the cervix and os were healthy, but the tumour could be felt to the left of the womb.

The catemenia had commenced at the age of 13, had been always profuse, but regular, and had ceased finally at the age of 51. There was no leucorrhœa; the digestive organs were in fair order; the nervous system strong; the thoracic viscera healthy; there was no hereditary disease, and no known cause for the present disease. In the summer of 1863 the patient had observed that her abdomen increased in size, while she elsewhere became emaciated. She was troubled with pain in the right groin, and occasional difficulty in micturition. In May, 1864, she consulted Mr. Squire, Dr. Protheroe Smith, and afterwards a homœopathic practitioner, all of whom told her she had a "tumour." She went on increasing in size, and her breathing became difficult. In January, 1865, the homœopathic practitioner drew off nine or ten quarts of greenish oily fluid by tapping. A week later he removed two quarts of clearer fluid by the same opening, and a fortnight afterwards he repeated the operation, but only obtained three pints of fluid. The patient recovered well, but the tumour went on increasing, although at the time of admission into the Hospital it was not so large as it had been before the tapping.

Mr. Wells advised that ovariotomy should be performed before another tapping became necessary, and the operation was performed on June 6, 1865, before Dr. Protheroe Smith, Dr. Laroyenne, of Lyons, Dr. Stokes, jun., of Dublin, and others. Dr. Parson gave chloroform. The incision was commenced midway between the umbilicus and the pubes, and continued upwards about six inches. There was only one slight band of adhesion, and it was not separated until the tumour had been partially withdrawn. One large cyst was punctured and emptied, as were two or three others through the same opening; and finally Mr. Wells introduced his hand, broke down a number of cysts, and gradually withdrew the tumour. The pedicle was scarcely thicker than one finger, but it was very short. An attempt was made to bring it outside with a clamp, but that made such a pull on the uterus that Mr. Wells transfixed the pedicle, tied it doubly with twine, and returned the stump with the ligature into the abdomen. There was not an ounce of blood lost during the operation. The left ovary was healthy and small. The wound was closed with seven deep and three superficial sutures of wire. The patient made a very rapid recovery. Her pulse never rose above 84.

On the second day there was a little dry bronchitis, and for several days there was a good deal of bladder irritation, which, however, subsided when the catheter was discontinued and mineral acid prescribed. The bowels were moved for the first time on the eighteenth day, without pain, and not excessively. This long constipation produced no uneasiness. The patient rapidly gained strength, and was discharged in good health on July 5.

The fluid removed at this operation measured twenty-two pints, and the mass of smaller cysts and solid portion of the tumour weighed eight pounds.

(To be continued.)

CASES OF INCOMPLETE OVARIOTOMY.

While the above eight cases of ovariotomy have been in progress, Mr. Wells has operated on two patients from whom he found it impossible to remove the whole of the tumour, owing to adhesions low down in the pelvis. In one case none of the cyst was removed, but a permanent opening was kept up, and a complete cure obtained after suppurative inflammation. In the other case all the unattached part of the cyst was removed by the écraseur, the remaining portion being fixed to the abdominal wall by suture. This patient died three days after the operation. The following details of these important cases will be read with interest:—

Case 1.—Early in December, 1864, Mr. Wells was asked by Mr. Nicholson, of Stratford-green, to see a housemaid 22 years of age, and single, who was suffering under ovarian disease. A tumour was felt occupying the lower part of the belly, and rising four or five inches above the umbilicus. It was not tender on pressure; fluctuation in it was perceptible, but was not very distinct. The patient had commenced to menstruate at the age of 14, and had always lost a good deal of blood every fortnight. The uterus was high and rather far back; the cervix was moveable; while a soft elastic tumour was to be felt depressing the anterior wall of the vagina. On the father's side the patient came of a strong family, her mother had, however, been delicate. She, herself, had at one time been supposed to have a hernia on the right side. No trace of it was felt.

About eight months before Mr. Wells saw her the patient was much troubled with pain in the right hip, and shortly afterwards she discovered a small tumour in the lower part of the abdomen. For six months symptoms of pressure on the bladder supervened occasionally, and pain and numbness continued in the right leg. The tumour increased slowly at first, and then more quickly, until it reached the size already mentioned. The patient was advised to wait before anything was done. On New-year's day, 1865, she had a smart attack of pain in the right thigh, and, three days later, Mr. Wells felt some recent lymph over the anterior surface of the tumour.

The patient was admitted on January 17, 1865. The catamenia had just come on. When they ceased—after some consultations rendered necessary by a questionable state of the apex of the right lung—it was decided not to delay ovariotomy by any preliminary tapping, and on February 6, 1865, Dr. Parson having chloroformed the patient at 3 p.m., Drs. Dehn, of Hamburgh, Marion Sims, and Mr. Wright, of Nottingham, being present, Mr. Wells made an incision from one inch below the umbilicus downwards for five inches. There were no adhesions anteriorly, but after tapping the principal cyst, and emptying it of several pints of fluid containing much blood, its attachments to the brim of the pelvis and to the right side of the uterus were found to be so close that Mr. Wells resolved not to attempt their separation, but to replace the empty cyst. There was, however, such free hæmorrhage from the opening into the cyst made by the trocar, and even from the little punctures made by the hooks which seized the cyst wall, that it was obviously unsafe to return it; and Mr. Wells transfixed the edges of the external parietal wound, and of the cyst wound, with a harelip-pin, and secured them together with a twisted suture. The rest of the abdominal wound was closed with four deep silk sutures above the pin, and one below it. The patient rallied well; pain was not excessive. Twenty drops of laudanum were given at 5. At 8 she was easier than she had been, but the skin was hot; the tongue very dry; the lips parched; the pulse 120; respiration 52. A pint of clear urine was drawn off. Mr. Wells thought of bleeding, but resolved to wait for two hours to see whether perspiration would break out; the aspect being good, and the state of the urine favourable. At 10.30 the patient was found to have been sick; the pulse was 136, the respiration 52. At 10.45 Mr. Wells bled to 10 oz. rapidly in a full stream. At 11 the pulse was 124, the respiration 48; the face rather pallid; the pulse still incompressible, although fuller than before the bleeding. At 12.20 the pulse was 124, the respiration 40. Next day the face was flushed, and the tongue still parched; the skin, although hot, was moist; the pulse, 120; respiration, 28. Mr. Wells cut away the thread around the pin, but left the pin itself. On the second day the patient was much better; her pulse was only 116. The stitches were removed in due time, and a very free discharge of serum gradually set up, just at the point where the cyst had been pinned to the cyst wall. Convalescence progressed, and on February 26 the patient was sent to Eastbourne. Mr. Wells next saw her on May 11. There was then a very little discharge from the bottom of the cicatrix, and a slight hardness and elastic swelling felt per vaginam. The abdominal tumour had disappeared. She returned to her situation, and Mr. Wells saw her again in July in excellent health, the catamenia being regular, and with a very slight moisture only at the lower end of the cicatrix.

Case 2.—In July, 1864, a patient suffering from ovarian disease was, at the recommendation of Mr. Cooke, admitted into the Samaritan Hospital, under the care of Mr. Wells. She was 49 years of age, had been married thirty years, and was the mother of fourteen children, the youngest of whom had attained his fourteenth year. She was of a dark complexion, looked tolerably healthy, but was rather thin. She had no night sweats, eruptions, ulcers, varicose veins, nor œdematous legs. Her digestive organs were out of order; her appetite was bad; her sleep troubled; her spirits broken. She had a short dry cough; her chest was narrow and pigeon-breasted; her pulse was 100, regular but feeble. The urine was normal in quantity and in quality, but was often passed in driblets. The girth at the umbilical level was 40 inches, the distance from the umbilicus to the ensiform cartilage 9½ inches, to the symphisis pubis 5 inches, to the right ilium 9½ inches, and to the left

ilium 9 inches. The abdomen was occupied with a moveable tumour, which reached up as high as the sternum, and also filled both lateral regions of the abdomen. Fluctuation in it was apparent superiorly, but not very clear below. The catamenia had commenced at the early age of 12, and had continued regular up to a year of the patient's admission to the Hospital, when, after having diminished gradually, they finally disappeared. There was no history of sudden suppression; there was no great leucorrhœa. The uterus was pushed backwards and somewhat to the left by a tumour which was distinctly to be felt per vaginam. The cervix uteri was large and soft. The history that the patient gave of herself was, that she came of a delicate family, that she had always lived a quiet although laborious life, and that, although she had often suffered from indigestion, she yet believed that she was free from serious illness until the stoppage of the menstrual discharge, nine months before her admission. About that time flatulence became very troublesome, and was succeeded by distressing pain under the right false ribs. The bowels became costive, the bladder became irritable, and the belly swelled rapidly. There were never any very distinct attacks of inflammation, but the patient was always feverish, and complained often of sharp, pricking pain in the right side of the abdomen. The swelling of the abdomen was at first very rapid; afterwards it increased more slowly. The treatment up to the period of admission had been directed chiefly towards the improvement of the digestive functions.

Mr. Wells diagnosed: "Ovarian cyst, unattached anteriorly; behind uterus attachment seems to be close." On July 15 he tapped and removed 16 pints of dark fluid, which was undoubtedly ovarian. The patient recovered well, and was discharged three days later. She returned to the Hospital on February 7, 1865. She then stated that she had been very comfortable up to the middle of the previous December, since which time she had suffered much from distension. Mr. Wells tapped for the second time on February 8, removing 15 pints of fluid, and leaving the contracted empty cyst and a secondary one, which could be felt distinctly on the left side of the abdomen. The patient was discharged relieved; but in May she returned, anxious to be radically cured.

Mr. Wells operated upon her on the 30th of May, 1865, in the presence of Dr. Laroyenne, of Lyons, Marion Sims, and others. An incision was commenced one inch below the umbilicus, and continued downwards for three inches. A thin walled, large cyst was thus exposed: it was tapped and emptied of some clear fluid, a few loose adhesions to the left side and one to a small piece of omentum were broken down; the cyst itself was then freely laid open, and some secondary cysts emptied by breaking down intervening dissepiments. Mr. Wells then found that the cyst was so closely attached round the brim of the pelvis, as well as to the back and to the right side of the uterus, that it would be highly dangerous to complete the ovariotomy. He therefore enclosed the lower part of the cyst in the loop of a large chain écraseur, and slowly cut through it. There was no bleeding from the divided edges of the cyst. Two vessels which were bleeding in the omentum were tied, and the wound was closed with four deep and several superficial sutures. The open part of the cyst was sewed to the lower angle of the wound by a stitch, which pierced each lip of the abdominal wound and each side of the remainder of the ovarian cyst; a piece of lint which was carried into the cavity of the cyst prevented the complete closure of this lower angle.

The operative peculiarities of this case were threefold:—1st. A large piece of cyst was removed and some left behind. 2ndly. The section of the cyst was made by the écraseur; and 3rdly. The opened cyst was fixed to the abdominal wound in such a way that a cure by suppuration might be obtained or iodine might be injected.

The quantity of liquid removed at the operation was twenty pints. The cyst wall removed was about eight inches by seven; its external surface was marked by traces of torn adhesions; its inner surface by hæmorrhagic patches and by small cysts containing blood.

The patient rallied well. Opium was given rather to relieve restlessness than pain. Five hours after the operation the voice and aspect were good, the pulse was 100, and urine was clear. During the day following the operation bad symptoms came on. At 9 p.m. Mr. Wells found her with a hot, dry skin, thirsty, restless, vomiting, the abdomen tympanitic, the urine scanty, the pulse 130, and quite incompressible. He therefore took thirteen ounces of blood from the arm. It buffed and cupped. On the morning of the second day the pulse was 140, the vomiting persistent, the urine scanty, but not albuminous. No flatus passed by the rectum. The symptoms gradually became worse. No fluid could be detected in Douglas' space, and the patient sank at 7 p.m. of the third day, seventy-six hours after the operation.

At the post-mortem examination the sigmoid curve of the colon was found to be much more acute than natural, and the canal to be obstructed, owing to a long narrow band of adhesion—apparently one of the *appendices epiploicæ* much elongated—which connected the gut with the lower part of the cyst. As the latter fell low down in the pelvis it pulled upon the gut. It is probable that the patient might have done well had it not been for this obstruction of intestine.

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Medical Times and Gazette.

SATURDAY, JULY 29.

THE NEW PARLIAMENT.

Medicine has gained one seat in the new House of Commons. Besides Dr. Brady, who is again returned for Leitrim County, we have the pleasure of recording that the choice of the electors of Shrewsbury has fallen upon Mr. William James Clement, a Fellow of the Royal College of Surgeons and a Fothergillian Medallist. This gentleman has a great career open to him, and he has our best wishes for its successful prosecution. We trust that the fitful breezes of party politics will not make him swerve from the line which we believe he has marked out for himself. To be the watchful guardian of the hygienic interests of the people of England, and a representative of the thoughts and wishes of the Medical Profession in Parliament, is to hold a position which ought to stimulate a man's best efforts. All we have heard of Mr. Clement leads us to the belief that he will prove himself worthy of the confidence of his Professional brethren and an enlightened advocate of such measures of social reform as may promote the physical well-being of the people. We must confess a feeling of disappointment that the names of other members of our Profession do not appear in the roll of the new Parliament. We should have been glad had Sir Charles Locock, Mr. Mitchell Henry, and Mr. Alfred Smee proved successful wooers of "free and independent electors." It is true that these gentlemen, had they been returned, would not have occupied the same benches, but we have every reason to think that they would have acted in concert when the interests of their common Profession were at stake. We should be glad indeed if, with a new Reform Bill looming in the distance, we saw a chance of a special representation of our Profession. Since Mr. Gladstone's rejection, the *Times* newspaper has discovered that University representation is an anomaly. We only wish we had a few more such anomalies in our constitution. The representation of education and science is surely as likely to be valuable to the State as the representation of bricks and mortar or of savings' bank deposits. If, besides the Universities of Oxford, Cambridge, and Dublin, whose majority of voters are clerical, the Universities of Scotland and the University of London, whose majority

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of graduates are Medical, returned members, the Profession would not be left for a representative to the chance of the return of a popular Surgeon by a provincial borough. No principle not already affirmed in the constitution, no purely professional class representation, would be involved in such an extension of educational franchise. We do not suppose that Parliament would ever consent to the allotment of a seat to the Colleges of Physicians and Surgeons and to the licentiates of the Apothecaries' Company; but with the precedent of the English and Irish Universities before them they could not justly refuse representation to the Scottish and London Universities. It is well known that the Liberal party — at least, its Whig section — pride themselves upon the close connexion which they have maintained with the thinkers and philosophers of the North, and upon the fostering care which they have bestowed upon the University, which, however, they seem quite content to remand, term after term, to the lumber-rooms of Burlington House. We shall probably have an opportunity in the next Parliament of testing their sincerity. If a Reform Bill introduced by the Government of Lord Palmerston contain a clause giving a seat to each of the Scottish and the London Universities, our faith may, to some extent be restored in party confessions of faith, and we shall try to unlearn the great lesson which the last Parliament has taught us—that a Government calling itself "Liberal" may be the undeviating opponent of the interests of a Profession which has ever occupied the vanguard of scientific and social advance.

CONSTANCE KENT.

The result of the trial of this unhappy young woman will be to stay the madness of those false friends of humanity who would wipe out the boundary between wickedness and disease There can be no doubt whatever but that Constance Kent, and she alone, was the murderess. As to the precise details, public curiosity is intensely aroused, and they who like to gloat over the horrible minutiæ of cruelty feel disappointed that the trial was not gone into at length. These will probably come out some day, but they do not affect the main question of guilt or innocence, responsibility or none. As to the motive, it was not an irrational, insane delusion, but one or more of those wicked passions which exist in every human breast, although, Heaven be thanked, they are not often allowed such unbridled course and frightful gratification. Witnesses were at hand to prove that the prisoner had uttered expressions showing the bitterest enmity against her mother-in-law; an enmity which seems not to have been provoked by any ill-treatment, or anything more than those feelings of ill-will which are often supposed to exist between mothers-in-law and their adopted progeny. The words of the judge were, without doubt, absolutely true:—

"It is my duty to receive the plea which you have deliberately put forward; and it is a satisfaction to know that it was not pleaded until you had the advice of counsel, who would have freed you from it if you could have been freed. I can entertain no doubt, after reading the evidence in the depositions, and considering your confession of the crime, that your plea is the plea of a really guilty person. The murder was one committed under circumstances of great deliberation and cruelty. You appear to have allowed feelings of jealousy and anger to work in your breast until at last they assumed over you the influence and the power of the evil one."

The prisoner interrupted the judge, and said "not jealousy;" but the distinction between allied bad passions is of no great moment. The judge properly commended the prisoner for her honesty and courage in confessing the crime, a course imperative not only for clearing innocent persons from suspicion, but for the relief of her own conscience, and as an acknowledgment of her offence against the laws of her country. We are glad to hear that the sentence is commuted. The moral lesson to be learned is the existence of evil passions in the breasts even of young children, which require to be kept in subjection by proper moral and religious training, and the existence of which alone, in however frightful a degree, does not constitute insanity.

THE NEW EPIZOOTIC DISEASE AMONGST HORNED CATTLE.

We are sorry to find that the reports which have been rife respecting the outbreak of a severe epizootic amongst dairy cows are not without good foundation. The first cases are said to have happened in Mrs. Nicholl's cowsheds at Islington. They were attended by Mr. Priestman, a Veterinary Surgeon in the Caledonian-road, and he believes that he had seen a solitary case of the same disease previously in a dairy at Hackney; but about this there seems to be a little doubt. The first cows attacked at Nicholl's sheds were six new cows which had been purchased about a week previously in the Metropolitan Cattle Market. Two or three of these cows were attacked together on June 29. They all had the disease and died. It is the custom at this dairy to place newly purchased cows in a shed by themselves for a short time; but it so happened that in the separate shed kept for this purpose two or three old cows had been placed with them. The principal shed, containing over ninety cows, is airy, habitually kept clean, and well ventilated, and situated about fifty or sixty feet from the quarantine shed on the opposite side of a paved yard, on which the dung is heaped before being removed. The same men who attend to the quarantine shed attend also to the principal shed. After the new cows, the next attacked were some in the principal shed, the old cows in the quarantine shed being seized later. The disease spread rapidly, and it was considered advisable to send the healthy cows to the fields. Still it spread amongst the stock, until at the time we write no less than 110 or 115 cows have died or been killed on account of it. Adjoining the cow sheds are layers, in which cattle are received prior to the market. Of all the cows attacked only three recovered after about a fortnight's illness, and having seen them we can testify that they are in a miserable state of emaciation. Since the outbreak in this shed the disease has been observed in many dairies, large and small, in the north of London, and we are informed at the Veterinary College that it has also proved fatal as an epizootic at Doncaster, Burton-on-Trent, and in other parts of the country. We are informed at the Veterinary College, where we have seen a case of the disease, that the course of the illness is somewhat as follows:—The cow, previously quite healthy, is suddenly seized with trembling or rigors; in an hour or two purging of thin, fæcal matter occurs, soon followed by purging of a thin, watery, brown, serous fluid, sometimes accompanied with a little blood. Of course, the milk is at once suppressed. Soon after a serous discharge takes place from the nose, and the mucous membrane of the nose and vagina are observed to become denuded of epithelium. Sometimes there is tympanitis. Prostration and collapse follow, the extremities become cold, and subcutaneous emphysema is observed in the loins. Death usually results in a period of from twelve hours to seven days. We understand that Prof. Simonds regards the disease as identical with the rinderpest or steppe murrain of Russia, Austria, etc. Others regard it as a typhoid or enteric fever. On examination after death the intestinal mucous membrane is found reddened, especially towards the rectum, and Peyer's glands enlarged, and with this there is emphysema of the lungs and other organs. From what we have said it would appear likely that the disease has been imported through the agency of Spanish or Hungarian cattle, which Nicholl's cows must have been in relation with, either in the market or the layers adjoining their sheds. There are some difficulties in deciding upon its spread by contagion alone, inasmuch as in one shed near

the Veterinary College where ten cows were kept which had not been out of the shed, into which no new cows had been introduced, the disease broke out about a fortnight ago. Two or three cows were seized the same day, and in a week all were dead. We have made inquiries amongst the cowkeepers in Islington, and find that in one of the largest sheds where 400 cows are kept not a single case has happened; that on the eastern half of that parish no cases have been found, but that some of the sheds on the western part of the parish have suffered more or less, some severely—one cowkeeper has lost all his cows. Several of the cowkeepers state that they have made up their minds on the occurrence of the first case to sell off all their stock. An order in council was issued on the 24th inst. for inspection of cattle under the Act of 1860.

OUR NATIONAL STATISTICS OF DISEASE AND MORTALITY.

Our national statistics of disease and mortality are at the present moment in a state of the most lamentable confusion. It is of all things most to be desired that the civil registers in use in the several parts of the British empire and the registers kept in the military and naval services of the country, should be framed upon an uniform model, so as to be comparable the one with the other. But this is not so. The more ancient nosological systems have been discarded, and nothing has yet been found to replace them in such a manner as to obtain general assent. The classification of disease is an old bone of contention, and still forms the stumbling-block to all the efforts yet made to attain uniformity in registration. The classification adopted in the General Registration Office in London, and which was put forth in the hope that it might be generally accepted, has met with all but universal rejection. Dr. Stark, of Edinburgh, says: "I, for my part, will not adopt the present English nosology for Scotland. In some parts it is science run mad. In others it follows no science at all." And accordingly that gentleman has constructed an arrangement of his own, which, while it sins against the principles which he himself lays down, is certainly no better, and in some respects worse for any useful purpose, than that which he repudiates. Dr. Farr's statistical nosology has had a fair trial in the Army Medical Department, and is condemned by the joint testimony of Dr. Gibson, the Director-General of the Army Medical Department; Dr. Logan, the head of its sanitary branch; Dr. Balfour, the head of the statistical branch; and the late Major-General Sir Alex. Tulloch. It has fared no better in the navy. In this service not even a trial of Dr. Farr's classification seems to have been made, the nosological arrangement adopted being that formerly in use in the army. Dr. Bryson, the Director-General of the Navy General Department, "strongly disapproves" of the English system; Dr. Nisbet, the Inspector-General of Fleets and Hospitals, advocates a return to Cullen's nosology; and Dr. Hilditch is conservative and satisfied with the naval *status quo*. Dr. Dickson, the Medical Inspector of Her Majesty's Customs, alone gives Dr. Farr a good word; but even he proposes modifications. Sir W. R. Wilde, the Assistant Census Commissioner for Ireland, has a pet classification of his own as old as 1841, to which his affections still remain constant. Dr. Morehead rejects Dr. Farr's system, as inapplicable to India; and Dr. Parkes, the Professor of Military Hygiene at Chatham, only seems to accept it as a great improvement on preceding systems, and as forming a good basis on which to construct something better. We need go no further to show that matters cannot for the credit of the country be permitted to remain much longer as they are. The difficulty might, indeed, be cut through, and all parties reconciled by adopting a bare alphabetical arrangement, leaving each to construct a classification such as will meet his own requirements. It would, no doubt, possess advantages, since the hygeist, the Medical teacher, and the meteorologist might each be expected to advocate a different arrangement, according to the object he had in view. But surely our national pride would not permit the Medical authorities in this country to agree to what would only amount to a confession of incompetency. Besides, it is to be recollected that *nationally* we have one distinct object in view, clear and well defined, and that a national classification should be such as shall promote its attainment without any concern for the special objects of individual classes of scientific inquirers.

At the close of the session 1862-3 Dr. Farr submitted to the Council of the Epidemiological Society certain questions concerning the classification of epidemic diseases, a circular was issued, and the replies from various quarters have been published. We have been quoting from them in the above remarks. Dr. Farr's inquiry, partial as it was, nevertheless opened up the whole question of a national classification. Some of those who replied to the circular—such as Dr. Watson, Professor Acland, Dr. Babington, and Dr. Gibson—declined to put forward their individual views upon the subject, on the ground that a committee of the Royal College of Physicians was still engaged upon it; and, although a feeling of propriety may very rightly have induced these gentlemen to withhold for the present any expression of their individual ideas, we are held in no such bonds, and have no similar good reasons for abnegating our functions as one of the leaders of popular Medical opinion. We will, therefore, as briefly as possible, sketch out, for the benefit of any who may care to know them, the views which we have come to entertain after some experience in the working of Dr. Farr's nosology, and a careful consideration of the entire matter at issue during a long period of years.

We have said that *national* statistics of disease and mortality have a clear and well-defined object. This object is prevention. We can conceive of no other paramount object, although there may be others which they may subserve in a more limited sense. The enumeration and classification of diseases must be of such a character as to promote the attainment of this object. In considering the subject of national statistics these two things must, however, be kept distinct, if we are ever to arrive at any clear ideas upon it; in the replies sent in to the Council of the Epidemiological Society they are in some instances confounded. First, then, as to the *enumeration of diseases*. It must be kept in mind that each disease, however we may please to group it with any other diseases, has, so far as it is preventible, its own proper means of prevention, some of which may be within the province of a public authority, and some which are available only when individual forethought is sufficiently aroused and individual intelligence sufficiently instructed to apply them aright. There is some force in the late Sir Alexander Tulloch's objection to Dr. Farr's nosology, that not only the classification but the nomenclature is not such as to be intelligible to any but those whose minds have undergone a Medical training. The conditions which must be secured in any national tabular enumeration of diseases appear to us to be the following:—1. It should include all diseases which Medical men of ordinary Professional attainments may be fairly expected to identify; and, as Dr. Parkes suggests, a careful examination should from time to time be made by competent authority with a view to adding in those diseases which the Profession generally has learned to make out in the interval. A medium course must be followed in the enumeration—over-refinement, on the one hand, being carefully avoided, and, on the other, such laxity as would result from too low an estimate of general Professional diagnostic capabilities. To adapt such a table, which, in its complete form, would be fatally unwieldy, to the requirements of registration at home, in various foreign stations, and of the military and naval services, appropriate omissions might be made in the forms provided for use in each instance. 2. The nomenclature should be such as to be

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comprehensible both to Medical men and to persons of ordinary literary attainments. Where English names can be used with facility and convenience, they should be preferred. 3. The enumeration must embrace not only diseases usually regarded as primary, but also such as are usually secondary; such, for example, as convulsions, ascites, general dropsy, hæmorrhages, &c. There is a double reason for this, one being that the primary malady may even up to death be veiled in obscurity, and the other that deaths are not always certified for civil registration by Medical men, and the leading symptom is then the only basis upon which a name can be given to a disease. 4. However perfect a table of diseases may be, the registrations made under it must be more or less imperfect, partly from diagnostic mistakes on the part of Medical men, and partly because in some instances the seat only, and not also the nature of a disease, can be made out; while in other instances the cause of death is so obscure that nothing can be said positively about it. Some general terms, then, must be introduced to meet such circumstances as these; hence we would retain some such designations as "undefined disease of the nervous centres," "disease of the organs of respiration," "disease of the digestive organs," etc. 5. Of course, there must be found a place for the registration of the violent causes of death, all those being enumerated which are most commonly met with either in civil or military communities. But even when all these causes of disease and death are provided for, there still remain conditions connected with the extremes of life, as where infants are prematurely born and die because they are organically unfitted to maintain an independent existence; persons who, after years or months during which their vital powers generally have been failing, die at last absolntely worn out with old age (although such instances are, we believe, rare); and women who succumb under the physiological efforts of childbirth, either as the result of disease in the parts concerned in the process or from accidents that sometimes attend it. A place should be found for the registration of all these conditions and for the diseases attendant upon pregnancy and childbearing.

Secondly, as to *the classification of these causes* of disease and mortality. The objects of classification are twofold: first, to group together diseases which originate under circumstances so similar that the prevalence of any one of the group indicates the recourse to similar hygienic precautionary measures; and, secondly, to assist such persons as use or consult the official tables in finding the name of any disease or cause of death that they may be in search of. If an etiological classification were possible, it would, of course, with the object sought, be the best that could be adopted; but for various reasons, mainly dependent upon our imperfect knowledge of the causes of disease, and in part upon the multiple character of the etiological relations of any one malady as they are at present understood, this, desirable as it is, must be admitted to be unattainable. Still, to some extent—that is, so far as our positive knowledge extends, and so far as it can be made compatible with convenience—this element should be represented in a classification. When this has been done, pathology may be appealed to for the construction of *natural* groups; and, when all that can conveniently be classified thus have been placed together, anatomical considerations should dispose of the remainder. What we are disposed to advocate, then, it will be seen, is a classification based upon the principle of Eclecticism, in which special prominence should be given to the suggestions of etiology so far as they are available for the purposes of preventive medicine. And here we would guard ourselves against any misconception of our meaning. In using the terms etiology and pathology, we mean an *empirical* etiology and a pathology the doctrines of which are so undisputed as to be accepted, so far as it goes, by Medical men of all shades of speculative opinion. In the words of Dr. Morehead—"So much of the science of Medicine as is universally acknowledged to be certain should be turned to account in our classifications of disease. But, on the other hand, there should be the greatest care that no part of the arrangement can be interpreted as expressing doctrines in etiology or pathology which are not universally acknowledged or which do not rest on unquestionable truths." Or, as Dr. Dickson puts it, it should be "based upon practical rather than theoretical data, and not fettered unnecessarily with the current notions of the day." We suppose this is what Dr. Dickson means when he says that the chief desideratum is simplicity. Our own ideas upon the subject may be gathered from the following desiderata, the attainment of which should be sought under the guidance of the general principles we have laid down:—1. The arrangement should be as far as possible a natural one—that is, diseases, etc., should be grouped much in the same way as they would occur together in the mind of any practical Medical man of ordinary Professional attainments. 2. The groups of diseases should not be designated in any manner that would involve a theory open to dispute. 3. The name of a disease should not appear twice upon the table. 4. Where diseases are closely allied or difficult to distinguish symptomatically, such, for instance, as diarrhœa, dysentery, cholera, and muco-enteritis, they should not on any account be distributed into different classes.

All this being understood, we are in a condition to suggest certain necessary groups. First, we think that one natural group consists of those diseases which are liable to spread epidemically, such as small-pox, measles, scarlet fever, continued fever (still grouping its varieties together as still commonly undistinguished by the mass of Practitioners), yellow fever, etc. These form a pathological group, as specific fevers, eruptive or otherwise, and are etiologically related as, in a very marked degree, spreading preferentially under conditions admittedly unsanitary. We would not have it understood that we hold them as originating in filth, overcrowding, etc., for we assume the truth of Dr. Morehead's doctrine when he says that it is an error to regard "causes of bad general health to be exciting causes of specific forms of disease, and in supposing that thereby the value of sanitary science and art is enhanced." But still wherever these febrile diseases prevail in excess, there every day's experience teaches us that there is something, usually very much, which the sanitary Physician is called upon to rectify. Many of these diseases thus grouped together are contagious, some very contagious, others less so; there could be no objection to placing them in the order of their supposed contagiousness. Taking Dr. Farr's "zymotic class" as our basis, we would thus throw out quinsy, placing it with the other diseases of the organs of alimentation; croup, which we would place near laryngitis, whooping-cough, carbuncle, influenza, and all forms of bowel complaint. The enthetic, diathetic, and parasitic diseases of Dr. Farr we would also find a different place for. Then we would of course abandon the use of the terms "zymotic" and "miasmatic," as involving an untenable, or, at all events, a most doubtful hypothesis. Another natural and etiological group might be formed of those conditions which are universally admitted to be brought about by indulgence in vicious or depraved practices; such a group would embrace syphilis, urethral stricture, delirium tremens, etc. Another natural group more or less etiologically connected might consist of the non-febrile diseases and conditions which are commonly registered as the cause of death of young infants. Pathologically, the group is like the last, an imperfect one. It would embrace premature birth, atrophy, and debility, various congenital malformations, teething (only named at all in deference to popular opinion), thrush, and infantile convulsions. Another natural group might embrace the accidents and morbid conditions of pregnancy, childbirth, and lactation. A fifth group would consist of those fatal conditions which are brought about by the application of some

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violence, accidental or intentional. Beside the conditions enumerated by Dr. Farr under this head, we think that this class should embrace privation of food, in the case of infants, privation of breast milk, hydrophobia, glanders, and malignant pustule, together with the stings of venomous animals. The further classification should, we think, be guided by pathological and anatomical considerations. One natural pathological group may be formed, perhaps, of diseases which Medical men in general connect in their minds with a general depraved condition of the blood or nutritive function. Some of these diseases would be often secondary to some unascertained morbid state of the blood or eliminative organs, or of some of the organs or parts concerned in the circulation of the blood. They must find a place, and the group would embrace diseases which are usually regarded as constitutional or general diseases. Such a group would contain scrofula and general tuberculosis, abscess (where the seat is undefined), cancer (the seat of which is often undefined in certificates of death), gout and rheumatism, general dropsy, hæmorrhage (where the seat is undefined), and mortification of the limbs. The remaining conditions might now be grouped much as they are by Dr. Farr, according to their diagnosed seat, arranging each anatomical group in some sort of pathological order. We should thus have a group of diseases of the nervous system, including hydrocephalus, and of the several organs of special sense; diseases of the organs of circulation, including those of the arteries and veins; diseases of the organs of respiration, including croup and also phthisis, as allied etiologically with bronchitis and asthma, and often popularly confounded with these diseases, diseases of the digestive organs, including bowel complaints, and placing ascites rather nearer in order to liver diseases than Dr. Farr does, and also intestinal worms, diseases of urinary organs, generative organs, organs of locomotion, and of the skin, embracing in the last class purpura, scurvy, carbuncles, and boils. This is a bare outline of what we think might be done in the way of a natural classification, that would have some useful application. No arrangement that authority could introduce would please everybody. It is tolerably certain that such an one as we suggest, for instance, would not please the Head of the Statistical Department in Edinburgh; but then he abhors anything in the shape of a statistical nosology, and would "crystallise" for our use to the end of time something in the form of a classification that could never be applied to any useful purpose at all. An official statistical table," says Dr. Stark, "ought to be a stereotype never to be departed from." We shall look with some impatience for the declaration of opinion to be given by the College of Physicians; but whatever the result of their deliberations may be—whatever classification is finally determined upon as fit for national application,—we sincerely hope that each and every statistical department in the service of the Crown will be required to adopt it.

THE WEEK.

THE RETIREMENT OF SIR JOHN FISHER.

We are informed that Sir John Fisher, F.R.C.S., has resigned the post of Surgeon-in-Chief to the Metropolitan Police—an office the duties of which he has honourably discharged for the long period of fifty-one years. We trust that the protracted and valuable services of this able public servant will be rewarded by the Treasury with a suitable retiring pension. The appointment of a successor to Sir John has not yet, we believe, been made. We hear that there are already several candidates for the vacant post.

FROM ABROAD.—ENGLISH AND FRENCH MEDICAL ORGANISATION —MEETINGS OF SCIENTIFIC CONGRESSES.

It is not often that we see the complex and difficult question of English Medical affairs so well treated as it has been in a recent number of the *Archives Médicales*—a journal which seldom meddles with Medical politics. Nor would it probably have done so now had not the writer participated in the fears which are entertained in well-informed quarters that some radical changes of a disastrous character are contemplated in French Medical organisation. At all events, the impression is abroad that English "free trade" doctrines, which have proved so beneficial under various circumstances, are in danger of being extended to Medical and pharmaceutical legislation, which is totally unsuited for their application. Unfortunately, discussion on the topic being prohibited to those most interested in its rigorous examination, or being confined within too limited a circle to be exempt from injurious prepossessions, the motives and decisions of those in authority are only suddenly promulgated in a clap of thunder termed a decree.

As, at all events, an indirect protest against this procedure, the writer in question, M. Follin or M. Lasègne, we presume, furnishes his readers with an impartial and able account of the operation of the Medical Act since its passing. While admitting that its passage at all was a great step in the right direction, he indicates how wofully it has fallen short of the expectations of the Profession, and points out how little hope there is, in our abnegation of all first principles, and nibbling at endless and unimportant details, that we shall ever arrive at any better result. He says, truly, that the desire of the Profession is for some restrictive measure, more or less similar to that which prevails in France, under the operation of which persons unduly qualified, or not qualified at all, would not be allowed to practise by the mere subterfuge of assuming an evasive title or even when destitute of title. Without such power as this he regards the Medical Council as inefficient, and he quotes Dr. Burrows' dictum that society cannot be efficiently protected without the practice of Medicine being interdicted to every person not registered according to the regulations of the Medical Act. Parliament, Dr. Burrows adds, will never consent to so radical a measure, which is, nevertheless, the only one likely to prove efficacious.

Although the writer can give us little consolation on this side of the Channel, he points out to his countrymen that at the very moment when the Profession in Britain demands with justice additional restriction, that which has proved of undoubted advantage in France is threatened to be relaxed. At all events, his warning will have been delivered, and we hope not in vain.

"Things have arrived at this point, that there is a great deal of talking and but little done. The Medical public complains that such trifling effects result from the annual sessions of the Council, which prove so costly; and it accuses the Council of inertia and indifference, not taking into account that the renovation is all the more laborious because it is sought to bring it about gradually, without doing violence to opinions, hatred of privileges rendering it necessary that prejudices should be respected. Every request made to the Government by the Council is characterised by timidity, because it seeks to obtain the acceptance of details while eluding questions of principle; and in proportion as the Council advances the Government retreats, compensating it with kind words. Compared with the old state of things, the organisation of Medicine in the United Kingdom constitutes an enormous progress; but, compared with our own institutions, it remains very defective, and the period does not seem to be near when it will undergo notable amelioration. . . . To sum up, the fundamental difference between the English and the French law relative to the practice of Medicine is, that the one recognises as imprescriptible the right of any person to practise the Medical Profession, provided he do not usurp any (registered) titles; while the other denies such right to the generality of persons, confining it exclusively to those who have acquired their diplomas by the approved examinations. Which of the two is most logical? Is it that which, aware of the danger, attenuates it and seeks with timidity to restrain it, or that which takes radical measures for its prevention? The Medical Act will not be the termination of Professional regulations, for, sprung from a semi-principle, it has only resulted in semi-legislative effects. Promulgated as a safeguard of the

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public health from the perils it runs at the hands of the ignorant and of charlatans, it only in part effects its object, placing a mere parchment where a barrier should have been raised, inflicting penalties on those who commit formal transgressions without attaining those more essentially wrong. . . . The compromises amidst which the English Medical legislation is wrecked should lead us to a better appreciation of the absolute laws as regards this matter by which we are governed. It is, moreover, entertaining a singular idea concerning liberty and equality to stigmatise as a privilege a right accessible to all, which is acquired by hard work, which can neither be ceded nor sold, and which expires with him who so laboriously gained it."

Those of our readers who meditate a visit to Germany this autumn may have the option of attending several of the scientific congresses as well as the jubilee of the Vienna University, which is to be held in August. This postponement from the proper historical period in March, on account of the revolutionary reminiscences thus recalled, has so offended the students that they have resolved to abstain from any participation in the celebration. In order to avoid the strange inconsistency of holding an university rejoicing without the presence of students, the authorities have endeavoured to bribe at least some of the body by offering lodging and good cheer gratis, a remission of future payments, and less rigorous examinations. To the credit of the young men it is said that only two have yielded to these temptations. From September 18 to 21 the fortieth meeting of the German *savants*, Physicians, and naturalists, will be held at Hanover. Professors Krause and Karmasch, who have the direction of the arrangements, announce that there is plenty of good and comfortable hotel accommodation, and that lodgings in private families can easily be got by communicating with them before hand. Then from August 28 to September 2 the Hungarian Physicians and naturalists are to hold their eleventh meeting at Presburg, Drs. Kanka and Römer, the secretaries, will supply every information. For those having a *horse* turn there is the second Veterinarian Congress, to be held at Vienna from August 21 to 26. Professor John Gamgee, of Edinburgh, will be a good person to consult by intending visitors. For those who prefer a near trip, and the vivacious Gaul to the plodding German, we again direct attention to the meeting of the third French Medical Congress, which is to commence at the fine old city of Rouen on July 31.

FOUNDER'S DAY AT EPSOM COLLEGE. — The 21st of July, the speech-day at Epsom College, passed off this year with unusual *éclat*. The prizes were distributed in the schoolroom by the Lord Bishop of Winchester, the Visitor of the College. Prior to the distribution the following speeches were delivered in very creditable style: — 1. Carmen Gratulatorium, Lever. Glee, "Sleep Gentle Lady" (Bishop). 2. Ulysses describes his interview with the shade of Teiresias (Homer, Odyss. xi.), Lowe; 3. Cæsar's Address to his Soldiers (Lucan, Pharsal. vii.), Hay; 4. Catiline's Speech to the Conspirators (Ben Jonson, Catiline), Newton. Chorus, "Hurrah for Merry England" (Berger). 5. Sosia and his Double (Plautus, Amphitruo), Mercurius, Elcum; Sosia, Yate. In addressing the assembled scholars after the distribution, the Bishop complimented them on the talent and eloquence they had displayed, which, he said, were worthy the magnificent hall in which they were then assembled. "He hoped that from year to year Cambridge and Oxford might know something of their powers, and that the College at Epsom would take its place among the honoured of the land, with the great schools of the day, Eton, Winchester, and Westminster, and he would forbear to mention all the little schools, such as Rugby, Cheltenham, and others — (laughter and applause) — for the latter, however useful in their way, must not compete with Winchester, Eton, Westminster, and Epsom. (Laughter and cheers.) He would conclude by saying to each boy '*vive valeque*,' and to the assembly generally '*gaudete et plaudite*.' (Loud cheers.)" In the afternoon an excellent *dejeuner* was served in the dining-hall. The health of Mr. Propert, the energetic and benevolent founder of the College, was proposed by the Rev. Derwent Coleridge, and most warmly received by the boys and their visitors.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF OXFORD.

(Continued from page 99.)

OXFORD AS A MEDICAL SCHOOL.

From the consideration of the Colleges we pass next to the subject of Oxford as a Medical School. We shall commence best by referring to the Hospital accommodation of the city.

There is only one Medical institution of importance in Oxford, viz., the Radcliffe Infirmary, the foundation of which was laid in 1759, and which was opened for the reception of patients in 1770. The Infirmary was named after Radcliffe, I believe, by the trustees of his charity, and the building was designed by Mr. Leadbeater. The design, however, is not very different from that of the other provincial Hospitals built at or about the same period. The Infirmary, situated a little way out of the town, is surpassed by none for openness and cheerfulness. It has a beautiful garden in its front, with a large fountain, and an extensive garden at the back, with broad walks, which the patients are allowed to traverse if it is considered advisable.

ADMINISTRATION.

The Hospital is supported by annual subscriptions and donations. The number of patients treated in the house is about 1100, and the total number treated out of the house nearly 5000. The subjoined table gives the

Number of Patients during the last Ten Years, and of the Weekly Average of In-Patients.

Years.	In-Patients. In the House at the end of the preceding Year.	In-Patients. Admitted during the Year.	In-Patients. Total in House during the Year.	Casualties and Out-Patients. Not including those under treatment at the end of the preceding year.	Total In and Out-Patients.	Weekly Average of In-Patients. Men.	Women.	Total.
1855	101	845	946	2368	3314	59	49	108
1856	101	875	976	2771	3747	60	48	108
1857	109	943	1052	3106	4158	65	49	114
1858	111	946	1057	3216	4273	64	50	114
1859	125	915	1040	3940	4980	67	49	116
1860	102	923	1025	4249	5274	71	49	120
1861	105	930	1035	4886	5921	67	47	114
1862	100	896	996	4930	5926	67	46	113
1863	97	873	970	4292	5262	61	44	105
1864	96	1011	1107	4982	6089	72	45	117
Average	104	915	1020	3874	4894	65	47	112

Warm baths dispensed to in-patients . . .	1491
,, ,, out-patients . . .	—
Shower baths dispensed to in-patients . . .	300
,, ,, out-patients . . .	6
Patients helped on their way home by the Samaritan Fund by sums of money varying from 1s. to 3s. 6d.	22

Rules for Admission of Patients.

	£	s.	d.		In-patients.	Out-patients
Annual subs. of	1	1	0	. may recommend	0	4
,,	1	11	6	. . . . .	1	1
,,	2	2	0	. . . . .	1	2
,,	3	3	0	and life govs. of 40 gs.	2	3
,,	4	14	6	,, 60 guineas	3	4
,,	6	6	0	,, 80 guineas	4	6

And so on. Additional out-patients' turns may be procured at the rate of two for every 10s. 6d. subscribed, in addition to the foregoing sums.

In respect of any body corporate, society, township, or parish annually subscribing three guineas or upwards, the head or chief officer for the time being, or any member of the said body corporate, society, township, or parish, being specially appointed to act on its behalf, is recognised as a governor; but in the case of a parish, if no appointment be made and notified to the secretary, the incumbent, or licensed curate, if he reside therein, is considered as representing the same, otherwise the representation is in the senior churchwarden.

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No parish is permitted to subscribe less than £2 2s. per annum.

Every parish officer recommending a patient must, if required, deposit one guinea with the secretary, for defraying expenses contingent upon the non-removal of such patient when discharged.

Lunatics, confirmed epileptics, women advanced in pregnancy, children under 5 years of age (unless labouring under acute diseases, or in need of any great operation), persons suffering under cholera, small-pox, primary venereal complaints, or in a dying condition, are not admitted as in-patients; and persons labouring under habitual ulcers or cancers not fit for operation are not admitted for the same complaints a third time, or, if inadvertently admitted, they are not suffered to remain.

Accidents, and cases truly urgent and admitting of no delay (though they be not cases of accident) are admitted at all times, as are also cases of typhus or other infectious fever, which are admitted, without delay, after due notice to the House-Surgeon-Apothecary.

Cases truly urgent, such as visceral and other stoppages, endangering life, may not only be admitted without delay and without a turn of recommendation, but if necessary may continue gratuitously in the house three weeks.

The sum of one shilling per day is charged for the expenses of board and maintenance of domestic servants, to be paid by their masters and mistresses, whose affluent circumstances enable them to testify in this manner their desire to relieve the finances of the institution.

Income of Hospital and Cost of Patients.

During the past ten years the average sum of £395 has been received annually from benefactions, legacies, and funded property; £110 from life subscriptions; £1827 from dividends and rents; £1852 from annual subscriptions; £344 from miscellaneous receipts; and £53 from life subscription fund. The average total income to meet expenses has been £4098. The average disbursements of the Hospital during the same period have been at the following rates annually:—For articles of daily consumption, £2183; for articles in daily use, £217; for repairs and alterations, £203; for officers' salaries, wages, etc., £908; for sundries, £149; for shop accounts, £445; for annuities, £48: giving a total of £4156. It will be seen from this that the expenditure of the Hospital has been something considerably above the income. To meet deficiencies in 1855 the sum of £1170 15s. was raised by a special subscription.

The average cost of each in-patient is £3 2s. 9d., and of each out-patient 5s. 5d. per annum. The average cost of each bed exclusive of out-patients is £21 5s. 8d.

Medical Staff.

Honorary Physicians: 1829. Charles G. B. Daubeny, M.D.; 1839. Seth B. Watson, M.D.

Honorary Physicians, with the Privileges of a Life Governor of Forty Guineas: 1839. W. A. Greenhill, M.D.; 1857. Robert Jackson, M.D.; 1860. George Rolleston, M.D.

Honorary Surgeon: 1851. Richard James Hansard, M.R.C.S.

Physicians: 1847. H. Wentworth Acland, M.D., Clinical Professor; 1857. Gilbert W. Child, M.D.; 1860. Edward B. Gray, M.D.

Surgeons: 1849. Mr. James Torry Hester; 1850. Mr. Edward Law Hussey; 1853. Mr. Frederick Symonds.

House-Surgeon Apothecary: 1860. Mr. Alfred Winkfield.

PRACTICE OF THE HOSPITAL.

No special form of disease is met with in the practice of this Hospital—at all events, nothing that requires particular observation; but very careful records of the Surgical cases are kept. I am indebted to Alfred Winkfield, Esq., the House-Surgeon, for the following table of

CAPITAL OPERATIONS AT RADCLIFFE INFIRMARY SINCE 1838.

Amputation of Thigh.

No.	Sex.	Age.	Disease or Injury.	Result.
1	M	21	Disease of right knee	Cured.
2	—	—	„ „	Died.
3	F	17	„ „	Cured.
4	M	19	„ „	„
5	M	—	„ „	„
6	M	55	Compound fracture of leg	„ secondary.
7	M	18	Disease of right knee	„ died of phth. sim.
8	M	24	„ left knee	„
9	F	15	„ right knee	„
10	M	26	Disease of right knee	Cured; died of phthisis.
11	F	20	„ „	„
12	M	19	Disease of left leg	„
13	M	24	„ left knee	„
14	F	21	„ „	„
15	M	49	„ right knee	„ died of phthisis.
16	M	18	„ knee	„
17	F	12	„ right knee	„
18	F	11	„ knee	„
19	M	22	„ „	„ died of phthisis.
20	M	47	Ulceration of stump	„
21	F	19	Disease of left knee	„
22	M	38	Cancer of leg	Died.
23	M	18	Disease of right knee	Recovered; died of phth.
24	M	50	„ left knee	„
25	M	10	„ „	„
26	F	25	„ right knee	„
27	M	26	„ left knee	„
28	F	15	„ right knee	„
29	M	47	Injury to knee	Died; primary.
30	M	24	Disease of left knee	Cured.
31	F	40	„ right leg	„
32	M	12	„ left knee	„
33	M	48	„ right knee	„
34	M	26	„ left knee	„
35	F	37	„ right knee	Recovered.
36	M	24	„ „	„
37	M	19	„ „	„
38	F	33	„ „	„ died of phth.
39	M	30	„ left knee	„
40	M	43	„ „	„
41	F	16	„ right tibia	„
42	F	29	„ right knee	„
43	M	35	„ left knee	„
44	M	19	Injury to thigh	Died; primary.
45	M	12	Disease of right knee	Recovered.
46	F	21	„ left knee	„
47	F	43	„ right knee	Died.
48	F	15	„ left knee	„
49	M	34	Injury to left leg	Recovered; primary.
50	M	26	„ „	„ secondary.
51	F	22	Disease of left knee	„
52	F	19	„ right knee	Died.
53	F	18	„ „	„
54	M	35	Mortification of left leg	Recovered.
55	M	35	Disease of right knee	„
56	M	70	Injury to knee	Died.
57	M	20	Disease of left knee	„
58	M	14	„ right knee	Recovered.
59	M	38	„ „	Died.
60	M	14	Injury to leg	„ primary.
61	M	28	„	„ „
62	F	18	Disease of left knee	Recovered.
63	F	20	„ right knee	„
64	F	37	„ „	„
65	F	20	„ „	„
66	M	21	Paralysis of limb	„
67	M	9	Disease of right knee	Died.
68	M	21	„ left knee	Recovered.
69	F	21	„ right knee	„
70	M	14	„ left tibia	„
71	M	38	„ left knee	Died.
72	M	19	„ right knee	Recovered.
73	M	45	„ „	„
74	F	33	„ left knee	„
75	F	38	„ „	„
76	M	25	„ „	Died, 3 months afterwards
77	M	19	„ right knee	Recovered.
78	M	12	„ left knee	„
79	M	48	„ „	„
80	M	18	„ „	„
81	M	27	„ „	„
82	M	25	„ right knee	„
83	F	33	„ „	„
84	F	40	Injury to right leg	Died; primary.
85	M	21	Tumour of leg	Recovered.
86	M	37	Disease of left knee	„
87	M	47	„ right knee	„
88	M	34	„ „	„
89	F	50	„ „	„

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No.	Sex.	Age.	Disease or Injury.	Result.
90	F	25	Disease of left knee	Recovered.
91	F	45	„ right knee	„
92	F	26	„ left knee	„
93	M	34	„ right knee	„
94	M	24	„ right leg	„
95	F	26	„ right knee	„
96	F	20	Tumour of leg	„ died since.
97	M	26	Disease of left knee	„
98	M	8	„ „	„
99	M	18	„ „	„
100	M	21	„ „	„
101	M	23	„ right knee	„

Amputation of Leg.

No.	Sex.	Age.	Disease or Injury.	Result.
1	M	—	Disease of ankle	Recovered.
2	M	—	„ „	„
3	M	20	„ left ankle	„
4	M	45	„ left foot	„
5	F	45	„ ankle	„
6	M	19	„ left ankle	„
7	M	29	„ „	„
8	M	16	„ „	„
9	M	52	Injury to foot	„ primary.
10	M	15	Disease of ankle	„ died of phth.
11	M	23	„ left ankle	„
12	M	27	„ right ankle	„
13	M	40	„ left ankle	„
14	M	11	„ ankle	„ died of phth.
15	M	50	„ right ankle	„
16	F	23	Injury to ankle	„ primary.
17	F	19	Disease of right ankle	„
18	M	25	„ „	„
19	M	6	„ right foot	„
20	M	35	Injury to left leg	„ primary.
21	M	41	„ right leg	„ secondary.
22	M	16	„ right ankle	„ primary.
23	M	19	„ right leg	„ secondary.
24	F	45	„ „	„ primary.
25	F	50	Disease of right ankle	„
26	F	54	Injury to ankle	„ primary.
27	M	48	Elephantiasis	„
28	M	51	Disease of right ankle	„
29	M	60	Injury to right leg	„ primary.
30	M	30	„ left leg	„ „
31	M	37	„ right leg	„ „
32	F	54	„ „	„ „
33	M	11	„ left leg	„ „
34	F	36	Disease of right ankle	„
35	F	25	Ulcer of leg	„
36	F	29	Ulcerated stump	„
37	F	63	Cancer of leg	Died.
38	F	19	Disease of left tibia	Recovered.
39	F	29	„ right leg	„
40	F	31	„ left ankle	„
41	M	30	„ left tibia	„
42	M	11	„ right foot	„
43	M	22	Ulcer of right leg	„
44	M	68	Disease of left ankle	„
45	M	65	Gangrene of foot	„
46	M	48	Ulcerated stump	„
47	M	31	Injury to leg	„ primary.
48	M	12	„ to right leg	„ „
49	M	24	Disease of right ankle	„
50	M	27	Injury to leg	„ primary.
51	M	20	Disease of right ankle	„
52	M	17	„ right tibia	„ at knee joint.
53	M	22	„ left ankle	„
54	M	66	Injury to right ankle	„ primary.
55	F	52	Ulcer of left leg	„
56	M	46	„ „ „	„
57	M	16	Injury to right leg	„ primary.
58	F	53	Tumour of leg	„
59	F	10	Disease of left ankle	„
60	M	27	Ulcerated stump	„
61	M	27	Ulcer of foot	„
62	F	39	Ulcer of right leg	„
63	M	18	Disease of leg	„ at knee-joint.
64	M	23	Injury to leg	Died; primary.
65	M	68	Injury to right foot	Died; secondary.
66	M	55	Ulcer of leg	Recovered.
67	M	60	Disease of right foot	„
68	M	60	„ „ „	Died.
69	M	26	Injury to leg	„ primary.
70	M	63	„ „	„ „
71	M	44	Ulcer of leg	Recovered.
72	M	32	Injury to leg	„
73	M	14	Ulcer of leg	„
74	M	50	„ „	„
75	M	31	Injury to foot	„ primary.
76	F	59	„ leg	Died; secondary.
77	M	36	Ulcer of leg	Recovered.
78	M	64	„ „	„

Amputation of Upper Arm.

No.	Sex.	Age.	Disease or injury.	Result.
1	F	13	Disease of left elbow	Recovered; died of phth.
2	F	55	Injury to arm	„ primary.
3	F	19	Disease of elbow	„
4	M	24	Injury to arm	„ primary.
5	F	40	Disease of left elbow	„
6	M	14	„ „ „	„ died soon after.
7	M	20	„ „ „	„
8	M	22	Injury to arm	„ primary.
9	M	14	„ „	„ „
10	M	13	„ „	„ „
11	M	14	„ „	„ „
12	F	29	Disease of elbow	„
13	M	38	Injury to right arm	Died; primary.
14	M	12	„ „	Recovered; primary.
15	M	20	„ left arm	Died; primary.
16	F	52	„ right arm	Recovered; primary.
17	F	19	Disease of right elbow	„
18	F	45	Injury to right arm	Died; at shoulder.
19	F	32	Disease of left elbow	Recovered.
20	F	66	Ulcer of arm	Died.
21	F	18	Injury to arm	Recovered; primary.
22	M	35	„ left arm	Died; primary.
23	M	16	„ „	Recovered; primary.
24	M	32	„ arm	Died; primary.
25	M	28	„ „	„ „
26	M	36	„ „	Recovered.
27	M	20	„ „	„
28	M	46	„ „	Died; secondary.
29	M	22	„ „	Recovered.

Amputation of Forearm.

No.	Sex.	Age.	Disease or injury.	Result.
1	M	53	Disease of left wrist	Recovered.
2	M	—	„ „ „	„
3	M	14	Injury to hand	„ primary.
4	M	33	Disease of right wrist	„ died of phth.
5	M	53	„ „ „	„
6	M	48	„ left wrist	„
7	M	20	Injury to wrist	„ primary.
8	M	46	Disease of right wrist	„
9	M	13	Injury to arm	„ secondary.
10	M	50	Disease of right wrist	„ died of phth.
11	M	31	„ left wrist	„
12	F	40	„ right wrist	„
13	M	57	Injury to wrist	„ primary.
14	M	30	„ „	„ „
15	M	19	„ „	„ „
16	M	45	„ „	„ „
17	M	19	„ „	Died; primary.
18	F	46	Disease of right wrist	Recovered.
19	F	48	„ „ „	„
20	M	48	Disease of hand	„ at wrist-joint.
21	M	12	„ „	„
22	M	28	Injury to hand	„
23	F	67	Ulcer of arm	„
24	M	53	Disease of left wrist	„
25	M	18	Injury to hand	„ primary.

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No.	Sex.	Age.	Disease or Injury.	Result.	
26	F	57	Disease of left wrist . .	Recovered.	
27	F	30	,, right wrist .	,,	
28	M	27	,, ,, ,, .	,,	
29	M	33	Injury to arm . . .	,,	primary.
30	M	13	,, ,, . . .	,,	,,

Excision of Knee-joint.

Sex.	Age.	Disease.	Result.
Male	14	Disease of knee	Died.

Amputation of Left Thigh and Right Leg.

Sex.	Age.	Injury.	Result.
Male	23	Both legs smashed	Died.

Ligature of Femoral Artery.

No.	Sex.	Age.	Disease.	Result.
1	Male	56	Popliteal aneurism	Recovered.
2	Male	—	,,	Thigh amputated.

Ligature of Common Carotid.

Sex.	Age.	Disease.	Result.
Male	35	Hæmorrhage from mouth injury	Recovered.

Operations for Strangulated Hernia.

No.	Sex.	Age.	Time of Strangulation.	Result.
1	M	19	Sixteen hours . . .	Cured.
2	F	36	Four days	,,
3	M	60	Three days . . .	,,
4	F	60	Forty hours . . .	,,
5	M	56	,, ,, . . .	Died.
6	M	60	Three days . . .	,,
7	M	23	,, ,, . . .	Cured.
8	M	35	Five days	,, omental.
9	F	44	Four days	,,
10	M	40	Many hours . . .	,,
11	F	16	Five days	,,
12	M	50	Twenty-four hours . .	Died.
13	M	77	,, ,, . .	Recovered.
14	M	41	Eight days . . .	Died.
15	M	—	Twenty-four hours . .	Recovered.
16	M	73	Forty-eight hours . .	Died.
17	M	40	Twenty-four hours . .	,,
18	M	70	Twenty-five hours . .	,,
19	M	61	Forty-three hours . .	,,
20	M	44	Twenty-one hours . .	,,
21	M	56	Forty-eight hours . .	Recovered.
22	M	34	Thirty-six hours . .	,,
23	M	26	Eighteen hours . . .	,,
24	M	70	Twenty-four hours . .	Died.
25	M	57	,, ,, . . .	,,
26	M	51	Three days . . .	Recovered.
27	M	31	,, ,, . . .	Died.
28	F	70	Four days	,,
29	F	32	,, ,, . . .	Recovered.
30	F	72	Seventy-two hours . .	Died.
31	M	49	Twenty-four hours . .	Recovered.
32	M	36	Three days . . .	,,
33	F	45	Fifteen hours . . .	,,
34	F	57	Three days . . .	,,
35	M	17	Twelve hours . . .	,,
36	F	48	Forty-eight hours . .	,,
37	F	39	,, ,, . . .	,,
38	M	26	Thirty-two hours . .	Died.
39	M	53	Twelve hours . . .	,,
40	F	47	Sixty hours . . .	Recovered.
41	F	45	Seventy hours . . .	Died.
42	M	32	Three days . . .	,,
43	F	50	Forty hours . . .	Recovered.
44	F	64	Six days	Died.

Operations for Lithotomy in Male Patients at Radcliffe Infirmary since 1838.

No.	Age.	Result.	No. of Stones.	Weight, Composition, and Remarks.
1	27	Cured	1	Oxalate of lime; weight not recorded.
2	5	,,	1	ʒj. gr. xx.; uric acid.
3	17	,,	1	ʒxij.; phosphates.
4	65	Cured	2	One ʒiij., the other small.
5	48	,,	1	ʒiij.; oxalates.
6	13	,,	1	ʒv.; uric acid.
7	61	,,	1	ʒvj.; oxalates.
8	4	,,	1	Gr. xx.; oxalates.
9	51	,,	1	Small; uric acid; weight not recorded.
10	56	,,	1	1½ in. in diam.; uric acid; weight not recorded.
11	57	,,	1	ʒiv.; uric acid.
12	3	,,	1	Gr. xx.; uric acid.
13	5	,,	1	ʒiij.; phosphates.
14	6	,,	1	ʒij.; uric acid.
15	63	Died	1	ʒij.; uric acid; said to have died of fever.
16	4	,,	1	ʒv.
17	3	Rec'd	—	No stone found at operation.
18	3	Cured	1	Gr. lxv.; uric acid.
19	70	,,	2	Each about ʒj.; uric acid.
20	3	,,	1	Gr. ix.; lithic acid.
21	26	,,	1	Lithates; weight not recorded.
22	48	Died	1	Lithic acid; weight not recorded; peritonitis; stone broken in extraction.
23	35	Cured	1	ʒij. gr. v.; lithic acid.
24	53	,,	1	ʒij. gr. xlv.; lithic acid.
25	11	Died	1	Very large; weight not recorded.
26	53	,,	1	ʒviij. gr. xiij.; lithate of ammonia.
27	7	Cured	1	Size of small bean; lithate of ammonia; weight not recorded.
28	32	,,	1	Lithic acid; weight not recorded.
29	27	,,	1	ʒij.; mixed phosphates.
30	14	,,	1	ʒiij. gr. xv.; oxalate of lime.
31	56	,,	1	ʒjx. gr. v.; uric acid.
32	3	,,	1	Gr. xxxiij.; triple phosphates.
33	2½	,,	1	Gr. xxxij.; triple phosphates.
34	64	,,	1	ʒiij. gr. xxxix.; lithic acid.
35	12	Died	1	ʒviij.; lithic acid; died of pelvic abscess.
36	6	Cured	1	ʒj. gr. xlv.; lithate of ammonia.
37	9	,,	1	Gr. xljv.; lithates.
38	8	,,	1	Gr. xlj.; phosphates.
39	36	Died	1	ʒij. ʒiv. gr. xv.; lithic acid; peritonitis.
40	9	Cured	1	ʒij.; oxalate of lime.
41	5	,,	1	ʒj. gr. liij.
42	11	,,	1	ʒv. gr. x.; lithic acid.
43	11	,,	1	ʒij. ʒij.; lithic acid.
44	13	,,	1	ʒiij. gr. x.; lithic acid.
45	5	,,	1	Gr. xxxij.; oxalate of lime.
46	9	,,	1	ʒij. gr. xxxij.; oxalate of lime.
47	11	,,	1	ʒjv. gr. x.; lithic acid.
48	7	,,	1	Gr. x.; oxalates.
49	5	,,	1	ʒj. gr. v.; lithic acid.
50	5	,,	2	One ʒj. gr. xl., the other gr. lxxviij.; lithic acid.
51	7	,,	1	ʒij. gr. x.; lithic acid.
52	4½	,,	1	Gr. xxx.; lithic acid.
53	6	,,	1	Gr. x.; oxalate of lime.
54	61	Died	1	ʒxij. gr. xiv.; lithic acid; disease of kidneys; measuring 2 in. × 1½ in. × ¾ in.

In my next and concluding chapter, after noticing the sanitary condition of the Radcliffe Infirmary, I shall endeavour to point out the advantages open to the Medical student who may select the University as the sphere for his Professional work during the first days of student life.

DR. ALTHAUS has been elected a Corresponding Member of the Society of Medical Hydrology of Paris.

ALLEGED POISONING BY A SURGEON.—Mr. Charles Gordon Sprague has been committed for trial by the magistrates of Ashburton on the charge of administering poison to his wife, father-in-law, mother-in-law, and servant. The whole party were taken ill after eating a rabbit pie. The symptoms, according to Mr. Gervis and other Surgeons of Ashburton, were those of poisoning by belladonna or atropine; they were a rash resembling urticaria, dilated pupils, vomiting, incoherency of speech and inability to walk. Atropine was proved to be in the possession of the accused, and Mr. Herapath, sen., of Bristol, deposed from experiments he had made "that he was convinced that atropine had been introduced into the interior of the pie." Bail for £1000 and two sureties of £500 each were accepted, Mr. Chalker, the father-in-law, himself one of the persons alleged to have been poisoned, offering himself as bail for the full amount.

GENERAL CORRESPONDENCE.

MEANS OF AVERTING DEATH FROM CHLOROFORM.

LETTER FROM DR. BULLAR.

[To the Editor of the Medical Times and Gazette.]

SIR,—Having just witnessed a very near escape from death by chloroform, I shall feel much obliged to you if you can give a prominent place in your journal to the plan which was successful in this instance, and has been so in many others.

The patient was a strumous lad, about 18, who was undergoing the removal of enlarged and indurated cervical glands at the Infirmary here by Dr. Lake. Mr. W. Shorto, the House-Surgeon, gave chloroform with Snow's inhaler, during which the pulse and breathing were watched. It took some time to affect him, and as his struggles after the first incision impeded the operation, more chloroform was given. The glands were rapidly removed, when the pulse was found to intermit, and then the heart's action and breathing ceased.

The plan which, under such circumstances, has been for many years followed in this Hospital is for those assisting to strike the patient with the flat hand in the most vigorous and rapid way on all exposed parts of the skin (the trunk, the legs, the arms, and the face), and to continue this until the pulse and breathing return.

From the severe accidents in this busy port, operations are very numerous, and from the first introduction of anæsthetics they have been constantly used, and, providentially, no death from chloroform has yet occurred. The mouth is also kept open and the tongue drawn forward.

It is difficult to estimate the time, but certainly from five to ten minutes elapsed before the heart acted, and not until both legs were blue with ecchymoses. Had not the staff of the Hospital had faith in this remedy, the case at one time seemed so hopeless that other plans might have been attempted and time lost; but this faith is necessary for perseverance. Every part of the skin should be rapidly exposed, and every one should assist and strike with his flat hand as sharply and rapidly as he can, and continue it.

In this instance the immediate local effect in filling the parts of the skin which were struck and around them with red blood whilst the heart and breathing had ceased shows that this plan is a stimulus of the reflex nervous function of a very vigorous kind, which can be immediately applied to the cutaneous ends of the nerves over a large surface without any apparatus, and with the greatest ease.

As the sympathetic nerve presides over the capillaries, and over the heart, the excitement of both by this means is readily explained by the direct communications of the ganglia of the sympathetic with the roots of the spinal nerves. According to the doctrine of the co-relation of forces, the mechanical force of the hands of the strikers is converted into the nerve-force of the patient, and is conveyed by the sensitive nerves of the skin to the spinal cord, and is reflected from it, through the sympathetic, to the heart and capillaries.

As I have repeatedly and recently read in the journals of fatal cases in which no mention is made of this plan having been used (although the analogy between coma from opium-poisoning and that from chloroform suggests the same treatment), and as much time seems often to have been lost in trying galvanism (for in such emergencies moments are of importance), I feel sure that the more general knowledge of this plan, which has already been published, may save many lives.

I am, &c.

Southampton, July 13. J. BULLAR, M.D.

THE SANDHURST HOSPITAL, BENDIGO GOLD-MINING DISTRICT, VICTORIA.—The *Australian News* contains an account and an engraving of this Hospital, which, judging from the latter, appears to be a very handsome structure. It contains eighty-four beds for males and sixteen for females. Each bed has nearly 1200 cubic feet of space, an amount stated to be larger than in any other colonial Hospital. The entire cost of the building was £12,000. The Resident Medical Officer is P. H. Macgillvray, Esq., M.A., M.R.C.S. The Consulting Staff are Drs. Cheyne, Cruickshank, Atkinson, and Roche.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 27.

Dr. ALDERSON, F.R.S., President.

A PAPER by Mr. T. SPENCER WELLS was read on

A SECOND SERIES OF FIFTY CASES OF OVARIOTOMY; WITH REMARKS ON THE SELECTION OF CASES FOR THE OPERATION.

The Author has constructed a table showing at a glance the result of the fifty operations; the recoveries being to the deaths in the proportion of two to one. The most favourable age for the operation appears to be before twenty-five or above forty. The conjugal conditions of the patients seem to have little effect on the result. Hospital cases have been more successful than private cases. The result of the operation depends but little on the season of the year in which it is performed. Adhesions of the tumour to the abdominal wall and intestines are of little importance; adhesions to the bladder, iliac vessels, ureters, or rectum are very unfavourable. A short pedicle is also very unfavourable. There is no doubt that the cases where the stump of the pedicle can be kept external to the peritoneum are much more uniformly successful than those in which the stump is allowed to sink into the abdominal cavity. Of this latter class of cases the least unfavourable are those in which the ends of the ligatures are cut off short. The size of an ovarian tumour does not of itself affect the result; but size and solidity together, by affecting the length of the incision necessary for the removal, appear to be of some importance. A short incision is much more favourable than a long one. The probable result of ovariotomy can be estimated with far greater accuracy by a knowledge of the general condition of the patient than by the size and condition of the tumour.

Dr. C. R. DRYSDALE read a paper entitled

REMARKS ON SOME RECENT EVIDENCE AGAINST THE INTERNAL ADMINISTRATION OF MERCURY IN SYPHILIS, WITH CASES TREATED BY THE AUTHOR.

The Author observed that as a Commission was endeavouring to arrive at some conclusion on this vexed question, he thought the present a fit time to invite discussion on the subject. He believed, in common with Mr. Syme and M. Ricord, that this disease had always existed; and that before the time of Paracelsus it was mild, probably on account of the absence of mercury from the materia medica of the ancients. Dr. Ferguson, in his letter from Evora in 1812, had shown what terrible mutilations were caused by mercury amongst the British; whilst the Portuguese, treated without it, had no phagedæna. M. Ricord had for some twenty years been chief of an eclectic school, which, discarding the drug in soft sores, advised "six months of treatment with a daily dose of mercury (which influences the accidents we have to combat), followed by three months of iodide of potassium. Of this treatment Mr. Syme had written that it "injures the health not less effectually than the process of poisoning it professes to have so advantageously replaced." Dr. Hughes Bennett said, "The idea that mercury is a specific for syphilis, and the incalulable mischief it has occasioned, will constitute a curious episode in the history of Medicine at some future period." Mr. Weeden Cooke and Mr. Spencer Wells said that syphilitic bone-disease did not occur without the use of mercury. The Author had recently received from Dr. Boeck, of Christiania, two works,—the one entitled "Recherches sur la Syphilis," by Dr. Boeck; the other "Aperçu des differentes Méthodes de Traitment employées contra la Syphilis Constitutionelle a l'Hôpital de l'Université de Christiania," by Dr. Bidenkap. Dr. Boeck, in his "Recherches," had shown that primary sores took, on an average, far longer to heal under mercury than without it (sixty-two to thirty-eight days); and also that the number of secondary appearances was far greater when it was used (twenty-four to fourteen). Dr. Bidenkap mentioned that for the last ten years there had been experiments in Christiana as to the treatment of constitutional syphilis, resulting in entirely expelling the drug. Besides syphilisation—employed by Dr. Boeck, and which, Dr. Drysdale observed, had, in his opinion, for sole merit its freedom from the use of mercury,—Dr. Bidenkap gave a detailed account of 192 cases treated by means of two expectant

methods: (1) sweating; (2) derivation—i.e., the raising of pustules by tartar-emetic ointment over the body. In these 192 cases thus expectantly treated, no worse symptoms were observed than eruptions, alopecia, sore-throat; with only five cases of iritis, which got well without mercury, and two cases of periostitis; and no bone disease. Dr. Bidenkap wrote, "The very rare cases of tertiary syphilis are met with among patients who have undergone a mercurial course elsewhere, especially abroad. Formerly, on the contrary, obstinate tertiary cases formed the majority of those treated at the Hospital. It appears, then, that the exclusion of mercury from therapeutics has been the cause of it." Prof. Bärensprung, of Berlin, in his work on "Hereditary Syphilis" (Berlin, 1864), after enumerating mucous tubercles, sore-throat, and exanthem-like eruptions, had written:—"The above rapidly described alterations are those of which, in the majority of cases, the picture of syphilis is entirely composed. These may remain for weeks or months, or vanish for a shorter or longer period, or finally disappear for life. At least, I can certify that in the now countless cases where I have treated syphilis without mercury, and which I have seen completely recover, there have never appeared any other forms than those papular and exanthematous ones, with, in a few cases, iritis, periostitis, and orchitis; but in no single instance has destructive perforation or necrosis appeared, provided that no extraordinary circumstances prevailed which have the property, like mercury, of altering the character of syphilis. . . . A rapid and well-marked mercurial cachexia is not the sole, but the most frequent cause of phagedæna. . . . Tertiary syphilis is not mercurial cachexia: it is syphilis in a constitution modified by mercury." Dr. Drysdale observed that his own experience completely corroborated the remarks of Bidenkap and Bärensprung. He gave the details of several cases recently treated by him without mercury, with immunity from any but trifling lesions. In conclusion, Dr. Drysdale said he believed that syphilis in adults was not always, but almost always, a very mild disease, when treated without mercury; that rupia was extremely rare when no mercury was used; that bone-disease did not occur unless in mercurially treated cases; and that, in short, the internal administration of mercury in syphilis, or in inflammatory diseases, had neither any rational theory to appeal to, nor was it supported by the experience invoked in its defence. He trusted that the verdict of the Profession would soon be against the internal use of mercury in syphilis.

Mr. Spencer Wells said that he had never denied the possibility of disease of bone being caused by syphilis alone in cases where no mercury had been given; but he had never seen such a case; and it was well known that workers in quicksilver mines and in looking-glass factories were subject to diseases of bone. He believed that in most cases, therefore, disease of bone in syphilitic patients who had taken mercury was due rather to mercury than to syphilis; but he was far from doubting the great value of mercury when properly administered in secondary and tertiary forms of disease, or locally used in the primary forms; and he certainly did not deny the possibility of syphilis alone causing bone disease because he had not happened to see a case in which it had done so.

Mr. Durham said the time was too short to permit a full discussion of the subject, but he could not allow it to drop without entering a protest against the doctrines of the author, and expressing his opinion that the judicious use of mercury by inunction or by bath affords the safest, speediest, and most successful mode of treating syphilis yet known. He would remind the Society of Dr. Boeck's patient who presented himself for examination by the Fellows at the last meeting. This patient was stated to have suffered most severely for several years from syphilitic disease. He never took mercury in any form, although constantly under treatment of one kind or other. He finally felt constrained to take a voyage to Norway and submit to the very tedious and disagreeable treatment of syphilisation. Not very encouraging this for the non-mercurialists! In Hospital practice cases of pure syphilis are rarely met with. The symptoms are usually obscured and complicated by the effects of dirt, drunkenness, and continued debauchery, and the history is unreliable. In private practice it is very different. But whether in Hospital or private practice, he (Mr. Durham) had almost invariably met with the best possible results from the judicious administration of mercury. He had never seen any mischief ensue, nor could he believe that such need ever be the case if the patient be watched with sufficient care. The Author's references to the ravages of venereal disease in the olden times and the wholesale administration of mercury then the fashion seemed to him altogether beside the question. His (Mr. Durham's) experience showed that very quickly under mercurial treatment chancres healed and secondary symptoms disappeared which under other treatment had remained long stationary. Lastly, it was worthy of note that many of the boasted cases of the non-mercurialists were really treated by mercury after all, as witness several cases recently published in the *British Medical Journal*, in which the ointment of the nitric oxide of mercury is stated to have been applied to portions of the surface of the body.

Dr. Webster said that English Physicians were apt to draw erroneous conclusions as to syphilis from facts obtained abroad. Dr. Ferguson's statistics obtained from the Portuguese army ought not to be confounded with those of the English army. The Portuguese soldiers lived very badly. Syphilis was quite as common in Portugal, but was perhaps milder and required milder treatment.

The President said the Portuguese soldiers lived chiefly on vegetables and fish.

Mr. Holmes Coote said he rarely gave mercury—not in one case in fifty.

Mr. Thomas Smith had read all the Author's papers on infantile syphilis, and was surprised at the results of his experience. His own experience was very different. Seeing many cases of infantile syphilis, he felt it to be his duty to say that the mercurial treatment was most successful. In reference to the question whether bone was ever diseased where no mercury had been given, he instanced a case of necrosis of the nasal bone, in a syphilitic infant who had never had any mercury.

Dr. C. Drysdale, in thanking the several speakers who had criticised his short abstract, observed that in the original paper he had quoted Mr. Spencer Wells's own words—viz., that he had never seen a case of syphilitic bone disease where mercury had been omitted from the treatment. This statement had also been made by Mr. Weeden Cooke and others. Consequently he (Dr. Drysdale) supposed it could but rarely have been seen by other Surgeons. He had never seen such a case, although he had seen nodes, iritis, and periostitis. With regard to what had been said by Mr. Durham, he would say (1) that he believed, as far as he had examined the question, that syphilisation, as practised by Professor Boeck, etc., had but one merit—viz., that of dispensing with mercury. The true doctrines of treatment of this disease, he believed, were, that it should be dealt with, like other Surgical complaints, by external applications, caustics, if necessary in phagedæna, and ordinary sound remedial measures; and he would observe further that he was persuaded that Mr. Durham, in common with the majority of the Profession, was not in a position to judge of the course of this disease without mercury, when it was, and had been up to this date, almost invariably treated by this powerful remedy. His (the Author's) own paper gave numbers of cases recently treated without mercury, all of them very mild affairs. With regard to the argument used by Dr. Webster, he would express his humble conviction that variety of race and climate would not account for the difference of the gravity of the disease, as that gentleman and others seemed to think, since in one of the warmest and in one of the coldest climates in Europe—Spain and Norway—the disease, when treated rationally, was a mild affair, and when treated by courses of mercury was one of the greatest afflictions that could attack a member of the human family. The statement of Mr. Smith with regard to the successful nature of the treatment of the disease called infantile syphilis by means of mercury was opposed to the conclusions come to by himself (the Author), and to those corroborative by Mr. R. Dunn and Mr. Allingham. As far as he was aware, he had himself been one of the first, if not the first, to publish cases of infantile syphilis which had recovered without any employment of mercury, internally or externally; and since that time Mr. Dunn had treated about fifty cases, with only two or three deaths, without mercury. He submitted that any evidence adduced by speakers this evening would be quite insufficient to convince a jury of scientific men, who came to the subject without prejudice, that mercury did much good in this disease. Finally, he had to remark that the illustrious Professor of Surgery of the Royal College of Surgeons of England had recently made use of the following language, as reported in the *Lancet* of June 10, 1865:—"Occasionally some, under the impression that nothing is being done, will cling to the mysterious-looking black or yellow lotion—to the so-called specific alterative; even a month of slow

poisoning with mercury may be preferred to the *laissez faire* system." Such were the words of the renowned Professor Fergusson; and he hoped they would make other able men in high places pause and think. It was but a few years back that an aspirant would have been rejected for a degree at the College of Surgeons if he had said that indurated chancres did not require a course of mercury. These days, he hoped, were gone by for ever.

UNIVERSITY OF CAMBRIDGE.

EXAMINATION FOR DEGREE OF MASTER IN SURGERY.—June, 1865.

Pathology, and the Principles and Practice of Surgery.

1. What changes take place in a vein when it becomes varicose? Where does this most frequently occur? What ill consequences are likely to result from the varicose condition of a vein?

2. Describe the appearances which distinguish the various dislocations of the hip-joint, and state accurately the treatment suited to each.

3. The pathology of simple stricture. In what parts of the alimentary and urinary tracts does it most frequently occur? and in what parts does it not occur?

4. A man receives a severe injury to his head, what symptoms would be likely to follow it, and how would you treat the case?

5. In what respect does a cancerous tubercle of the skin differ from a scrofulous?

6. A woman has a tumour in the breast, by what symptoms would you be led to judge of its nature, and under what circumstances would you advise your patient to undergo an operation?

7. What are the sources of hæmaturia in the male? How would you discriminate between them? and what would be your treatment in each case?

8. Describe minutely the operation for inguinal hernia. What dangers have you to guard against? How would you avoid them?

Midwifery.

1. Describe the formation, structure, and functions of the placenta.

2. Describe any case you may have treated yourself of placenta prævia, stating the steps you adopted for the relief of your patient.

3. What symptoms would lead you to suspect that a woman was in the third month of pregnancy?

4. In head presentations give the various positions relatively to the pelvis in which the head can be placed, and state the mode of rectifying a malposition where necessary.

5. In a case of protracted labour, under what circumstances would you interfere, and how?

Surgical Anatomy.

1. Describe the clavicle and its articulations.

2. Describe the shoulder-joint. In which direction is luxation most likely to happen? What parts are most liable to injury in this accident?

3. Name the bones of the tarsus. State the nature of their articulations, and describe briefly the ligaments of this part.

4. Describe the course and relations of the external carotid artery. When this vessel is to be tied near its origin, how is the incision to be made, and what parts are divided by it in succession?

5. Give the relations of the superficial veins and nerves at the bend of the elbow. How is the brachial artery placed at this part?

6. Define externally the position of the femoral artery where it passes under the superior border of the sartorius. In making the incision for applying a ligature to the artery a little above this point, what parts are successively divided? Point out the position of any veins or nerves that lie near the artery at this place.

7. Describe the spermatic canal. In the operation for strangulated hernia lying within the canal, what parts have to be divided? How may the spermatic cord and epigastric artery be placed with regard to the hernial sac?

8. Describe the nasal fossæ, and the arteries and nerves within them.

There were in addition an examination of patients in the Hospital and of selected specimens of healthy and morbid anatomy, operations on the dead subject and *viva-voce* examination in Anatomy, Surgery, and Midwifery.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 25th inst.:—

Other Windsor Berry, Canonbury-road; Richard Pugh, Llandovery, South Wales; Thomas Edward Stafford, Long Bennington; Kenneth Reid, Montreal; Eyton Owen Williams, Llanrhaiadar, Denbighshire; Frederick Walter Lowndes, Southport, Lancashire; William Hoffmeister, L.S.A., Cowes, Isle of Wight; John Henry Ashton, L.S.A., Margate; Robert Stuart, Woolwich; Disney Thorp, Maldon, Essex; Willoughby May, Barnstaple, Devon; Geoffrey Hett, Brigg, Lincolnshire; Samuel Oldham, Burslem, Staffordshire; Edward Scott Jones, Weston-super-Mare; John Hope, South Shields; Thomas Stevens Gimson, Cleveland-street, Fitzroy-square; Thomas Creighton, Morpeth; William Anderson, Newcastle-on-Tyne; Robert Jackson, Catchgate, Gateshead; Arthur Humphrey, Balham-hill, Surrey; and William Harris Butler, Old Charlton, Kent.

At this meeting of the Court Mr. John Hilton, F.R.S., Surgeon to Guy's Hospital, took his seat as an examiner, in the vacancy occasioned by the resignation of Mr. James M. Arnott.

Admitted members on the 26th inst.:—

Samuel Linley Heald, Brighouse, near Normanton; William Tatman Goodman Hicks, Toddington, near Dunstable; Benjamin Gowing, Lowestoft; Robert Henry Kinsey, Canterbury; George Cooper Sanders, Moulton, near Northampton; Marcus Beck, Isleworth, Middlesex; Henry Robert Glover Rust, Weathersfield, near Braintree; Richard Kinnear, Weston-super-Mare; Henry John Branson, Sydney-street, Brompton; Henry Weekes, Brompton, Kent; Arthur Richardson, Chatteris, Cambridgeshire; Robert Elphinstone, Streatham, Surrey; John Albert Grindrod, Rochdale; Nathaniel Thomas John Haydon, Bovey Tracey; Henry Deane, Sandwich, Kent; and Frederick Adolphus Hill, Wookey, Somersetshire.

Arts Examination.—The following gentlemen have just passed the preliminary examination in general knowledge at the College of Surgeons:—

F. D. Atkins, E. W. Alabone, H. H. Backhouse, W. M. Beor, H. H. Bailey, Francis Bone, J. A. Bell, T. T. J. Bull, W. C. Blaker, E. H. Brown, C. H. Beardshaw, E. A. Brash, F. R. Bernard, H. A. Cavendish, T. D. Cooke, Samuel Cresswell, A. E. Cumberbatch, G. D. Deeping, E. H. Downing, G. A. Dundas, A. H. Evans, T. R. Edmundson, F. F. Fisher, Richard Fletcher, John Fisher, James Griffin, William Gill, C. J. Green, C. F. Grindrod, Timothy Hamilton, Henry Harris, H. A. Hawkins, H. F. E. Harrison, W. H. Heygate, S. T. Huggins, H. B. Hawkins, Philip Havens, William Jones, James James, F. E. Jackson, W. H. Jenkins, J. R. Joseph, S. E. Jones, A. E. Kynaston, Percival Kingsford, H. R. Ker, M. H. Laxton, G. D. N. Leake, David Levison, Hervey Lowndes, Edward Madelay, Lewis Mackenzie, F. J. Naish, William Nettle, C. J. Newton, Wright Nicholson, A. W. Orwin, J. E. H. Pughe, Urban Pritchard, W. A. Parker, W. H. Pearce, T. F. Pickering, F. P. F. Ransom, F. B. Robertson, J. E. Rimell, E. R. Rowland, William Radcliffe, Howell Rees, A. H. Sandiland, Edward Skinner, Thomas Snaith, J. A. Smith, E. B. Sproule, George Stone, J. C. Skinner, Henry Sewill, Reginald Taylor, R. W. Thomas, G. S. Thorn, T. S. Townsend, Edmund Vialls, Thomas Whittington, J. W. Watson, W. W. Westcott, and W. E. Williams.

Apothecaries' Hall.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, July 20, 1865:—

David Roberts Pughe, Aberdovey; James Byrne, Little Ilford, Essex; Lewis Charles Manney, Newcastle-on-Tyne; Herbert Branwhite Spurgin, Thrapston, Northamptonshire; James John Hott, Robert-street, Hampstead-road.

As an Assistant:—

George Frederick Bindloss, Leighton-road, Kentish-town.

The following gentlemen, also on the same day, passed their first Examination:—

Henry Charles Mayer, Meath Hospital, Dublin; Walter Moore, Westminster Hospital; John Joseph Bingham and William Parker Pinder, University College.

Pharmaceutical Society of Great Britain.—Names of Candidates who passed the Major Examination on July 19 as Pharmaceutical Chemists:—

Charles R. Amoore, Hastings; George Fredk. Bindloss, London; Henry J. Brough, Windsor; Francis C. Clayton, Leeds; Samuel G. Cox, Leicester; Oliver R. Dawson, Southampton; Francis W. Fitt, Barking; William H. Harris, Reading; Arthur W. Hitchcock, Oxford; Frank Oldfield, Dover; Josiah Oliver, Tunbridge; Martin H. Payne, Bridgwater; William L. Stevenson, London; Francis Swift, Spalding; Alfred Tanner, Lewes; John A. Thomas, Harrogate; James Watson, Mauritius; William Whysall, Belper.

Testimonial to C. F. Pollard, Esq.—On Thursday, the 13th inst., the members of Court Commerce, 1965, A.O.F., met at their court-room, Commercial Hall, King's-road, Chelsea, for the purpose of presenting C. F. Pollard, Esq., M.R.C.S., of Brompton-crescent, a splendid ormolu timepiece, as a testimonial of their appreciation of his services as Medical officer to the Court, extending over a period of twenty years.

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APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ANDERSON, JOHN F., M.D. Aberd., has been appointed Medical Officer to the Haverstock-hill and Malden-road Provident Dispensary.

ATTHILL, LOMBE, M.B. Dub., has been appointed Examiner in Midwifery in the Queen's University, Ireland.

BELCHER, THOMAS W., M.D. Oxon., has been elected Hon. Librarian to the King and Queen's College of Physicians, Ireland.

CLARKE, WILLIAM H., M.R.C.S. Eng., has been appointed Assistant Medical Officer to the Dorset County Lunatic Asylum, Dorchester.

HARRISON, REGINALD, M.R.C.S. Eng., has been appointed Lecturer on Descriptive and Surgical Anatomy at the Liverpool Royal Infirmary School of Medicine.

IRVINE, W. JOHNSTONE, L.R.C.S. Edin., L.S.A. Lond., of Aintree, near Liverpool, has been appointed Poor-law Medical Officer and Public Vaccinator for the District of Walton, in the Township of West Derby.

JONES, A., M.R.C.S. Eng., has been appointed House-Surgeon to the Loughborough Dispensary.

LETHBRIDGE, Mr. C. F., has been appointed Assistant House-Surgeon to the Nottingham General Hospital.

LYONS, ROBERT D., M.B. Dub., has been appointed Examiner in Medicine in the Queen's University, Ireland.

MARLEY, RICHARD, M.R.C.S. Eng., has been appointed Medical Officer for the Bromyard Union, Herefordshire.

MCDONNELL, ROBERT, M.D. Dub., has been appointed Examiner in Surgery in the Queen's University, Ireland.

MEADE, HARRY, M.R.C.S. Eng., has been elected Surgeon to the Bradford Infirmary.

MEADE, RICHARD H., F.R.C.S. Eng., has been appointed Consulting Surgeon to the Bradford Infirmary.

ORWIN, JAMES, M.D. Aberd., has been appointed Medical Officer to the Haverstock-hill and Malden-road Provident Dispensary.

PATER, WILLIAM T., M.R.C.S. Eng., has been appointed Assistant Medical Officer to the County Lunatic Asylum at Knowle, Fareham.

SQUAREY, C. E., M.R.C.S. Eng., has been appointed Resident Medical Officer to the London Fever Hospital, Liverpool-road.

SUTTON, FREDERICK J., M.R.C.S. Eng., has been appointed Medical Officer for the Hursley Union and Workhouse.

THORP, Mr. D., has been appointed Resident Assistant Medical Officer to the London Hospital.

TONGE, MORRIS, M.D. Lond., has been appointed Visiting Physician to the Infirmary for Consumption and Diseases of the Chest, Margaret-street.

DEATHS.

ARDEN, ARTHUR O., M.R.C.S. Eng., at Hull, on July 22.

CARTER, NICOL, L.R.C.P. Edin., Assistant-Surgeon 109th Regt., at Aden, on June 3.

DICKINSON, JOSEPH, M.A., M.D., at Waterloo, of Bedford-street South, Liverpool, on July 21.

DINWOODIE, FREDERICK M., L.R.C.S. Edin., at Appleby, Westmoreland, on July 13.

HERPIN, Dr., of Geneva, died the other day, much regretted by the whole body of the Profession of that city. His principal work was his treatise on the "Prognosis and Treatment of Epilepsy."

M'KINNELL, R., M.D., at Dumfries, on July 8, aged 26, formerly of Bradford.

POOR-LAW MEDICAL SERVICE.

RESIGNATIONS.

*** The area of each district is stated in acres. The population is computed according to the last census.

East Ward Union.—Mr. Dinwoodie has resigned the Appleby District; area, 30,700; population, 3452; salary, £35 per annum.

Gateshead Union.—The East District is vacant: area, 740; population, 12,440: salary, £40 per annum. The West District is also vacant; area, 746; population, 12,977; salary, £40 per annum.

Glendale Union.—The Chatton District is vacant; area, 36,206; population, 2761; salary, £15 per annum. The Southern District is also vacant; area, 21,480; population, 907; salary, £7 per annum.

Headington Union.—The Headington District is vacant; area, 10,565; population, 13,164; salary, £70 per annum.

Hexham Union.—The Fifth District is vacant; area, 19,965; population, 2089; salary, £15 per annum.

APPOINTMENTS.

Bedminster Union.—William F. Carter, M.R.C.S.I., M.R.C.P. Edin., to the Second District.

Belford Union.—Henry Hunt, L.R.C.S. Edin., L.R.C.P. Edin, to the West District and the Workhouse.

Bolton Union.—Alister S. Robertson, M.D. Aberd., C.M., L.R.C.S.E., to the Horwich District.

Clitheroe Union.—Henry Patchett, L.R.C.S. Edin., L.R.C.P. Edin., to the Chipping District.

Ellesmere Union.—John W. Roe, M.R.C.S.E, L.S.A., to the Welsh Hampton District.

Lutterworth Union.—Joseph F. Ashby, M.R.C.S.E., L.S.A., to the First District.

Mutford and Lothingland Incorporation.—Henry Hope, M.R.C.S., L.S.A., to the Kessingland District.

Ongar Union.—William Gilmour, L.R.C.P. Edin., L.F.P. and S. Glasg., to the First District.

Presteigne Union.—William Steventon, M.D. St. And., M.R.C.S.E., L.S.A., for the whole Union.

Petersfield Union.—Albert W. Leachman, M.D. St. And., M.R.C.S.E., to the Third District.

West Derby Union.—William J. Irving, L.R.C.S. Edin., L.S.A., to the Walton District.

Wimborne and Cranborne Union.—Charles B. Parkinson, M.R.C.S. L.S.A., to the First District.

Wirrah Union.—Alexander C. Gibson, M.R.C.S.E., L.S.A., to the Bebington District.

THE QUEEN'S COLLEGE, BIRMINGHAM.—At a meeting of the Council and Committees of Council of the Arts and Theological Departments held on Monday last, the Earl of Lichfield, the Principal, in the chair, the Mayor, the Venerable the Archdeacon of Coventry, the Hon. and Rev. the Rector of St. Phillips, the Dean of the Faculty, the Senior Physician to the Queen's Hospital, Messrs. J. Suckling, Isaac Trow, Professors Clay, Chamberlain Johnson, and Suckling being present, the Rev. T. E. Espin, formerly Fellow and Tutor of Lincoln College, Oxford, Vicar of Hadleigh, and Professor of Theology in the College, was unanimously elected the Resident Warden. It was resolved to remove the theological students from the crescent to within the College walls, and to give increased facilities to junior resident Medical students, to enable them to prepare themselves under the direction of the Resident Medical Tutor for the Arts Examination now required by all the Examining Medical Boards. At the same meeting the Principal submitted a financial scheme, under which the College may be made self-supporting. His lordship's plan was cordially approved. The appointment of Professor of Medicine has been declared vacant.

WATER IN SOILS.—During the past autumn, after several months of the long-continued drought of 1864, Prof. Church, of the Royal Agricultural College, examined for water the thirteenth inch in thickness downwards from the surface of a clay-land field near Cirencester. Several samples of subsoil taken from this depth were analysed. In one case, where the soil had been deeply cultivated during the previous autumn, no less than 28·6 per cent. of the apparently dry layer examined was water. In another, where the subsoil was taken from uncultivated land, which had not been disturbed within memory, the percentage of water was 19·2. In a third case, the subsoil of a kitchen-garden, which had been deeply trenched in autumn, yielded 26·2 per cent. of water. In a fourth, the subsoil in the same garden, where the bed had only been half dug, yielded 20·5 per cent. There had been no rain to speak of since the spring, and yet these enormous quantities of water still remained in the subsoil. The soil experimented on is "a light calcareous clay loam, resting on the forest marble." These facts are instructive, both as showing the great storage of moisture within the land, available during seasons of drought, and also as indicating to tillage-farmers the greatly-increased capacity for moisture which deep and thorough tillage gives to land.—(Review of "Journal of Science") *The Guardian.*

A PHRENOLOGIST OF EARLY DATE.—Guy or Guido de Chauliac, one of the fathers of French Surgery, and Surgeon to more than one pope at Avignon, in the treatise on Anatomy prefixed to his *Chirurgia Magna*, published about the year 1363, presents an interesting dissertation on the localisation of the faculties of the mind. Each faculty, in his opinion, has its special organ in the brain. The first half of the anterior ventricle of the brain is the seat of common-sense, the second half that of the imagination. The middle ventricle is the seat of the thinking faculty, and the posterior ventricle that of the memory or recording faculty. In the portion of his work devoted to injuries to the head, he states that lesions affecting the anterior lobes of the brain are attended with loss of reason, those affecting the posterior lobes with loss of memory.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

M.R.C.S., Merthyr Tydfil.—We believe no book has been published since Mr. Wiblin's, which appeared many years ago.

The Late Dr. Ferguson.—The article in the *Quarterly* to which we referred in the biographical notice of this lamented Physician was entitled *Medical Psychology*, and published in that periodical for December, 1854.

Phallus Impudicus.—A country clergyman writes to the *Times* of July 26 complaining of this as a new fungus in his neighbourhood. Possibly the reverend writer had some deep moral in view; otherwise it seems strange that an educated man should write to the "leading journal" of Europe to describe the appearance and properties of a perfectly well known and common plant.

A correspondent, who signs himself "A Ratcatcher, though not a Professional One," complains that he is invaded by mice, who eat all his small comforts and spoil more than they consume. Is there any poison which the creatures would take, and which would leave them stupefied or drunk, so as to be incapable of moving away and getting into crannies where their bodies would become offensive?

Netley Candidates.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—With reference to the letter of "Medicus," together with the editorial remarks which recently appeared in your journal, I wish to remark that, although I have as little connection with "Medicus" as with the Emperor of China, I have some little knowledge of Netley, and am under the impression that the statements contained in the letter and article referred to have a foundation in fact, although it does not at all follow that the Professors or officers of the Medical staff were in the slightest degree acquainted with the matter; it is not to be supposed that these gentlemen know all the proceedings of the somewhat heterogenous mass who have of late formed the school.

With regard to the supposed depression of the standard of examination, this may be open to doubt; but it is quite possible that candidates may be accepted and approved of who do not attain that standard. One thing cannot, I believe, be denied, namely, that a knowledge of "logic" and "natural philosophy" are not required of candidates now, although formerly they were considered indispensable; and, if this be the case, the charge of depression of standard would seem to have a substantial foundation. I am, &c.

COSMOPOLITAN.

"Clinical Remarks on the Present Epidemic of Diarrhœa."—*Medical Times and Gazette*, July 22, 1865.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—On this subject will you kindly permit me to refer to the *Bombay Medical Transactions*, vol. iii., page 142, and again for the following year, page 175, etc.; or, for those who may not have access to these, to say that it is there shown that high temperature, though the predisposing, is certainly not the exciting cause of diarrhœa; indeed, were it so, the hot season in India would be the period during which it is endemic, which is not the fact: it is at the commencement of the rainy season, when the temperature begins to fall, and the atmosphere is loaded with moisture, just as recently after the dry, hot weather of June; nor is the difference of small moment. Were the cause high temperature, that would indicate reduction of clothing, whereas nothing is so good a prophylactic as a flannel common bandage, three and a-half inches or so broad, and three yards or so long, wrapped round the abdomen from below upwards firmly, and fixed with a pin, having a second always in reserve, dry and ready to be put on when coming in from exercise. They do not require to be washed each time, but the one taken off to be hung to the fire, or better in the sun a short time; but better far without any change than to be without altogether. Dysentery follows in India when the temperature falls much lower, a month later, accompanied with drenching rain; against this the bandage is equally valuable. Cold is the exciting cause of diarrhœa in hot climates; cold and heat of dysentery.

When I look at the mortality, however, I strongly suspect there has been more than diarrhœa during the last weeks. Diarrhœa is, if properly treated, anything but a fatal disease, even when seemingly severe. It is, however, powerfully predisposing of cholera, so that when that also is prevalent, tenfold care is necessary; and even aperients of every kind must be avoided as much as possible, even in the healthy; or, if absolutely necessary, accompanied by opium or chalk mixture, and opium after every loose motion. Long and watchful experience in India has led me to a conviction of the vast importance of these measures.

I am, &c.

ROBERT HOPE ALSTON HUNTER, First Class Staff-Surgeon, half-pay; formerly Assistant-Surgeon in charge of Queen's Royals.

Dollar, near Stirling, July 24.

Alcoholic Stimulants in Disease.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In these days of temperance, teetotalism, and Permissive Bills, it seems to me that the publication of a case strikingly illustrative of the beneficial effects of cognac, eau de vie, or brandy as a stimulant, tonic, and astringent might prove both interesting and instructive. That a portion of the public and the Profession are quite alive to the valuable qualities of alcoholic stimulants I am aware; still, a large number, and among them legislators and Medical men, condemn their use *in toto*, and are banded together for the purpose of inducing the Parliament to pass a law prohibiting their sale altogether; and no wonder, when the ignorant and the vicious are continually destroying their bodies and their minds, and filling our workhouses with paupers and our prisons with criminals, by an habitual abuse of these very stimulants. While, however, I acknowledge and lament to the fullest extent the frightful evils that spring from this cause, I cannot agree with those legislators who would forbid the sale of spirituous liquors altogether, nor with those of my Professional brethren who would wholly banish them from the Materia Medica. On the contrary, I maintain that in the present condition of civilised man a moderate and judicious use of them is absolutely essential to his well-being: and though tea and coffee are great boons to all who labour with their limbs or work with their brains, they can by no means always supply the place of alcoholic stimulants. In syncope from loss of blood, concussion of the nervous centres, debility of the heart and arteries, etc., these latter stimulants alone are able to restore and preserve life. In excessive flooding after childbirth, no stimulant is to be compared with brandy; it is the one thing needful. In diseases arising from nervous and muscular debility, or from relaxation of the capillaries, the tonic and astringent qualities of brandy are invaluable—*e.g.*, in many cases of deafness, aphonia, diarrhœa, and chronic discharges from the mucous membranes. I ask, then, why should one of the most valuable—perhaps the most valuable—of our remedies be decried and discarded because the ignorant and the vicious too often turn a blessing into a curse? Are not all active agents powerful for evil as well as good?

In the summer of last year I was consulted by a gentleman, a widower, of upwards of fifty years of age, stout, and rather corpulent, who complained of the following symptoms:—Deafness to such a degree that he could scarcely hear the ticking of his own watch, even when in contact with the outward ear. Aphonia occasionally complete. A constant throbbing or beating in the ears, arising no doubt from the pulsations of the carotids being audible; at times so loud as to be almost insupportable. Sleepless nights, seldom sleeping more than an hour or two continuously. A troublesome cough both night and day, with a copious expectoration of mucus from the sacculi laryngis and trachea. Pulse natural, though feeble. Appetite good. Tongue moist, and rather white in the morning. Diarrhœa, having usually four or five liquid motions in the day. Bile, etc., normal. Troubled with much flatulence. The secretion of urine superabundant, with a brick-dust sediment on cooling. Before seeking my advice this gentleman had consulted several eminent Physicians, all of whom were of opinion that he was suffering from nervous depression, and recommended change of air and scene and a nutritious diet, with wine and beer in moderation. Tonics and astringents of various kinds were also prescribed, such as quinæ sulphas, the mineral acids, bismuth, catechu, tinct. ferri perchloride, etc. This treatment completely failed to relieve the symptoms, and the patient was beginning to despair of being restored to health. After carefully considering the symptoms I arrived at the same conclusion as my colleagues as to the cause of the disease, and believed that a cure could only be effected by a remedy that combined in a high degree the three qualities of a stimulant, a tonic, and an astringent, such as brandy. My advice, therefore, was to continue the same diet, to discontinue all medicines, and for wine and water to substitute cold brandy and water, in the proportion of a wine-glassful of spirits to a tumbler of water, this quantity to be taken at dinner and before going to bed. Immediate and unmistakable benefit was the result; within a week almost all the symptoms yielded, and gradually entirely disappeared. At the end of nine months my patient was in better health than for the three previous years. At the present time he only complains of a slight cough and expectoration before rising in the morning.

Numbers of similar cases doubtless exist, especially among the poorer classes. A large proportion of the out-patients of our Hospitals and Dispensaries, as well as those receiving relief from the parish, are suffering from want of nutrition, and their diseases require food, not drugs. It is a most painful position for a Physician or Surgeon to be forced to prescribe medicine when his judgment tells him that his patient can only be really benefited by an improved diet. If the guardians of the poor were able to take an enlightened view of this subject, they would effect a great saving of the public money by providing the sick poor with a more generous diet, and ceasing to expect the Doctor to supplement the insufficient supply of nutriment by nauseous drugs; and this change of treatment would greatly contribute to the more speedy and certain restoration of these poor sufferers to health and usefulness. I am, &c.

Codrington-villas, Notting-hill. J. JONES, M.R.C.P.

The Late Inquest in Jamaica.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have read in a number of your periodical which has arrived by this packet a letter from Mr. Fiddes, of this city, on the subject of the inquest held in January last on Richard Bailey, late a patient under my care in the Public Hospital of this city, of which institution I have the honour to be one of the ordinary Medical officers.

You have already expressed an opinion on the way in which Mr. Fiddes along with other Medical men of this city gave their evidence at the inquest in an article which you published, headed "Colonial Medical Ethics," and have condemned in the strongest terms their unprofessional and ungentlemanly conduct. Your strictures are fully deserved, however unpleasant they may be to the gentlemen against whom they are directed; but you are not aware of the circumstances under which the portions of evidence you condemn were given. They were not elicited from these gentlemen reluctantly, under the pressure of cross-examination, but they were volunteered by them as commentaries on the preceding evidence, unasked and unlooked for, and against the protest of some of the jurors. I leave you to judge with what intention this evidence was volunteered.

Messrs. Fiddes, Scott, Stern, Lake, and Dr. Dunn during the inquest furnished the jurors with questions to be put by them to themselves and Dr. Bowerbank and myself, and all these questions were such as to elicit only evidence condemnatory of our line of treatment; and when Professional opinions were given which supported our conduct, these Medical men did all in their power by their questions to destroy any good effect they might produce on the jury. Whether such conduct is in accordance with Professional etiquette is not for me as an interested party to determine. I leave you to do so.

The inquest was conducted in a manner which I believe must be peculiar to this island, and even here I hope is only found when one body of Medical men, anxious for the destruction of another, influence the jurors in various ways, and during the adjournments entertain them in their houses while talking over the evidence already given and to be given. As instances of the conduct of the jury, I may mention that many of them left their seats and even the inquest-room in company and conversation with those Medical men who opposed Dr. Bowerbank and myself, and this while important evidence was being taken. One of them declared publicly before the coroner and his fellow jurors early in the progress of the investigation that "it was a gross case of butchery."

These facts will, I think, lead you, with me, to doubt whether a jury who acted in this manner could be expected to give an impartial verdict.

You have, I believe, received copies of the *Colonial Standard* and the *Morning Journal* newspapers, sent to you by the Medical men whose names I have mentioned above, and I would only say that nearly all these papers have published, in the form of editorial and communicated articles, is little else but falsehood, in so far as they relate to Hospital matters, and this inquest in particular. Many of the editorials or communicated articles, and letters under various anonymous signatures, appearing in the columns of one or other of these newspapers, abusive or condemnatory of Dr. Bowerbank and myself, were, I deeply regret to say, either written or instigated by the Medical men whose names I have given above. And to show the preconceived bias of these papers, it is only necessary to say that the *Standard*, before the verdict was given, drew attention to those portions of evidence given by Mr. Fiddes which condemned our line of treatment by printing them in capital letters and italics, but did not so distinguish the evidence of those who approved of our treatment. The *Journal*, several days before the verdict was given, recommended that Dr. Bowerbank and myself should be prosecuted for manslaughter. You will thus see that little dependence can be placed on anything which may appear in such papers on Hospital questions.

You state, "We are quite ready to acknowledge that the treatment of the patient does not receive our entire approval." As you do not know all the facts of the case and the reasons for the line of treatment pursued, allow me to give you some information on the subject.

It must first be borne in mind that Richard Bailey, the deceased, was admitted into Hospital on January 11 last, under the care of Mr. Fiddes, the ordinary, and Mr. Stern, the Resident Medical Officers. On the 21st

I took charge of Mr. Fiddes' wards, as Ordinary Medical Officer, and Mr. Field succeeded Mr. Stern on the 16th. I found the patient in one of the wards of which I took charge. He was a man about 70 years old, and the subject of chronic disease of the heart, bladder, and kidneys. I subsequently learned that he had been an habitual drunkard for thirty years. On his bed-ticket was written, "Complete occlusion of the meatus urinarius." "There is a fistulous opening forming a kind of supplementary channel in the perinæum, through which, as far back as he can recollect, the urine has passed. He has no control on his bladder." I found that an incision had been made about one inch from the end of the penis, and through this, I was informed, the urine now passed. The further history of the case is as follows:—On January 27, while making an early visit for the purpose of taking private notes of the cases, I passed a No. 2 catheter with a little difficulty (owing, as I now see, to the existence of spasm), and after a good deal of opposition on the part of the patient. This was tied in by my orders, and I intended to remove it the next morning. However, about twelve hours after its introduction, the patient, in the temporary absence of the nurse, tried to get out of bed, and, in doing so, broke the catheter. When I visited the Hospital the next morning, I was informed of the accident, and at once saw the patient, and told him the broken fragment must be immediately removed, or he would die. He, however, denied that any accident had occurred, and refused to submit to any operation whatever. The nature of the operation proposed was not explained to him. He persisted in refusing, though urged by myself and many others several times a-day. At length he consented, and the broken catheter was removed on February 4 through a small incision in the perinæum. He did well for two or three days, but serious symptoms came on, and ultimately Richard Bailey died, on February 11, from what several Medical men swore at the inquest was "pyæmia and chronic disease of the kidneys."

The treatment of this case has been denounced in very strong, and what I cannot but think as very unprofessional, language by Messrs. Fiddes, Scott, Lake, Stern, and Dr. Dunn. By reading the evidence of these gentlemen, which is contained in the pamphlet sent you by Mr. Fiddes, you will at once see that this statement is correct. Mr. Fiddes, has, however, in his letter to you, asked, "Was it possible for any Medical man conversant with urethral Surgery to endorse the propriety of the practice which was adopted in this case?" He then puts three questions as follows, which I will now answer:—

I. "Was the introduction and retention of a No. 2 catheter in a morbidly wide and roomy urethra a justifiable measure?"

In answer, I state that, having dissected the patient and found in this manner that his urethra was "wide and roomy," I do not now consider that such a procedure was necessary. But the question then naturally arises, Why did I pass and tie in a No. 2 catheter? It is easy to form an infallible diagnosis of disease with the body lying dissected on the table; and some Medical men who gave evidence have acted on this principle. My reasons were as follows:—On taking charge of the patient, along with others, I asked for the case-book, and was handed a so-called case-book; but it contained only eleven imperfectly recorded cases out of about 3000 patients admitted into Hospital, about two-thirds of which must have been in the wards to which this case-book belonged. Richard Bailey's case was not one of these eleven. I had, therefore, no guide as to the previous treatment of the patient but the verbal statment of the officers. On seeing the case, Dawkins, the dresser (who had for many years resided in the Hospital), in answer to my question whether an instrument had been passed into the bladder, informed me that Mr. Fiddes had on two occasions tried to pass an instrument, but failed, and that these instruments were a silver probe and a No. 2 catheter; and when I saw a large fistula in the perinæum, and learned from the patient's bed ticket that through this all his urine had passed as long as he could recollect; taking all these facts into consideration, I believed at the time that the patient had a narrow stricture; and most Medical men, I think, under the same circumstances, would have been of the same opinion. If the case had been a private one, I would, of course, have explored with a No. 7 or 8; but finding the case in a Hospital, and that the Surgeon in charge had tried and failed to pass a No. 2, I took it for granted that the case was one of stricture. Mr. Fiddes, at the inquest, swore that he did not try to pass any catheter at all; but Dawkins swore he saw him make the attempt. As this is a disputed point, therefore I will quote *verbatim et literatim* from my memorandum-book the notes of a conversation I had with Mr. Fiddes twenty days before he gave evidence, and at a time when the possibility of an inquest was not suspected by me. These notes were made in less than five minutes after the conversation took place. They are as follows:—

"February 1.—On my coming home in the evening from seeing Dr. Bowerbank and Mr. Campbell, met Fiddes coming out of his coach-house—asked him about the stricture case in which the catheter broke. In answer to my questions, he told me that in the case his attention was principally directed to the condition of the meatus; that he slit it up with a bistoury; that he had no doubt that there was a stricture further back; that he was not quite certain whether he passed an instrument into the bladder or not—he does not remember. On repeating the question afterwards, he says that he thinks he did not get an instrument in; that his attention at the time was directed principally to the condition of the meatus." By these notes, therefore, it will be seen that Mr. Fiddes believed that the patient had a stricture, and that twenty days before he gave evidence he could not remember whether he passed an instrument or not, though at the inquest he swore positively he did not. Mr. Stern, the Resident-Surgeon, could not say while he had charge of the deceased whether he had stricture or not. In his evidence he says—"I was not in a position to say positively whether or not he was the subject of stricture;" and, again—"I should say there was a possibility of a stricture existing in the deceased."

I have given my reasons for passing at once a No. 2 catheter instead of rupturing the urethra as is usually done with a larger sized instrument.

My reasons for retaining it in the bladder were, that a Hospital Surgeon had on one or two occasions failed to pass the same instrument; that I found some trouble in its introduction (from spasm, I suppose); and that when in, it was firmly grasped.

II. Mr. Fiddes asks—"Was it proper to permit six and a-half inches of a catheter to remain nine days in the urinary canal without making any attempt to effect the extraction of it?"

The best answer to this question is to quote from the evidence given on oath. I stated—"Day after day and several times a day he was advised to have it removed; but he refused most pertinaciously." Dr. Bowerbank says—"We tried all we possibly could to persuade the man to submit to its removal." Mr. Field says the patient "was informed by me that he must have the broken piece taken out or he would die. . . . He would not consent to any operation." Mr. Sommerville says—"The deceased was then requested by each of us to submit to an operation for the removal of the broken catheter; but he obstinately refused." Dawkins, the Dresser, says—"Dr. Anderson proposed then and several times after to operate, in order to take out the broken pieces; but the deceased refused." Thus it will be seen that all that was possible was done to persuade the deceased to have the broken catheter removed; and as it would have been illegal to operate on him by force and against his will, we could do nothing but keep him quiet, and wait till he changed his mind. When he did, the instrument was removed.

Mr. Fiddes in his evidence states that, "I consider that the omission of Drs. Bowerbank and Anderson to withdraw the broken catheter immediately after the accident . . . was a most culpable error on their part—an error which ultimately led to the death of Richard Bailey." Mr. Scott in his evidence states, "The retention of the broken instrument in the urethra and bladder from the evening of January 27 until between two and three o'clock in the afternoon of Saturday, February 4, was as unpardonable an act, in my opinion, as any Surgeon could have been guilty of." Are the opinions of these two gentlemen justified by the extracts I have given from the evidence? I think not.

III. Mr. Fiddes asks, "Was it in accordance with sound Surgical principles to open the urethra in the perinæum when the broken catheter might have been readily seized and extracted in a few seconds by means of an ordinary urethral forceps or by one or other of the extracting instruments found in all well appointed lithotrity cases?"

Urethral forceps could not be used for the very good reason that we had them not. There is not a pair of such forceps, or forceps that could be used to extract a broken fragment of catheter six inches deep in the urethra, in the Hospital, in the Army Medical depôt in this city, or in the private collections of myself or my partners, Drs. Bowerbank or Campbell, and both these gentlemen have been practising in this island between twenty and thirty years. Nor had any Medical man in this city at the time of the inquest a pair of urethral forceps except Mr. Fiddes, and I was not aware that he had them. And I regret to say that this gentleman, though informed of the accident by my House-Surgeon, Mr Field, and knowing that such an instrument was not in the Hospital collection and that it was required, did not offer to lend it, and thus help me out of a difficulty. It would, as a Medical witness well said, have been "no great stretch of generosity or kindness on his part had he offered to lend it," the only one suited for this purpose in this city; and though Mr Fiddes speaks of using the "extracting instruments to be found in all well appointed lithotrity cases," he knows that, as there have been only two cases of calculus in the bladder admitted for treatment in the Kingston Hospital during the last twenty years, such instruments are not there, and I do not believe he can mention one Medical man in this island possessing a complete lithotrity case manufactured within the last five years.

No other resource, therefore, was left in the absence of forceps, when, after several days, the patient at last consented to an operation—but to remove the broken catheter through a small incision in the perinæum, an operation of necessity strictly, and one of so trivial a nature that the patient would certainly have recovered had he not been an aged, diseased, and broken-down drunkard.

Dr. Bowerbank will, I believe, answer the charges made against him by Mr. Fiddes, and I leave him to do so. I will only say that his conduct with regard to the Public Hospital and lunatic asylum has been so approved of by all who are not directly interested in these institutions that a two hundred guinea testimonial has been presented to him as a mark of gratitude from the public throughout the island for his noble and successful efforts in improving such important public charities.

I trust that though this letter is a long one you will be able to give it insertion, and so allow me to defend myself from an attack on my Professional character. And I further hope that having previously expressed an opinion on the "Medical ethics" of this inquest, you will now express an opinion on the Surgical treatment of the case, and whether you think the strong and unqualified condemnation of my treatment given by Messrs. Fiddes, Scott, Lake, Stern, and Dr. Dunn is either merited or even in the remotest degree justifiable.

I am, &c. IZETT W. ANDERSON, M.D. Univ. Edin.

Kingston, Jamaica, June 24.

*** Dr. Anderson's account of the Surgical treatment adopted in Bailey's case places it in a new light. If it be true, as he asserts, that the patient obstinately refused to allow any Surgical interference, and that no urethral forceps was believed by him to exist in the island, we think Dr. Anderson entirely exonerated.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your number of the 27th ultimo is a letter signed "Alex. Fiddes," in which that gentleman attempts to get rid of your just strictures on the conduct of himself and a few members of the Profession here by casting the blame upon me.

As regards "Baily's case," I shall say no more than what I have already expressed in my evidence at the coroner's inquest—the more so as my partner, Dr. Anderson, has furnished you with a true and detailed account of this unfortunate case.

For years past I have done my utmost to reform the gross abuses existing in the public Hospital and Lunatic Asylum of this City, and in doing so I have had to cross the path of not a few members of the Medical Profession, and others (contractors for the supplies of these institutions). I have thus incurred the displeasure and hatred of a party who have hitherto spared no opportunity to malign my character and to thwart my proposed improvements, and some of the most prejudiced and virulent of whom appeared as jurors or witnesses at the recent inquest.

I have in a great measure succeeded in my object, as may be seen on reference to the recent reports of these institutions, but during the last two years, in my capacity of Chairman of the Board of Visitors of the Public Hospital, I have given great offence to Mr. Alex. Fiddes, one of the ordinary Medical officers, who considers that no Medical man should be on the Board of Visitors.

I have not your journal of the 27th ult. before me, but I will notice a few of the charges made against me by Mr. Fiddes from recollection.

The first is, that I have insulted the members of the Profession connected with the Hospital. The height and depth of my sinning in this respect has been, on witnessing glaring points of mismanagement, to express my opinion "that such arose from the fact that, of all the Medical men connected with this Institution, not one had been previously a House-Surgeon in a British or any other Hospital, and therefore could not understand the management of such an institution in detail." This,

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though allowed to be true in fact, has nevertheless been voted insulting by the gentlemen concerned.

Mr. Fiddes next charges me with setting all Professional etiquette at defiance. On one occasion, which occurred in 1864, of charges being made by a patient which implicated one of the resident Medical officers—these were forwarded by me, as Chairman of the Board of Visitors, *unread*, to the Inspector and Director to be inquired into by him, but were by him referred back to the Board as too serious to be investigated by him. On this occasion I was accused by Mr. Fiddes and a clique of the members of the Board of being actuated by personal motives against the resident Medical officer, and of having acted unprofessionally in not having sent in the charges to be decided by the Medical officers themselves. At a meeting of the Board I indignantly repelled this insult, and stated that I had only done my duty, and that in the performance of my public duties I would not allow any nonsensical charges of so-called breach of Professional etiquette to actuate me, but would act in a straightforward way to all.

I insisted on the charges being fully inquired into, and I certainly did feel shocked and disgusted to hear the Medical officers, and Mr. Fiddes in particular, declare that this young man had proved himself since his appointment skilful and ur remitting in his attention to his duties, when to my knowledge Mr. Fiddes had over and over again to different persons, when speaking of him, declared him to be "ignorant of his Profession," to be "fast," "idle," "the coolest fellow he had ever known for neglecting his duties"—and when I knew, too, that on one occasion the ordinary Medical officers have made serious complaints against him to the Inspector and Director for neglecting the keeping of the registers.

I may add that these very books are now in existence, and afford a present instance of the disgraceful manner in which some of the duties of the office were conducted.

Such are some of Mr. Alex. Fiddes' charges against me. So true as these are so true are the rest. But, to give you an idea of Mr. Fiddes's truthfulness, integrity of purpose, and consistency of opinion throughout the whole Hospital controversy here, I will give two extracts of his evidence on two separate occasions.

The first was on May 17, 1861, before the commissioners appointed to inquire into the condition and management of the public Hospital. At this time I must observe that Mr. Fiddes had been upwards of twenty years in practice in Kingston, twelve or eighteen months of which, in 1854-55, he had acted as Assistant-Surgeon in the Public Hospital.

At the time of being examined, Dr. Scott being the sole ordinary Medical attendant, Mr. Fiddes was an advocate for a greatly increased Medical staff, and for the different members of the Profession in the city holding the appointments for a fixed period in rotation.

Mr. Alex. Fiddes on oath:—You are well acquainted with the Public Hospital and lunatic asylum?—I believe I am.

Do you consider the present site a proper one for a Hospital?—I do not consider it a proper one, or one that would be chosen in these days for a Hospital.

Will you give your reasons for considering the site ineligible?—That part of the city is more exposed to north-westerly breeze, which is a malarial breeze, and there would be a difficulty in establishing a drainage.

Is the locality unhealthy from natural causes irrespective of the presence of the Hospital there?—I believe so; but both may combine to render it so.

Are you aware of any swamps being in the locality?—Yes; there is a rank vegetation north and west, and when it rains a great deal of water falls on the surface; at times the land wind passes over it.

Are you aware of any swamps or saline exhalations passing over the Hospital?—In failure of the sea breeze, and when the variable land wind prevails, it might prejudicially operate on the locality in which the building is situated.

Is there any disease which is more prevalent in that quarter than any other part of Kingston?—There is a great deal of malaria and bowel diseases in the locality during the rainy seasons, in May and October.

Have you observed if these diseases are more prevalent in the neighbourhood of the Hospital?—I have not observed that; it is so generally in that part of the city.

Is convalescence from disease more delayed in that locality than in other quarters?—No. . . . . .

Have you been an officer in the Public Hospital?—Yes. . . . . .

During that time was there any epidemic disease in the institution?—Bowel complaint.

Did you find it increase when the cesspools were being cleaned?—I did not trace it to any direct cause. . . . .

Have you ever filled the office of House-Surgeon in any of the English or Scottish Hospitals?—No. . . . . .

Do you think the mortality in the Hospital greater, *ceteris paribus*, than in the town?—I do not think so. The mortality in the Hospital is high, but it should not, in my opinion, be considered that this is the consequence of the want of Surgical skill. The locality of the Hospital, with the swamps and malaria, must lead to a high mortality.

Strange to say, Dr. Andrew Dunn, who was present, and heard Mr. Fiddes' evidence, fully concurred with it.

I will here only observe that the swamps and malaria have been in no way diminished—the sea or day, and the land or night breezes still alternate as heretofore.

On November 9, 1863, the following is the evidence of Mr. Fiddes, as taken before the Committee of the House of Assembly. At this time Dr. Scott had been dismissed, and Mr. Alex. Fiddes was one of the ordinary Medical attendants of the Public Hospital, and as such had modified his opinions on several subjects: he now strenuously opposed any increase of the Medical staff, and urged upon the Board of Visitors that the appointments of Medical officers for a limited time and in rotation would not be conducive to the welfare of the Institution, and recommended that the present appointments should be made permanent.

Mr. Alex. Fiddes, on oath, stated: I am one of the Medical officers of the Public Hospital. I think its situation is just as healthy as the other parts of the city, certainly more so than the lower part of the western end. I do not think there is more intermittent fever in that district than any other. There is fever when the westerly winds prevail; these are not frequent. The ground is gravelly and dry, and the water flows off readily. The present situation is relatively as good as that of the Court-house would be. . . . . .

Have you altered the opinions you expressed before the Commissioners as to the healthiness of the site of the Public Hospital?—My increased experience of the Hospital itself and its immediate locality since the time that my evidence was given before the Commissioners has somewhat modified my views in regard to the salubrity of its site. I certainly do not think that the site of the Hospital can be called an unhealthy one, and the present Medical officers of the city, in a recent communication which I had with them on the subject, assured me that they had less sickness in that neighbourhood than in the lower part of the town.

Strange to say, Dr. Andrew Dunn, now attached to the Hospital, also gave evidence, and concurred in all respects with Mr. Fiddes.

Subsequently, in the last annual report of the Public Hospital, these gentlemen, instead of attributing the diminished mortality of the Institution to its true causes—namely, a diminished daily number of inmates, the power of selecting cases applying for admission, and the existence of a severe epidemic of small-pox, cases of which were not received in the wards of the Institution—twice state that the lessened mortality is a proof that the averments as to the unhealthiness of the site of the Hospital are groundless.

On this report being submitted to the Board of Visitors, previous to its being presented to the Legislature, I pointed out to the Board that such a statement was not concurred in by myself and other members of the Board, whose firmly-expressed opinions as to the unhealthiness of the Hospital were still unchanged, and that such a bold assertion was calculated to mislead the Government. I therefore, moved the following remark, which was unanimously adopted, and ordered to be appended to the report:—"The Board, however, cannot abstain from taking notice of the statement that the diminished rate of mortality 'affords irrefragable proof and shows conclusively that the condemnatory averments which have been made against the salubrity of the Kingston Hospital site are groundless.' Such comments upon opinions previously expressed are, in the opinion of this Board, inappropriate and irrelevant in a statement prepared for the Legislature, and the Board dissent from the views on this subject expressed in the Report."

This dissent of the Board—together with a Report from the Inspector and Director relative to the dietary of the Institution, and the fact that His Excellency the Governor called upon Dr. Dunn, as Senior Ordinary Medical Officer, according to law, to retire at the end of the year—appeared to annoy Mr. Fiddes, who thereupon resigned his appointment. The Government were thus unexpectedly placed in a difficulty, and requested me to assume the appointment as one of the ordinary Medical officers in Mr. Fiddes's place. This I did with great inconvenience to myself, and under the express stipulation that I should be relieved at as early a period as practicable.

Up to this latter occurrence Mr. Fiddes always appeared on friendly terms with me, and never on one single occasion gave me reason to believe that he entertained towards me the sentiments he has since expressed.

I would here express my belief that Mr. Fiddes's resignation of his post as a Medical officer of the Hospital, on the plea of vindicating the rights of his Profession, is absurd, and I have strong reasons for thinking that he has deceived himself as to his real motives.

With respect to his letter, as published in the *Medical Times and Gazette*, I will only further assure your readers that it is an unscrupulous repetition of assertions which he first published in Jamaica, and which, with the exception of a few lines in which I publicly denied their correctness, I have been content hitherto to regard with indifference, feeling that his motives are generally understood, and that I have the approval and confidence of the Government, the great body of the Profession, and by far the greater majority of the community.

That such conduct as was exhibited at the inquest is disgraceful and degrading to the Medical Profession must have been apparent to every impartial mind; and you are indebted to the thanks of all who would uphold the dignity and respectability of our Profession for the severe, but well-merited remarks which have called forth Mr. Fiddes's letter.

I am, &c. LEWIS L. BOWERBANK.

Kingston, Jamaica, June 24, 1865.

*** Having now allowed both the opposed parties to make a statement in our columns, we shall publish nothing further respecting this controversy. The opinion we expressed as to the evidence given by certain of the Medical witnesses at the inquest in our article "Colonial Medical Ethics" remains unaltered.

The Effects of Heat on French Wines.

This subject continues to be investigated with great perseverance. M. L. Pasteur has made an important communication to the Paris Academy of Sciences on the character of the various deposits which take place in wine, and on the methods of preventing bad consequences. M. Pasteur believes that it is not the heat itself, but the amount of oxygen imbibed, which ripens wine; but, of course, heat and motion are great auxiliaries. With respect to the artificial ripening of wine in bottle, or the prevention of the evils arising from microscopic vegetation, M. Pasteur describes his mode of applying heat. He says:—After the wine has been bottled, I tie down the cork with string, and place the bottles upright in a hot stone room. The bottles should be quite full. The wine dilates with the heat, and tends to lift the cork, which, however, the string retains; a little of the wine may be forced out between the cork and the glass, but the string never yields, and I have never seen a single bottle break. When the bottles are taken out of the stove, and the wine cooled, the corks are driven in so as to shut out the air, and the bottles are then sealed. A very small chamber and an ordinary stove suffice for heating an immense number of bottles with scarcely any cost at all.

M. C. Ladey has also treated the subject in a practical manner, and says that, in many vineyards in Côte-d'Or, wine is heated in stoves at a high temperature, but that the operation is generally ill-conducted and ill-understood, besides being kept a secret, and that many accidents have happened, causing the loss of all the wine operated upon. If carried on with the light of science, the effect of such heating must, M. Ladey thinks, mature the wine, and prevent any mischief from the elements of fermentation, until, at all events, they are formed afresh after the lapse of time. The same operation, according to M. Ladey, is applicable to wine in the wood, but in that case great care must be taken to prevent the access of air while the wine is in a heated state, and the wine should be bottled as soon as it is again cooled. At any rate, he avows his intention of trying it himself in the month of July on some 1864 wine of very sound character, and on some sick wine of the vintage of the previous year.

Lastly, we may mention that this method of improving and of saving wines is fast becoming popularised, and, as an instance, it is stated that in Provence it is a common practice to expose *vin ordinaire*, in bottles, for a month on the roofs of houses in the sun of March,—the March of Provence, be it remembered, being very different to that month in London or Paris, and that the wine obtains more maturity than two years of actual age would give it.

Since the effect of oxygen on wine is found so extraordinary, it is surprising that no method of introducing that gas artificially has yet been suggested.—*Wine Trade Review.*

COMMUNICATIONS have been received from—

W. B. Woodman; E. Bembridge; Dommett Stone; Apothecaries' Hall; Dr. Jacob; Dr. E. Ellis; R. C. B.; M.R.C.S.; R. A. Hunter, Esq.; W. Sands Cox, Esq.; K. C. H.; Nemo; Henry Jones; A Volunteer Surgeon; A Ratcatcher (not Professional); Dr. E. Hughes.

BOOKS RECEIVED.

The Student's Book of Cutaneous Medicine and Diseases of the Skin. By Erasmus Wilson, F.R.S. Part II. London: Churchill and Sons. 1865.

*** We have elsewhere (see articles on "Modern Dermatology") feebly expressed our opinion of the value of this handbook of the Diseases of the Skin, and we have now only to congratulate the Profession on the early appearance of the second, and concluding, part of the work. Mr. Wilson deserves a special word of praise for having so quickly completed it. As in our former notices of it we alluded to Mr. Wilson's opinions on scabies, we may remark here that, at page 491, when treating of "Morbus Acari," he says:—"We had always contended that, in this country at least, the acarus was seen only on the hands, and we have repeated that conviction in the third chapter of this book; but we have now to say that, since that chapter was published, we have found the acarus in the skin bordering on the axilla in one case, and on the prepuce in another, and in both instances the creature was absent in the hands."

On the Successful Treatment of Flatulence, by a Novel Use of Charcoal. By A. Leared, M.D., M.R.I.A., Senior Physician to the Great Northern Hospital, and Physician to the Royal Infirmary for Diseases of the Chest. London: Churchill and Sons. 1865.

*** Charcoal has long been used as a remedy for dyspepsia, having been introduced some twenty-five years ago by Dr. Belloe; he gives it in powder, stirred up in water; charcoal lozenges and biscuits are also frequently used. Employed thus, charcoal is of some service, but requires to be given in large quantities, and being in the moist form its absorbent powers are greatly lessened. Dr Leared purposes to employ it as a direct and powerful absorbent of the gases in the stomach, and directs the freshly-burned powder to be given, enclosed in gelatine capsule. He found, by experiment, that charcoal made from vegetable ivory or cocoa-nut shell possesses the highest absorbent power, that ten grains may be enclosed in one capsule, and that twenty grains, or two capsules, will absorb more than two cubic inches of carbonic acid gas. "The number of capsules to be taken must vary with the greater or less severity of the flatulence, but three or four will generally be found sufficient." It is an ingenious suggestion.

A Proposal for the Institution of Degrees or Certificates of Qualification in State Medicine at the Universities of the United Kingdom. By H. W. Rumsey, F.R.C.S. London: Macmillan and Co.

*** A well-written and useful little pamphlet on the need of "specially-qualified agents, both for Medico-legal investigations in important civil and criminal causes, in order to promote the better administration of justice, and for systematic local inquiries concerning disease and mortality, with a view to the more efficient working of sanitary laws." Mr. Rumsey proposes to establish the degrees of Bachelor and Doctor of Civil or State Medicine, and that then, "after some future date, no one should be appointed to any Medico-sanitary or Medico-legal office" who did not hold such a degree.

The Physical History of the Earth: Meditations by a Student. London: S. Bagster and Sons.

*** It is most difficult to determine whether this strange book be a dismal reality or a still more dismal hoax. The writer arguing that all attempts to reconcile the *conclusions* of science with the literal Miltonic interpretation of the Scriptures have failed, seems to have set to work to invent, out of his own not very clear head, a set of facts, as he calls them, —*i.e.*, a cosmogony of the old sort—which he asks us to accept, as being in accordance with the said literal Miltonic interpretation. For this purpose a theory of the figure of the earth, its rotation, the nature of light and electricity, etc., are invented, which the writer proposes as a history of the earliest condition of this planet, and which seem to us to set all that is known of physics at defiance. We really are in some doubt whether the writer be in jest or in earnest, and whether the motto on the title-page be not an irreverent sarcasm; but we hope that he will repent of having published a book which, if serious, can but delight the scoffer.

The Veterinary Review. July, 1865. Edinburgh: W. P. Nimmo.

*** Mr. Armatage tells us that antimony is used in large doses by pig-keepers, who apply the medicine indiscriminately, whatever may be amiss with their pigs. No matter whether the pig has "a bit of a cold," "off his meat," "getting too fat," "not getting fat enough," or whatever the ailment is, antimony is the remedy. Will this fact explain some of those cases where pork, apparently good for food, disagrees and produces cholera-like attacks in those who eat it?

This number also contains an abstract of a lecture by Dr. Budd, of Clifton, upon Typhoid Fever as it occurs in the Pig. This is the disease known as "hog typhus," and by other names. Dr. Budd shows it to be the analogue of human typhoid, and that it is propagated in a similar manner. Dr. Budd states that 10,000 to 15,000 pigs have died through this disorder within the last eighteen months in the South and South-West of England. What has become of all these carcases? The records of the police-courts have informed us what was done with some of them.

The New York Medical Journal. Nos. 1 and 2.

*** No. 1 contains Dr. Emmet's paper on his radical operation for procedentia uteri. We have already noticed this subject. Dr. Lente also has a paper on "Sulphuric Ether *versus* Chloroform," in which he advocates the preferential use of the former on the ground of greater safety. There is a tendency among American Surgeons to use what is termed by them the "American anæsthetic." Dr. Lente tells us he regards this fact settled, viz., that a patient may be brought under the influence of sulphuric ether as quickly as he can safely by chloroform, and *with a quantity costing less and weighing litt'e more than the requisite amount of the latter.* The objection, then, sometimes raised by Army Surgeons of increased trouble in transportation is not tenable." He does not tell us how he manages this, but in another part of his paper he speaks of an average quantity of 2½ ounces.

The Boston Medical and Surgical Journal. No. 17. 1865.

*** Contains an editorial article on the starvation of Union prisoners in the late war. We cannot see the advantage of recalling this subject at the present juncture. Accusations of barbarity have been made on both sides during the recent struggle, and should be forgotten now as soon as possible. A Medical journal should be the last to foster ill-feeling.

The Geological Magazine. No. 13. London: Longman and Co.

Homes without Hands. Part 19. By the Rev. J. G. Wood. London: Longman and Co.

The Natural History of the Human Teeth. By John Hunter, F.R.S.; with Notes by F. C. Webb, M.D., and R. T. Hulme, M.R.C.S. London: R. Hardwicke.

The Dental Journal. June. London: John Churchill and Sons.

Handbuch der Speciellen Pathologie and Therapie. Von P. Virchow. Erlangen: V. F. Enke.

Handbuch der Allgemeinen und Speciellen Chirurgie. By Dr. V. Pitha and Dr. Billroth. Erlangen: F. Enke.

Lehrbuch der Physiologie des Menschen. Erlangen: Verlag von F. Enke.

Die Uroscopie am Krankenbette. Dr. A. Ziegler.

The British and Foreign Medico-Chirurgical Review. No. 71. July. London: John Churchill and Sons.

Braithwaite's Retrospect. Vol. 51. January to June. London: Simpkin and Co.

The Climate of San Remo and other Winter Stations of the Mediterranean. By M. Proper James, M.D. London: John Churchill and Sons.

Notes on Spa, or Observations on its Chalybeate Springs. By P. Cutler, M.D. Seventh Edition. Brussels: A. Mertens and Sons.

Tension of the Eyeball; Glaucoma, etc. By James Vose Solomon, F.R.C.S. John Churchill and Sons. 1865.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 22, 1865.

BIRTHS.

Births of Boys, 1033; Girls, 920; Total, 1953.
Average of 10 corresponding weeks, 1855-64, 1692·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	739	728	1467
Average of the ten years 1855-64	622·2	567·7	1189·9
Average corrected to increased population..	..	..	1308
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	1	7	2	3	6	5	46
North ..	618,210	9	9	6	..	9	15	70
Central ..	378,058	3	1	5	..	4	9	29
East ..	571,158	1	2	9	..	12	13	50
South ..	773,175	4	12	7	3	13	8	92
Total ..	2,803,989	18	31	29	6	44	50	280

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·706 in.
Mean temperature	63·6
Highest point of thermometer	78·8
Lowest point of thermometer	51·2
Mean dew-point temperature	55·2
General direction of wind	SW. & Calm.
Whole amount of rain in the week	0·35 in.

APPOINTMENTS FOR THE WEEK.

July 29. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

31. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

August 1. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

2. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

3. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

4. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

AN INQUIRY INTO THE NATURE OF THE PHENOMENA WHICH CONSTITUTE "INFLAMMATION."

TWO LECTURES DELIVERED AT

The Royal College of Physicians.

By LIONEL S. BEALE, M.B., F.R.S.,

Fellow of the College; Professor of Physiology and of General and Morbid Anatomy in King's College, London; Physician to King's College Hospital.

Lecture II.

THE NUTRITION OF A CELL OR ELEMENTARY PART.

Inflammation in non-Vascular Tissues:—Cartilage and Epithelium—Of the Nature of the Inflammatory Process—Of the Increase and Multiplication of Cells in the Simplest and most highly Complex Organisms—Of the Formation of Pus from Germinal Matter—Of the Pus in Purulent Ophthalmia, Gonorrhœa, etc.—Vaccine Lymph—The Nature of the Poison of Fevers and Contagious Diseases.

Inflammation in Vascular Tissues:—A Punctured Wound—Of the Blush in a Flea Bite—Of the Vasomotor Nerves, and of the Nerves Distributed to Capillary Vessels—Of the Excitor and Motor Nerves Concerned in Nutrition—Of Exudation and the Formation of Coagulable Lymph.

Of Reducing the too Free Access of Pabulum to Germinal Matter, and of Reducing the Activity of the Inflammatory Process—Conclusion.

In my last lecture I entered at some length, even at the risk of being considered tedious, into the consideration of the structure of the elementary part or cell. Every tissue consists of a congeries or vast number of these elementary parts or cells, and every elementary part in each kind of tissue possesses precisely the same structure, but the elementary parts of different tissues differ from one another in many important particulars. I showed that we might represent a living growing elementary part of any texture in an exceedingly simple way, for it consists of matter in two distinct states—matter which I stated was *living*, and matter which has *ceased to live*. I adduced evidence in support of the conclusion that the whole of this formed matter was once in the state of the living matter within; but I thought that when this internal living substance became converted into the external formed material its life ceased; so that formed material is regarded by me as *lifeless* matter. Although this conclusion may at first sight appear unreasonable, it is the conclusion which I am led to entertain from a careful consideration of very many facts, and if the general inferences at which I have arrived are true at all, it will, I think, be found that this general conclusion is correct. In all cases, then, I speak of this formed material as lifeless, and of the germinal matter as living. And if this view be true, it must be accepted as a fact that the contractile material of muscle, even while it is contracting actively, is not living, but has ceased to live. I mention this in all its baldness, because I am well aware that much may be said against the view I entertain, and I desire that the facts and arguments against me should have due prominence given to them; but I feel that I am led to this inference logically, and, therefore, I accept it. If the results of further research prove that I am wrong, I shall willingly admit my error; but so far, the results of the observations I have been able to make support and confirm the conclusions at which I have arrived, and I think they fully justify me in calling attention to the views which I entertain.

The Nutrition of the Cell or Elementary Part.—Now, the changes which take place in one of these elementary parts during normal nutrition may be very easily described. Suppose this to be a minute particle of living matter—(drawing on the board). This particle grows till it reaches a certain size, which is very limited, being invariably less than $\frac{1}{500}$th of an inch in diameter: it then divides and subdivides into other portions. It never goes on growing and growing until it attains even the diameter above mentioned. Suppose the living mass to have absorbed pabulum and grown to the size here represented, a new series of changes will now take place. By the action of external conditions the living matter upon the surface of this living mass undergoes a change; to speak simply, but plainly, a portion of the surface dies or is killed, and certain compounds result which did not exist before. These are often firm, and in many cases form a tolerably hard layer. The cell being still exposed to adverse conditions, the same process goes on until but very little of its living matter remains. The whole of the original living mass is therefore supposed gradually to undergo conversion into this formed matter—matter which exhibits certain properties and certain peculiarities in composition, but which nevertheless does not live. The diagram which I have ventured to represent is very easily understood; but it does not represent the exact truth, because as a fact we find that the elementary part taken in its entirety, in many tissues at least, increases considerably in size, although the portion consisting of germinal matter never reaches the $\frac{1}{500}$th of an inch in diameter. Suppose this outline to represent the extreme limit which the germinal matter can attain, the fully formed elementary part may extend as far as this outline. The mass of germinal matter inside is the same size as it was when we first examined it (and usually it is very much less), but the formed matter around it has greatly increased in proportion. Ever since the cell was first discovered there has been the greatest difference of opinion regarding the manner in which this formed matter was produced and underwent increase. It results, I think, in the simple manner I have described in the first course of lectures I had the honour of giving to the College in 1861.

It must be borne in mind that nutrition is still going on while in the living matter its outer part is becoming converted into formed material. Nutrient matter passes into the living matter through the thin layer of formed material which has been produced. Layers of new formed material are formed upon the surface of the germinal matter, and of course *within* those first produced, which are, therefore, gradually forced outwards. I could not represent this on the board without rubbing out every one of the lines which I have made and drawing other lines within them; nor could I imitate the process as it occurs in nature by a model. The formed material upon the surface gradually accumulates within that already produced. While this deposition goes on, nutrient matter continues to pass into the interior and new germinal matter is formed. These changes are continually going on, and the entire elementary part increases in size by the deposition of new layers one within the other; not, as used to be supposed, by the formation of layer after layer upon the surface. These, then, are the changes which seem to take place in the elementary parts of tissues in the normal condition; and this seems to be the simple way in which nutrition really occurs.

Now, let us inquire in what particulars the changes taking place in the cell, or elementary part in disease, differ from those occurring in it in the normal or healthy state, and it seems to me that this inquiry should not be limited to a consideration of the changes occurring in man. The Physician should study the influence of altered conditions upon the lowest and simplest organisms, and he should investigate with the greatest care not only the minute structure of the tissues of man in health and disease, but those of the domestic animals. It appears to me certain that if Physicians do not pursue these branches of inquiry, and in detail, the purely scientific man will play a most important, and the Physician but a very subordinate, part in the future progress of Medical science. It is clearly for the interests of British Medicine that we should follow the noble example set by so many former Fellows of our College, and devote very much of the time not spent in the active duties of our Profession to advancing some of the many departments of scientific research, upon the earnest and continual prosecution of which all true advance in Medicine almost entirely depends.

In such a structure as the ordinary epithelial cell, the formed material possesses a considerable degree of hardness, and is not very readily permeable to nutrient fluid. Suppose that this hard envelope of formed material becomes softened, or suppose a portion of it be torn away, or to be removed piecemeal, fluid nutrient pabulum will of course pass more readily into the germinal matter of the cell; the consequence of that will necessarily be that the germinal matter will increase in quantity; and where the formed material is much softened the germinal matter not only takes up the nutrient fluid, but the formed material itself. The germinal matter is increased, and lives, as it were, at the expense of the tissue which it had already formed; that is, the tissue which was formed in the first instance, and was firm, and hard, and capable of resisting, after being softened is soon destroyed and absorbed or taken up

by the living matter in contact with it. Thus it may gradually be consumed. Last of all, the germinal matter, which has thus increased in quantity, passes to the external surface of the cell, and then being entirely surrounded by the nutrient material it of course grows very rapidly.

It seems, then, that there are two distinct processes taking place in nutrition. In the one, the germinal matter absorbs nutrient material, and increases from *within outwards*; and in the other there is a tendency for this germinal matter to be precipitated and destroyed upon its external part, and this proceeds from *without inwards*. It is important to bear in mind the existence of these two opposite tendencies in the case of every living cell.(a) In the normal epithelial cell the formed material gradually increases around the germinal matter. In disease the germinal matter may increase at the expense of the very material it has produced.—In health there is a gradual death. In disease there is active nutrition, and the matter which was dead becomes living.—In health there is slow action associated with duration of structure. In disease, as I shall show further on, there is increased action associated with evanescence of structure.

Inflammation of Cartilage and Epithelium.

Now, to apply this doctrine to the consideration of the phenomena of inflammation. As it has been truly observed by Virchow, and abundantly confirmed by others, all the essential phenomena of inflammation may occur in non-vascular tissues. Although in the majority of the tissues of man subjected to inflammation the process is seriously complicated by the action of vessels and nerves, inflammation, as is well known, occurs in cartilage, epithelium, and other non-vascular tissues.

Cartilage.—The changes taking place in cartilage in a state of inflammation were carefully studied many years ago by Professor Redfern: he showed that the changes which resulted when a piece of living cartilage was perforated by a thread precisely accorded with the changes occurring in various cases of inflammation of cartilage induced by disease. If cartilage be perforated by a thread, this is very briefly what takes place. Supposing this (drawing on board) to represent the masses of germinal matter in a piece of cartilage, and suppose this shading to represent the matrix or so-called inter-cellular substance of cartilage, which, as I said before, corresponds to the cell-wall—suppose a thread to penetrate through a mass of cartilage thus (drawing), in the channel which has been made through the cartilage by the thread the nutrient fluids must necessarily flow much more quickly than through the firm cartilaginous matrix; and these nutrient fluids, in order to reach the masses of germinal matter in the neighbourhood of the line of perforation, will have a much thinner layer of formed material to permeate than when the cartilage was entire. Now, these masses of germinal matter being supplied with an increased quantity of nutrient matter, it would absorb and consequently would increase in size. Every cell of the cartilage, or, rather, each mass of germinal matter, near the part which has been penetrated by the thread, very soon becomes increased in size. The masses of germinal matter divide and sub-divide, so that, as is often said, one "cell" (really one mass of germinal matter) seems to give rise to a vast number, and these cells appear to have been formed in cavities in the matrix of the cartilage; but, really, the cells grow at the expense of the softened cartilage around them, and thus the large cell-containing cavities are formed. The cells (masses of germinal matter) absorb the softened cartilaginous tissue, as well as certain nutrient substances, which pass in the manner I described through the channel which has been made by the thread, and which nutrient materials have permeated and softened the cartilage. The formed material undergoes important alterations in character, and these are probably induced by the increased passage of fluids through it. The increase of the germinal matter may go on to the formation of "pus." The passage of the nutrient material to the germinal matter still continuing, the cartilaginous material is rendered softer, and as the latter becomes more readily permeable, the growth of the germinal matter may increase at such a rate as to lead to the production of numerous spherical masses of germinal matter and the entire destruction of the formed cartilaginous material. These masses of germinal matter assume the spherical form, and constitute what we call "pus."

Epithelium.—In epithelium similar phenomena occur. Epithelium is a non-vascular structure, and we may trace the various phenomena which result in the formation of pus, in epithelium, readily enough. In vaginal epithelium the change is common, and if we carefully examine the vaginal epithelium in the urine of female patients suffering from slight leucorrhœa, we shall have no difficulty in demonstrating the process of pus formation within epithelial cells.

In this very simple way, then, by more active nutrition than occurs in the perfectly healthy state, the masses of germinal matter of any tissue may multiply, reach a certain size, divide and subdivide, and give rise to a number of new masses, which new masses at last become what we know as pus corpuscles. In these cases the cells resulting from the inflammatory process differ from the normal cells mainly in the characters of the formed material. When pus is formed, formed material is produced, but this material, instead of being firm and hard, as it is when slowly produced, is soft and semi-fluid. The fluid in which the pus corpuscles are suspended is the liquor puris, but this contains, not only the formed material of the corpuscles, but the nutrient pabulum which is about to be taken up by them,—the products of decay, as well as the nutrient matter about to be appropriated.

(To be continued.)

(a) See the author's papers on Nutrition, *Medical Times* for February 25 and following number.

ORIGINAL COMMUNICATIONS.

THE EDINBURGH SCHOOL ON SEWAGE EXHALATIONS AS THE CAUSE OF DYSENTERY, DIARRHŒA, AND TYPHOID FEVER.

By AN EDINBURGH GRADUATE.

Dr. Clouston, in the able essay which has recently appeared in consecutive numbers of the *Medical Times and Gazette*, has directed attention to the influence of sewage exhalations on the production of dysentery. The author in so doing states that he at first experienced much difficulty in believing that the epidemic had any connection with sewage miasm, and adds, in explanation of his hesitancy, that he "had never heard of dysentery being connected in this country with sewage exhalations as a cause at all." Dr. Clouston is justly entitled to great credit for his successful observations, and I do not wish in any degree to detract from their value; but Dr. Clouston is an Edinburgh student and graduate, and for the honour of our common *alma mater* I must beg leave to state that he might have learnt from the Professor of the Practice of Medicine all that which painful experience has taught him as to the influence of sewage exhalations on the intestinal canal and the production of diarrhœa, dysentery, and typhoid fever. At this season, when miasmatic disorders are most apt to prevail, and much earnest thought is turned to social problems affecting public health, and especially to sewerage of towns, it might be neither uninteresting nor without advantage to bring forward views bearing directly on both topics. Asking you to permit me the favour of doing so, I shall quote somewhat amply from notes of lectures by Dr. Laycock, delivered eight years ago. The views therein expressed will, I trust, confirm my assertion that Dr. Clouston's conclusions are not unknown at Edinburgh, and thus vindicate the real teaching of her Medical school.

Etiological Nosology of Miasmatic Fevers, Sewage Diarrhœa, and Typhoid.

Dr. Laycock classes these diseases with the "pyretic diseases" of endemic origin. A definite meaning is attached to the term endemic. "When the cause," he observes,(b) "is inherent in the soil or surface—*i.e.*, is topographical—it is endemic; whenit spreads amongst the people, irrespectively of local conditions, it is epidemic."

When a communicable fever poison is introduced amongst a people susceptible of its action, and the endemic and atmospheric conditions favour its development and communication, a state of health and disease arises generally termed the epidemic constitution. This epidemic constitution is manifested in summer and autumn as diarrhœa and dysentery.

Dr. Laycock arranges the poisonous emanations of endemic origin under three heads—1. Malaria. This is derived from

(b) "Principles and Methods of Observation and Research." Second edition, p. 259.

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the decomposition of vegetable matter and from certain soils. It is the cause of periodic fevers. 2. Miasms. These are derived from decomposing animal matters, and are the causes of endemic continued fevers. 3. Combined, or complex miasms. These are for the most part operative in those towns in which the conditions for the production of malaria and miasms are found, and give rise to civic endemic fevers, with complex symptoms.

Now, miasms are chiefly of three kinds—the septic, given off by putrifying flesh; the fæcal, given off by putrifying fæces; and the ochlotic, derived from the skin and lungs of men and animals crowded together. (*Ochlos* is Greek for a crowd.)

It is with the fæcal miasms we have to deal, and the diseases they cause are thus stated by Dr. Laycock:—

Miasmatic Fevers.—Fevers caused by products of decomposing animal matters; pyrexial phenomena continuous; gastro-intestinal symptoms predominant. I. Fæcal Miasmatic Fevers, caused by sewers and dunghill miasms: (*a*) Ephemeral fæcal miasmatic fevers, terminating in one to four days,—i. Endemic summer diarrhœa; ii. Endemic summer cholera; iii. Endemic dysentery. (*b*) Continued Fæcal Miasmatic Fevers, terminating in from seven to twenty-one days,—i. Simple continued fever; ii. Typhoid continued fever, with adynamic symptoms.

I will now give extracts from notes of Dr. Laycock's lectures:—

How Malarias and Miasms Differ.

The term miasm (from *μιαινω*, I pollute) comprehends, strictly speaking, every emanation, vegetable and animal, which has the power to cause disease; but its significance must here be restricted to those of animal origin. Malarious emanations, we have seen, occur away from the usual habitations of mankind, as, for example, on the West Coast of Africa, where at some parts a ship cannot approach with safety within even two miles. This is not the case with miasmatic emanations. They peculiarly belong to the habitations and places of resort of men. Hence arises the fundamental necessity for distinction and demarcation between malaria and miasms.

Enteric Fevers and Other Enteric Endemics

are commonly met with in town practice, but also not unfrequently in the country, originating in the large dung-heaps. Large towns, from their sites being usually on rivers or plains, are infested by these fevers, in consequence of the accumulation of fæcal matters, which is apt to increase rapidly unless controlled by a very perfect system of hygienic, police, and sewerage regulations. In this country, up to the seventeenth century, great uncleanliness prevailed, so that dysentery was very destructive in the towns, and when an epidemic poison attacked the population during the summer many perished in a few days. Miasms arising from slaughter-houses and churchyards are of mixed character, and intensify all the others. London offers a good example of the effects of sewage miasm; from its situation on an almost dead level, the sewers are converted into elongated cesspools filled by human and brute fæcal matter—the former from the neighbouring houses, and the latter washed down by the rain from the streets. The neighbouring Essex marshes supply malaria to the London atmosphere. In Edinburgh there are some of those elongated cesspools, but no malaria. Fæcal miasms abound in Paris, although less now than formerly.

Fæcal Emanations as Enteric Poisons and Irritants—

Consist of noxious gases, which are inhaled by the people, and require to undergo a secondary intestinal excretion. There is pathologically a very great difference between the primary excretion of the constituents of these gases, and in thus being presented to the body a second time for a similar purpose in the deleterious form of miasms. In the latter case they are obviously presented as poisons, and their actions as such are to cause irritation and inflammation of the intestines from the duodenum and ileum downwards, with their consequences, ulceration and suppuration. This action is much intensified in the colon when the poisons are received in large doses, and producing dysentery. But they act more frequently on the ileum and colon, and are then followed by diarrhœa. The poison also acts on the blood glands, causing deterioration of the blood.

Influences of Season.

The evolution of miasm depends on decomposition, and this on temperature. Hence the number of deaths from miasmatic diseases is greatest in the hot months. This fact is well established, as may be seen by the following table:

Table of Deaths from Diarrhœa in London (on an average from 1843 to 1852).

Months.	Average Temperature.	Average Deaths.		
January	36·0°	14		
February	39¼	14	12·5	Winter and early spring average.
March.	42	12		
April	47·6	10		
May	55·4	11		
June	59·5	16		
July	63	70		
August	63	116	90	Summer average.
September	57·7	86		
October	51	37		
November	42·5	18		
December	31·75	15		

Varieties of Miasmatic Diseases.

Varieties arise as the endemic and social conditions vary. In our investigations of this class of diseases, therefore, the cleanliness and manner of living of the inhabitants should be taken into account, for although variations in the quantity and composition of the poison induce corresponding varieties in the febrile phenomena, so also do the personal conditions of the people.

Cholera morbus, or English cholera, is developed when both vegetable and fœcal decomposition concur during the warm months of summer, and characterised by spasm of the ileum and colon, and abdominal muscles. It sets in generally in the beginning of August, and runs its course as an epidemic in about a month.

Dysentery is another form of summer diarrhœa—depending for the most part on intense miasmatic pollution. There is a form of endemic cholera not usually described termed "dry gripes." It is endemic colic, and receives its name from causing neuralgia only.

Infantile Diarrhœa and Cholera and Typhoid.

The tendency of the endemic to terminate in ulceration and perforation of the bowel is proportioned to the extent of the inflammation, the violence of the reaction to the poison, and to the predisposition to disease of the intestinal system. This fact is very well shown in children during dentition, when the alimentary and intestinal mucous membranes are in a state of morbid irritability. When to the irritation produced by dentition the action of an endemic poison is superadded, the disease generally assumes a more fatal character; so that in 5000 cases of deaths from diarrhœa in London 75 per cent. were children under five years of age; and of these, 75 per cent. were under one year, and 77 per cent. between the ages of one and two years. Sex also appears to influence the deaths, for these occurred in the proportion of twenty males to seventeen females. This disparity was most apparent under one year, when deaths occurred in the ratio of four males to one female. But under two years, the female mortality rather exceeded that of the male. Children, besides inflammation of the intestinal mucous membrane, sometimes suffer from strumous mesenteric disease terminating in tabes mesenterica. Endemic, or English cholera, rarely attacks children; 29 per cent. only of the deaths occurred in children under one year, and many of these were due probably to remittent fevers of a miasmatic character. All morbid conditions of the intestinal canal predispose to miasmatic diseases.

Prevention and Protection.

Acclimatisation to miasmatic influence is observed in large towns, for persons newly arrived from the country are more frequently attacked by these civic diseases than residents. The same is observed in soldiers commencing camp life. The duration of the latent period has not been well ascertained, but is probably the same as in malarious fevers, influenced, doubtless, in part, by the dose of the poison received.

The Exciting Causes must be Avoided.

These are the same as those of malarious fevers—viz., much fatigue, exposure to cold and chills, want of food, etc., but especially irritants applied to the mucous membrane of the stomach and intestinal canal. Hence the use of purgatives, errors in diet, etc., are often followed by an attack when miasms are rife.

With regard to prophylaxis against this class of fever poisons, acclimatisation or habituation is of the greatest importance. After this, there is exemption from the immediate

effects of the poison, except, perhaps, during a hot, dry summer, when in consequence of large doses the specific effects are produced. The degree of exemption produced by acclimatisation is, in some cases, very remarkable. Persons have been known to live to old age in the neighbourhood of a cesspool. Such facts are cited for the purpose of showing that miasmatic exhalations are harmless to everybody; but this, I need hardly say, is illogical reasoning.

With regard to special prophylaxis, we should not forget that civic emanations have the same influence as malaria in predisposing to the spread of epidemics generally, and especially intensify all the phenomena of the enteric fevers, so that where these poisons are developed epidemic enteric fevers spread with great fatality. Where towns are situated on the banks of rivers, there is a combination of both civic and malarious miasmata. It has been observed that wines and good diet are prophylactic, and will often carry a person of weak constitution through an attack of cholera, even in the collapse stage. Vegetable acids, such as exist in ripe sub-acid fruits, are often useful, especially in fevers arising from fæcal miasmata; but they should be easily digestible. Hence, apples, pears, and unripe fruit should be avoided, as they irritate the bowels, especially in those cases in which there is a predisposition to irritation of the intestinal canal. Plums were until lately almost universally believed to be the cause of cholera and diarrhœa, but, on the contrary, are among the best fruits that can be eaten, provided they are ripe and good. During the prevalence of cholera as many ripe plums, apricots, and peaches as agreeable may be eaten. The simple rule is to take nothing indigestible and irritating to the bowels. In miasmatic and malarious fevers common salt is prophylactic, and should be used largely. Quinine is likewise beneficial. Should it be given in typhus and autumnal fevers? This question has been much discussed. It would be well to employ it only in those cases in which its use is not contra-indicated by the cerebral symptoms. Cleanliness of the skin should be carefully attended to, and everything like active medication sedulously avoided. A gentle dose of rhubarb and magnesia will, by acting on an irritable mucous membrane, sometimes induce dangerous diarrhœa. Should pain be felt, flannel with a teaspoonful or two of mixed laudanum and turpentine may be worn round the body; and if it get worse, a few minims of a sedative may be given. Constipation and consequent intestinal irritation are best remedied by a little castor oil with ten or fifteen drops of laudanum.

Let us now consider some of the special diseases produced.

What Summer Diarrhœa is, and How it Ends.

This in its character is more endemical than epidemical, as it is generally confined to certain districts. It is an enteric catarrh—an irritation or inflammation of the gastro-intestinal mucous membrane. It is characterised by slight nausea, vomiting, pain, and spasms, and a feeling of internal heat—the symptoms, in short, of the premonitory stage of fever. The pulse is at first small and weak, then full and strong, rising above 100 beats a minute. The fever terminates generally in four or five days, when the skin becomes moist and the appetite returns. This is the ephemeral form, and, pathologically considered, is a continued fever cut short. Here we have a good example of the *vis conservatrix naturæ*, for the poison is removed by the diarrhœa. A more severe form sometimes occurs in persons of a cachectic habit. In these the griping pains are of a very severe character, and the vomiting is more persistent. Afterwards there are frequent fæcal evacuations, which are watery, mucous, and sanguincous, accompanied by flatus and occasionally tetanus of the abdominal muscles. Pain on pressure characterises a more intense form of inflammation. These cases may pass on to a second stage as dysentery, with its pathognomonic inflammation of the colon and rectum, hot and dry skin, hurried pulse, and extreme thirst. Children, we have seen, suffer more proportionally from summer diarrhœa than adults. In such cases there is increased action of the bowels; the motions are at first healthy, then yellow, resembling the yellow of an egg, then green and frothy. The green colour is due mainly to admixture with bile, but partly also to presence of blood corpuscles, but the latter is not an invariable constituent. This condition may terminate in health in four or five days, or pass into dysentery and prove fatal by exhaustion.

Cholera Infantalis is summer diarrhœa with nervous symptoms, and it occurs for the most part in children. There is increased and more lengthened vomiting, and more severe, occurring sometimes so often as every half hour; there is much spasm of the intestinal canal, and probably debility of the sphincters, so that the evacuations gush out violently; the stools often become mucous and sanguineous. The symptoms abate after forty-eight hours, ending either in recovery or in continued fever coincident with the inflammation. Aphthæ may appear on the tongue, and abscesses near the nates. This disease, even when the active symptoms have quite subsided is prone to relapse; the child then becomes rapidly exhausted, and dies three or four days after the commencement of the relapse.

Hints on Treatment.

In adults the first discharges are usually beneficial. If there be no local intestinal disease or irritation from purgatives, the patient will probably recover by resting in bed, and taking a simple diet. Sub-acid drinks, as apple tea, lemonade, etc., may be given. If there be pain, opiate epithems should be applied. When the vomited matters are acid, alkalies, as carbonate of soda, potass, or magnesia, are beneficial. The vomiting may be checked by iced or aërated water, but soda powders act as purgatives, and should be avoided. In the more severe forms astringents, as the earthy carbonates of lime and magnesia, can be used with benefit. In the advanced stages of diarrhœa, sulphuric acid has been recommended, but its employment is questionable, and sometimes does much harm. In some cases with abdominal tenderness and mucous stools, we must treat for inflammation by opium, leeches applied to margin of anus, etc. Sometimes after a few days mucus collects in the intestine, and becoming half putrid, irritates without inducing sufficient contraction of the bowel. In such cases there is nothing better than a gentle dose of castor oil with ten or fifteen drops of laudanum. Plenty of broth, salt, pepper, rice, and farinaceous food in general should be conjoined with any remedy administered, but solid food, likely to be imperfectly digested, will prove irritating, and should be avoided. When the diarrhœa is chronic—*i.e.*, lasting several days, the balsamic expectorant medicines often do good. Such are storax, copaiva, camphor, creosote, etc.

The Cold Wet Sheet in Cholera.

The treatment of miasmatic or endemic cholera is like that of diarrhœa. When called to attend a patient labouring under this disease, the vomiting and diarrhœa will have probably lasted long enough for elimination. These should therefore be stopped. This is best done by a dose of opium and calomel given at once. One, or even two, grains of each in pill is not too much for a robust adult. Should bile continue to flow into the stomach, it must be ejected; and for this purpose, warm water, or, still better, camomile tea, should be freely given. The latter, if retained, has the advantage of acting as a tonic. It is thus likewise preferable to ipecacuanha and sulphate of zinc, which, if they fail to induce vomiting, may be positively hurtful. Flannel, wet with laudanum and water, is a good epithem to the epigastrium; and if it do not relieve quickly, still does good by tending to withdraw the patient's attention from the seat of pain.

When there are violent spasms, ʒss. to ʒj. of chloric or sulphuric ether with twenty or thirty drops of laudanum makes a good draught. In the event of collapse, stimulants may freely be given—wine, brandy, ammonia, camphor, etc.; and should reaction threaten to become excessive, beneficial diaphoresis will probably be induced by the application of the cold wet sheet. But in the employment of this remedy you must be guided by the state of the patient. If week and feeble, it is safer to have the sheet wrung out of warm water, but if comparatively vigorous it is better applied cold. Relapse during convalescence is often induced by errors of diet. Hence the need of precaution to avoid whatever is likely to irritate the gastro-intestinal mucous membrane. Solid diet should still be abstained from, and farinaceous soups are bland, sufficiently nourishing, and safe.

A Miasmatic Duodenitis.

Bilious colic is characterised by vomiting of bile, and but slight or no diarrhœa or cramp. It is probably a miasmatic duodenitis. The duodenal inflammation extends to the common bile-duct, and thence to the gall-bladder, thereby inducing excessive secretion of bile. This is poured into the duodenum, and thence, by reversed peristaltic movement of that portion of the bowel, into the stomach. This form of colic is attended by severe epigastric pain and hypochondriac tenderness. The treatment is as for flatulent colic, and there is no difficulty of diagnosis.

Clinical Varieties of Dysentery.

Dysentery presents itself under different forms, varying according to the seat and extent of the intestinal inflammation and ulceration. Any poison may thus produce dysentery, but the miasmatic form is most generally met with. When malaria complicates the fæcal poisoning, the disease assumes a remittent character, and is, indeed, not unfrequently associated with true remittent fever. It is likewise often complicated with epidemic typhoid and typhus fevers, and epidemic cholera. Epidemic cholera, under favourable endemic conditions, terminates in dysentery, constituting a choleraic dysentery. Typhoid and choleraic dysentery are communicable diseases. In the Crimea they were thus communicated by the stools of the sick.

Dysentery may be either acute or chronic. Acute miasmatic dysentery varies much, according to the intensity of the phenomena manifested. In the eliminatory stage there is little mucous or sanguineous vomiting or diarrhœa.

This is termed the "benignant" form of dysentery. It is ushered in by diarrhœa. In a few hours those twisting colicky pains in the hypogastrium termed "tormina" commence, and recur at intervals, followed by scanty evacuations, and attended by much painful straining ("tenesmus"), and a sense of heat and irritation at the lower end of the bowel. The symptoms become more urgent as the disease advances, until at length the patient is afraid to quit the stool. The dejections are now almost entirely composed of mucus. Abdominal tenderness increases; the pulse gets quick; the tongue white, and the skin hot and dry. These symptoms abate between the fourth and seventh days. Pain and tenesmus cease; the stools again become feculent, and diarrhœa reappears. From the seventh to the eleventh day convalescence is re-established. This is the summer or autumn endemic dysentery of temperate regions. In tropical regions the symptoms are different and more grave.

There is a form of dysentery which, from the formation of multiple abscesses in the liver, has been termed "hepatic." These abscesses are developed concurrently with the dysenteric symptoms. Scurvy is not an infrequent complication of dysentery. This is most usually met with in soldiers and seamen, in the camp and on shipboard. The dejections in such cases are much modified, becoming sanious or grumous. Dysentery, I have already said, is sometimes associated with typhus or typhoid fever; and there can be no worse complication. The motions in such cases are in general exceedingly offensive, due, probably, to putrescence of the large amount of mucus they contain, and are infectious.

Treatment will vary with the predisposing causes, diet, age, and condition of the patient. The disease in this country is of a simple character, being oftener the sequel to diarrhœa than true acute dysentery. In cases where there is an accumulation in the gut of acid mucus and fæces, or in which there is general relaxation of the bowel, or the proper secretion suppressed, and the symptoms those of simple irritation of the rectum, mild aperients, such as rhubarb and magnesia, with a little laudanum, or castor-oil and laudanum, are the best forms of medication. Mucilaginous drinks, soups, broths, should be given copiously, and any previous deficiency in vegetable diet supplied. To the diet, which cannot be too light, simple, and digestible, may be added for this purpose citric acid and some of the ripe sub-acid fruits. If the tenesmus be distressing, acetate of lead and morphia, or morphia suppositories, will relieve it. Opiate epithems to the hypogastrium will allay tormina, and carminative astringents will do good where there is much flatus. Quick pulse with hot skin and much febrile disturbance indicate antiphlogistics; and diaphoresis, either with the wet sheet or diaphoretics, may be induced with benefit. If hypogastric tenderness be marked, leeches to the colon or verge of anus may be applied. In a robust man a little blood may even be taken from the arm, and, conjointly, small and frequent doses of calomel or blue pill, combined with opium, given with advantage. Mercury should not be given in doses to relax the bowels. Ipecacuanha, from its supposed action on the general mucous membranes, has long enjoyed a high reputation in dysentery. Where there is much debility and loss of strength, quinine may be given, in some cases even from the first, especially in malarious districts.

Chloride of sodium and vegetable acids are very useful in such cases. In dysentery with typhus complications, little can be done except to relieve symptoms. Treatment must be conducted on general principles, and directed especially to conserving as much as possible the patient's strength. In such cases the fœtid dejections may be rendered less offensive and hurtful by the use of disinfectant injections, and a very dilute solution of chloride of lime will prevent putrescence in the bowel, and destroy the septic miasm after evacuation. Dysentery is apt to become chronic, and then there is the greatest difficulty in the treatment. As to local treatment, iodine in enemata has been recommended; also the salts of iron in combination with morphia. Careful diet should be enjoined long after symptoms have disappeared. Flannel bandaging is useful in preventing relapses, which are to be particularly guarded against as leading to organic changes.

Endemic Typhoid—Endemic Enteric Fever.

(I now give only heads of notes.)

Discrepancies of opinion as to the nature and causes of the endemic and epidemic continued fevers of this country and the Continent. Opinions differ in a threefold manner:—1. It is asserted that they are exclusively of endemic origin and spread. 2. That they are exclusively of epidemic origin and spread. 3. Fevers differing as to cause, but similar as to symptoms and course, are confounded. 4. Both epidemical and endemical coincide in a population. (This is the Professor's opinion.)

The pathological anatomy and the symptoms and course have been made the bases of a differential diagnosis. Thus, enteric or gastro-enteric fever or typhoid is distinguished from typhus by the enteric lesions, which are absent in typhus, and by the symptoms and course, viz.:—1. The difference as to the cerebral and intestinal symptoms. 2. As to the eruption. 3. As to the duration. When the fever is clearly epidemic, these distinctions suffice; but when sporadic or endemic, a difficulty arises, more especially as to the diagnosis of epidemic enteric from endemic enteric fever. In both the enteric lesions are the same, and an eruption is often wanting in the epidemic kind, while the general symptoms are alike. Hence the only sure ground of distinction is in the endemic character and the presence of endemic causes. Further difficulties are found in the fact that whenever fæcal or sewer miasm prevails, any fever will have more or less of an enteric character; as, for example, agues, remittents, or intermittents; the exanthemata (variola, rubeola), and exanthematic typhus itself, the enteric lesion being in these cases a complication. In typhus—*e.g.*, at Glasgow, according to Dr. Perry—1 in 6 of the dying had the Peyerian glands affected. The continued miasmatic fevers due to fæcal miasm may be modified by variations in composition of the endemic emanations,—*e.g.*, if malaria abounds, as may be the case in various districts where villages or farm-houses are the seat of fevers, then there is a malarious—*i.e.*, more splenic, gastric, and paroxysmal—type. This is more likely to be the case in London than in Edinburgh, the London soil being marshy and aguish. In Paris there is predominance of the fæcal type.

There are three forms of the fever:—1. The Ephemeral, ending in three or four days. 2. The Simple Continued Fever. 3. The Grave Continued Fever.

Continued Fever.—Cause, malaria or fæcal miasm.

I. Ephemeral fever, seen most usually in the young and healthy, and prevails usually in spring and early summer. Symptoms: After lassitude, headache and slight rigors; a feeling of prostration, generally increasing; aching in the loins and legs; soreness of the body generally; sensibility to cold. Appetite wanting; thirst slight; tongue moist, with a white or yellowish coat; bowels little affected; headache considerable; drowsiness; sometimes a little delirium at night. Termination in two or three days by abundant perspiration, slight diarrhœa, epistaxis; herpes about the mouth in three or four days. Treatment simple.

II. *Simple Continued Fever.*—The commencement and symptoms resemble those of ephemeral fever, but the former are more intense, especially the head symptoms, and in addition there is generally at the commencement bilious vomiting and epigastric pain; tongue red at the point; complexion of a bilious tint; skin hot, but not remarkably dry; pulse full, strong, regular, 90—100. Progress: Is marked by remissions and exacerbations. The exacerbations towards evening, and in malarious districts with a regular periodicity, running into remissions. Termination is usually, in health, in from seven to fourteen days, with profuse perspiration or bilious diarrhœa, or hæmorrhages from nose, uterus, anus (not bowels). Sometimes herpatic eruptions about the mouth. Prevalence: It occurs in autumn, after summer heats; recurs in spring, following the rule of agues and remittents. The complications are pulmonary, splenic, enteric, and cephalic inflammations. Treatment: If bilious type, gentle emetics; if remittent, quinine, sub-acid drinks. Treat diarrhœa and complications.

III. *Typhoid—Malarious and Miasmatic Continued Fever.*—The phenomena of this fever are well known, and need not be stated.

TUBAL FŒTATION.—TRUE CORPUS LUTEUM IN OVARY OF OPPOSITE SIDE.

By MICHAEL SADLER, B A. and M.D. Lond., etc.
Honorary Surgeon to the Beckett Dispensary, Barnsley.

Mrs. D., aged 22, married about two months, was seized with sudden severe abdominal pain about 8 p.m. May 25, 1865. She fainted and vomited. When seen she was pale, cold, and almost pulseless, though her voice continued clear and her mind collected until her death, at 8.30 a.m. next morning. The last menstruation was four weeks and three days before. On opening the body the lower part of the abdomen was found full of blood, which had escaped from the rupture of a distension of a portion of the left Fallopian tube near the uterus containing a distinct chorion. The embryo appeared to have escaped into the cavity of the abdomen. The uterus contained a decidua.

The most remarkable part of the case is that in the left ovary there was no corpus luteum, whilst in the right ovary there was a true and distinct corpus luteum, so that the ovum after impregnation must have crossed the fundus of the uterus, and passed into the open extremity of the left Fallopian tube.

In conclusion, I may mention that I sent the whole preparation to my friend, Dr. Priestley, Professor of Midwifery at King's College, London, and that he confirms my view of the case.

A CASE OF

MYELITIS, PRESENTING ALL THE SYMPTOMS OF SEVERE CHOREA—DEATH ON NINTH DAY—AUTOPSY.

By SAMUEL D. HINE, M.R.C.S.,
Consulting Surgeon to the Nottingham Dispensary.

Mary Ann S., aged 21 years, a plethoric, well-nourished young woman, eight months advanced in her second pregnancy, applied to me for advice on June 26, her symptoms being constant twitchings of the muscles of the arms and legs, with an evident inability to control their movements, sleeplessness, rather severe frontal pain, considerable heat of head, quick pulse, slight thirst, and some difficulty of speech and deglutition. She gave me the following history of her case:—Eight years ago, when thirteen years of age, she suffered from a severe attack of St. Vitus's dance, from which her mother in early life had also suffered more than one attack. Eleven months ago had given birth to twins, which she had not suckled, and after delivery had suffered from procident uterus, for which she had been successfully treated in the General Hospital of this town. Very soon became pregnant again, and is now eight months advanced. Ten days ago, being at that time in perfect health, she had gone on a visit to some relations about fifteen miles distant. Instead of meeting with the kind reception she expected, she was coldly received and unkindly dealt with; and from the shock she experienced at this unlooked-for treatment she attributes her present illness. Returned home five days ago, when her friends noticed her looking ill and harassed, and nervous in her manner, which had gradually increased up to the present time, and the involuntary twitchings had steadily augmented in force and frequency.

I prescribed quietude, six leeches to the temples, to be followed by cold lotions to the head, purgatives, and milk diet.

Next day, June 27, she had passed a sleepless night, and was evidently worse, excepting that she said the leeches had relieved the pain of the head. The jactitation of the limbs was more constant and more forcible, and she had considerable difficulty in standing upright, her speech was more jerky and obstructed, and swallowing more interfered with than on the day previous. I prescribed a steel mixture, and ordered two opiate draughts, each containing half a drachm of tinctura opii, one to be taken at bed-time and repeated if necessary.

28th.—The jactitation of the limbs is increased in severity, so that four strong women can scarcely keep her on the bed; she has had no sleep, or not more than for a few minutes, during which she was perfectly still. She is cheerful and perfectly sensible; says she has no pain anywhere. I inquired particularly if she felt any pain anywhere in the back, but she assured me she had none. She has bruised herself much by striking her legs and arms against the wall and bedstead. Saw her in consultation with my brother, Mr. W. C. Hine, of Swineshead. As the symptoms were so pressing, we agreed to try the effect of inducing premature labour, thinking that if delivery were effected the nervous symptoms might be mitigated. With this view, we administered chloroform by inhalation, when, upon examination, it was discovered that parturition had already commenced, and was considerably advanced, the os uteri being dilated to the size of a wineglass and the head presenting. After three hours she was delivered naturally, and the placenta followed without difficulty, with the exception of the difficulty experienced in holding the patient on the bed, so severe were the involuntary convulsive movements. After delivery no diminution took place in the jactitatory motions, and I prescribed two grains of acetate of morphia, to be given in divided doses until sleep was induced.

29th.—Has had no sleep, though she took the whole of the morphia. Her condition remains unchanged; says she has no pain at all. Prescribed full doses of chlorodyne, with the hope of producing sleep, but it took no effect, and she gradually sank exhausted and died at two o'clock on the morning of June 30.

Autopsy Seven Hours after Death.—Rigor mortis slightly marked; the arms and legs are much discoloured by bruises inflicted on herself during the convulsive paroxysms. The spinal canal was first laid open by dissecting back the integuments and muscles and sawing through the vertebral arches. There was an unusually large quantity of spinal fluid, and it appeared turbid and pinkish in colour. In the cervical region the cord and its membranes appeared natural; but from the seventh cervical to the second lumbar vertebræ there was intense redness of all the membranes, and the arachnoid appeared much thickened and of a pulpy consistency. About the middle of the dorsal region the substance of the cord was considerably softened, presenting the consistency of thin cream. On opening the cranium, the membranes of the brain appeared rather congested, and there was slight opacity of the arachnoid on the surface of the right hemisphere. The other organs of the body presented the appearance of perfect health.

Remarks.—The foregoing case appears well worth recording for several reasons. First, from the symptoms being so evidently attributable to an efficient exciting cause—namely, mental shock, the patient appearing quite confident that to this, and this alone, her condition was due. Secondly, the absence of the usual symptoms of inflammation of the cord and its membranes; no pain in the back or tenderness over the spines of the vertebræ; no spasm of the dorsal muscles or rigidity of the back; no disturbance of the heart's action nor of respiration; no sensation of a cord tied round the waist; no retention of urine or any symptom of paralysis. All the symptoms were those of violent chorea, the only difference being that the jactitations were not more marked on one side of the body than the other, the whole of the muscles appearing equally involved. Thirdly, the very clear, indubitable marks of inflammatory action in the cord and its membranes revealed by the post-mortem examination. These were of no doubtful character, leaving no room for question as to that condition constituting the sum and substance of the disease. It appears reasonable to inquire whether all fatal cases of chorea are not due to inflammation of the cord or its appendages. I am strongly inclined to think that those cases of severe chorea following rheumatic fever are of this character, instead of being, as generally supposed, due to sympathetic disturbance of the nervous system, from an impure condition of the blood consequent on the rheumatic poison. May it not be that these cases afford an instance of true metastasis from the fibrous tissues of the joints and heart's valves and membranes to the fibrous tissues of the vertebræ and coverings of the cord? If post-mortem examinations were made in all fatal cases of chorea, it would, I think, lead to an answer to this important question, bearing, as it does, so vital a relation to diagnosis and treatment.

Nottingham.

University College.—Dr. Graily Hewitt has been appointed to the offices of Professor of Midwifery in the College, and Obstetric Physician to the Hospital.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

PARTIAL DISLOCATION OF THE AXIS—RECOVERY—REMARKS.

(Under the care of Mr. HILTON.)

[Reported by Mr. FREDERICK E. MANBY.]

JOHN S., aged 21, labourer, of St. Mary's Cray, was admitted on May 26, 1865, under Mr. Hilton.

States that he has been ailing for the last three months; loss of appetite and general debility; has, however, followed his employment.

On Sunday, May 14, he was stooping down to black his boots as they were on his feet, when suddenly he "felt a snap" in the upper and back part of his neck; "he felt as if some one had struck him there." About a quarter of an hour after he became insensible and continued so about half an hour; then he felt a stiffness and numbness at the back and side of his head and the back of his neck, with a fulness in the throat and difficulty of swallowing. At first he had no loss of power over his limbs, only slight pain down the right arm; some days after admission, however, he had partial loss of power in the right arm, which shortly recovered itself.

On admission he carries his head fixed, and has pain on slightest attempt to rotate, flex, or extend the head; his jaw is partially fixed, and he cannot open his mouth wide enough to admit of a finger being passed to the back of the pharynx; his voice is thick and guttural; deglutition not attended by any great uneasiness. Complains of all the symptoms before enumerated. Externally over the spine of the second cervical vertebra there is a tumour hard and resisting, but tender on pressure; this is evidently formed by the undue prominence of the spine of the axis itself; the tenderness is not general, but circumscribed; the parts all round are numb. He was put on his back on a hard bed, his head but slightly elevated; a small sandbag was placed beneath the projecting spine, and the whole head maintained in a fixed position by larger sand-bags. He was ordered pulv. Dov., gr. v.; hydr. cu. cretâ, gr. iij., bis die. This was continued for about ten days, when his gums became affected slightly, and it was then omitted. Marked improvement has taken place in his general appearance, and more particularly in his special symptoms. He continued thus till July 3, gradually and steadily improving. He then had acute rheumatic inflammation of the right knee and elbow-joint, followed in a day or two by a similar state in the left knee-joint. There was no evidence of a pyæmic state. The joints were blistered, he has been treated with pot. nitr. and lemon-juice, and is now fast recovering. The tenderness and all the symptoms have disappeared, the projection still remaining, and he expresses himself as much relieved by the continued rest in bed.

Mr. Hilton, in remarking on this case, observed that it had been demonstrated that the area of the vertebral canal might be diminished by one-third, provided that the diminution was slowly effected, without giving rise to any alarming, or indeed marked, symptoms of compression of the cord.

KING'S COLLEGE HOSPITAL.

FIBROUS TUMOUR OF LOWER JAW DEVELOPED IN THE DENTAL CANAL — REMOVAL — RECOVERY.

(Under the care of Mr. FERGUSSON.)

[Reported by Mr. PARIS BRADSHAWE.]

ANN H., aged 30, admitted June 22, 1865, states that six or seven years ago she first noticed a hard swelling of the lower jaw-bone on the left side. Soon after its first appearance an operation was performed under chloroform, and a portion of the lower jaw removed by the saw, some teeth being extracted. A second operation of the same nature was performed soon after this, the bone being removed by an incision made from within the mouth. The swelling reappeared, however, and continued to increase slowly in size until four years ago, the increase in size having been more rapid since then. There is some history of arterial hæmorrhage from the alveolar ridge of the diseased portion of jaw. There has been slight puriform discharge into the mouth since the last operation. There has been no pain whatever, nor has there been any tenderness referred to the tumour since its appearance; nor has the swelling interfered materially with mastication or deglutition. The general health has not suffered since the tumour has been present.

On Admission.—Patient healthy looking; an oval hard tumour of the size of a goose's egg was observed extending from the symphysis of the lower jaw to the angle on the left side, the tumour being formed apparently by an enlargement of the inferior maxilla; the surface of the swelling was uniformly smooth, it also presented a uniform degree of hardness at all parts, and was moveable only with the internal maxilla. Within the mouth the whole of the alveolar ridge on the affected side was much widened, the most so midway between the symphysis and angle, and was destitute of teeth, the position of the sockets being marked by shallow conical depressions from which some thin puriform discharge seemed to escape.

July 1.—The tumour was removed under chloroform. The soft parts were divided by a straight bistoury, by an incision along the base of the jaw, commencing about the middle line in front, and terminating level with the posterior border of the ascending ramus, both extremities of the incision being curved upwards, the free margin of the lower lip not being divided. A ligature was then put upon the facial artery. After dissecting the cheek from the surface of the tumour, a small straight saw was passed through half the thickness of the jaw both in front of the tumour and above it at the angle, the bone being divided in front obliquely from above downwards and outwards, so as to leave the genoid tubercles with their muscular attachments, the tumour being grasped firmly the while in the lion forceps; by the use next of the cutting pliers in dividing the bone, the tumour was removed; a thin plate of bone which had encased it internally remaining; this was now removed after the re-application of the saw and cutting pliers—a few touches of the knife sufficed to free it from the soft parts. The bleeding vessels were ligatured, and the edges of the wound brought together by sutures.

On examination, the tumour proved to be of the fibrous variety, enclosed between the expanded and attenuated tables of the jaw, the bone being wanting at the alveolar edges, where the shallow depressions in the fibrous structure corresponded with the position of the alveoli.

The sutures from the wound were removed on July 5, and all the ligatures had come away by the 8th.

11th.—The patient can eat meat, being able to masticate her food with comparative facility. There is but little discharge into the mouth, and she suffers but little pain. Wound healing fast.

13th.—Wound completely healed.

Left the Hospital in perfect health, having had no bad symptoms whatever.

THE LONDON HOSPITAL.

CASES OF CHOREA CURED BY THE SULPHATE OF ANILINE—A COMPLICATED CASE OF CATALEPSY AND CHOREA—CLINICAL REMARKS.

(Under the care of Dr. FRASER.)

IN the *Medical Times and Gazette* of March 8, 1862, we published from Dr. Fraser's practice five cases of chorea unsuccessfully treated by the sulphate of aniline. Since then Dr. Fraser has employed this agent in the two following cases. In the first, although relief followed the ordinary treatment by purgatives and a regulated diet, two relapses occurred at short intervals. On the third admission the aniline was given with marked success, and, as the patient has not reappeared, it is fair to suppose that the recovery has been permanent. In case No. 2, the alkaline treatment was tried first, but without benefit. The complicated case of C. M., which might be put down as a case of catalepsy, shows an analogy between this disease and chorea. In remarks to his class, Dr. Fraser observed:—A great deal has been said and written about the inefficiency of drugs in cases of chorea, and that most cases may be cured by diet and hygiene alone. Now, without an attempt to weaken your belief in the use of these important agents in the treatment of this as in every other disease, I hold a very decided opinion that specific remedies have a very great deal to do with a quick recovery. I do not pronounce in favour of any one specific, and therefore give the cases at

random, all of them tending, however, to the necessity for physic as well as diet; and, in proof of my statement, I can quote one case treated by diet and purgatives for fifteen days without benefit, and ten days under the use of arsenic a cure was effected.

Another case, after three months' dieting without benefit, a cure was effected by arsenic in twenty-six days.

Another case, after eighteen days' careful dieting with no good effect, by the use of arsenic for twenty-five days a cure was effected.

All these patients had taken calomel and jalap purges.

Then the case of a young girl, aged 7, who took 178 grains of valerianate of zinc within ten days, without benefit. Arsenic was then given with no better effect. The case ultimately got well under the use of drachm doses of the old sesquioxide of iron three times a-day.

In one case the chloride of arsenic was useful, when the ordinary preparations had failed.

A case of cure, in one month, of a girl 10 years of age, under the use of the chloride of arsenic, after all the ordinary remedies had been employed for three months fruitlessly. This case was at one period imminently dangerous. The jactitations were so violent as to render the administration of nourishment most difficult. In case 3 I had occasional doubts as to the truthfulness of all the symptoms; but, in this as in all cases of shamming, there is always a certain amount of truth; the point is to make out what is true and what is false. No patient will dare to come to a Doctor without more or less of ailment, and thus it becomes a question of intentional or uncontrollable exaggeration. It is observed that headache was present in five out of the seven cases while the aniline was taken. I cannot explain the cause of this headache, and no conclusion is better than a bad one. The cause of the very peculiar mauve colour in the mucous membranes, as explained in the previous cases, arises from the aniline while circulating in the system receiving oxygen from the arterial blood.

Case 1.—Chorea Treated by Aniline.

[Reported by Mr. JOHN MACKENZIE.]

Henry M., aged 12 years, carman's son, states that his parents never suffered from rheumatism. For several years the patient has passed worms from the bowels, otherwise his health has always been good. About four years ago he became gradually affected by a twitching of his arms and legs; this was accompanied by a numbness in the extremities, the disease was more marked on the left than on the right side, the muscles of the neck and face were involved, his speech became impaired as the disease advanced; he was ill for seven months, one of which he was an in-patient in the London Hospital; he was discharged cured, and continued well, with the exception of occasional appearances of worms, until about thirteen months ago. Chorea returned, and he was again admitted into the Hospital, where he remained four weeks, and was discharged relieved; the symptoms had not quite disappeared, nor did they entirely subside, but from this time they gradually increased in severity until he was admitted for the third time into the London Hospital, under the care of Dr. Fraser, on January 20, 1863. In the first two attacks, the left side was principally affected, but now his right is chiefly involved. He has all the peculiar characters of chorea well marked, but not very severe. He is ordered the middle diet of the Hospital, and the medicinal treatment was commenced by a purge of calomel and jalap; this was to be followed by sulphate of aniline gr. v.; acid sulph. dil., ♏x.; aqua ʒj. ter die. He did not commence this medicine until the 23rd. Its effects could be observed about half an hour after he had taken it, by the mauve colour of the mucous membrane of the mouth; the nails showed this effect at the same time. The colour continued to increase for about two hours, then disappeared gradually. On the evening of the second day after taking the medicine he complained of headache with giddiness.

27th.—Still complained of headache, giddiness, and vomiting; his medicine was now omitted; next day he was well; the spasms were not so frequent, and were milder in character.

29th.—His medicine was resumed. On the evening of the 30th he complained of slight headache. Bowels regular.

31st.—Enema terebinth. was ordered, with the intention of ascertaining if the cause of the disease was owing to the presence of worms in the intestines. This operated freely; but no worms were found in the matter discharged.

February 3.—He still continues the medicine with little or no inconvenience. He is much improved since his entrance into the Hospital. There are still slight muscular spasms present.

14th.—He is almost well. The characteristic twitching of chorea can only be observed by close watching. The medicine has not the same marked effect in discolouring the mucus membrane now as it had when it was first administered; the colour is not so well marked, it is fainter. The aniline has been omitted to-day.

20th.—He continues well. There is no appearance of a relapse. He is discharged cured on February 25, 1863.

The amount of aniline taken from January 23 to February 14 is 290 grains.

Case 2.—Chorea Treated by Aniline.

[Reported by Mr. JOHN MACKENZIE.]

H. R., aged 17 years, cook, entered the London Hospital under the care of Dr. Fraser on December 17, 1862.

He states that he is not aware of any of his relatives ever having rheumatism, and he denies ever having suffered from worms. He is very partial to underdone pork.

About eight months before his entrance he was first attacked by chorea. His left side was principally affected, and he experienced a numbness in his extremities. At the end of three months he was almost well, but did not entirely recover, and gradually got worse until he was admitted into the London Hospital on December 17.

His complexion was fair, countenance pale and rather idiotic in expression. His right side was chiefly involved, and the spasms affected the upper and lower limbs. By auscultation a regurgitant mitral murmur was heard.

Treatment commenced by calomel and jalap, which was followed in a few days by potass. bicarb., ʒj., every second hour.

January 23.—The alkaline treatment not being satisfactory, it was given up, and a mixture containing aniline sulph., gr. v.; acid sulph., die, ♏xv.; aqua, ʒj., ter die, was substituted. In a few days he began to complain of headache and giddiness. Mucus membrane was coloured mauve.

29th.—Medicine omitted. Towards evening he was much better.

February 2.—The medicine was resumed. His headache returned, but not so severe as before.

17th.—Since the 2nd he has continued the medicine without any bad effects except a slight headache, which became gradually less in severity until it disappeared entirely. The mauve colour is not so marked as at first. The patient is now quite steady. No spasms can be detected. The medicine is omitted.

20th.—He continues well. No appearance of any relapse of symptoms.

25th.—Full diet of the Hospital. Inf. quassia, c., tr. ferri mur. ter die.

29th.—The patient is discharged cured.

The quantity of aniline taken 315 grains.

Case 3.—Case of Chorea, complicated with Catalepsy.

[Reported by Mr. T. G. GRAVES.]

C. M., aged 17, servant. Brought into the Hospital May 17, 1859, at 9 p.m., in a state of insensibility. Stated to have been so from 1 p.m. Was engaged in household work, and suddenly fell to the ground. Said to have struggled as if in a fit. Was raised in a sitting posture; she remained so, unless the body were inclined, and her arms being raised, they did not fall at once but gradually. Not roused by loud talking. Kept eyelids closed. Ol. tiglii, ♏j. st. mist. salin and haust. domest., milk, and beef-tea. Spoke next day, the 18th. Answers questions. Severe pain in head. Cannot remember events of previous day. Cannot remember her mistress, or her mother, or about her service, or common events. Tongue coated with white fur. Pulse quick and weak. Pulv. emetic. Headache continued more or less for first week. Second week galvanism, but soon discontinued, as affected head.

28th.—Blister to back of neck. Bark, ammon., and valerian.

30th.—Pulse 56. Memory almost entirely gone. Pupils much dilated, the right more than left.

31st.—Better. Headache diminished. Pupils less dilated. Pulse 64.

June 1.—Recognised parents, and recollection of passing events; but period from attack to present date a blank. Pupils normal. Head worse. Pulse 54.

2nd.—Much fatter; altogether improving.

11th.—A severe case of chorea having been admitted into the ward, she began to complain of severe pain in head, tossing about, ungovernable, and total relapse into former state. Counter-irritation to neck. Quinine, ether, and wine. Pulse between 50 and 60. Eyelids closed.

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16th.—Galvanism and shower-bath daily, from which time much improved.

23rd.—Hospital being whitewashed, was removed temporarily to another ward, next to a patient with hysterical vomiting. There, from force of example or not, the patient began also to vomit. Effervescing mixture, with hydrocyanic acid, cat. sinapis to stomach, blister, quinine, and valerian, mist. assafœtid. and creosote, but without much effect. After a time this ceased, and on July 9 discharged, although very weak.

July 22.—Readmitted in same condition as at first, having relapsed a few days after leaving Hospital. Same treatment resumed; shower-bath and galvanism; turpentine injections. Spoke in a few days.

August 6.—Choraic movements of upper extremities commenced. Bark, Fowler's Solution, and morphia. Night watchfulness, and sleep only by snatches.

September 15.—Blisters to neck and sulphate of zinc for a time. Fish and chop from time to time, and wine ʒiv., but mainly milk and beef-tea. The zinci sulph. continued a month.

October 26.—Head shaved; blister.

November 10.—Removed to attic, and under full doses of morphia to induce narcotism.

26th.—An hysterical fit, and on following day three hysterical fits.

30th.—One side quiescent, and the right still choraic. Blisters to successive portions of spine.

December 17.—Movements of right side still more or less uncontrolled, although much less ecstatic.

Early in January, 1860, discharged cured, and has continued well.

ST. MARY'S HOSPITAL.

TWO CASES OF QUASI-CHOLERAIC COLLAPSE—DEATH—ABSENCE OF ANY MORBID ALTERATIONS EXPLAINING THE FATAL EVENT.

(Under the care of Dr. HANDFIELD JONES.)

Case 1.—E. H., widow, aged 33, admitted July 12. She was seen shortly after she had come into the ward, and had no appearance of being seriously ill. She stated that she had suffered for six months from indigestion, brought on by worry and over-exertion. The last eight days she had been very sick, vomiting up all her food. There was very little epigastric tenderness, but pain over the lower third of sternum. Tongue coated; is very thirsty; bowels relaxed lately; urine dark-coloured; pulse very weak and small. She feels very weak; is almost ready to fall when she stands up. Has much flatulence. Catamenia regular; not anæmic. She was ordered spoon-feeding at short intervals with brandy and milk, ice to suck, and beef tea.

On 13th, as the sickness was not better, she had 5 grains of calomel and a sinapism to the epigastrium.

The next day there had been no action of the bowels, and Indian hemp was ordered, gr. ¼ quater die.

15th.—Is less sick; asks for some fish.

17th.—Not much sickness. Bowels not open. Skin cold, and pulse extremely small and weak. Apex beat of heart in right place, but first sound very weak. Feet rather cold; is lying lightly covered, complaining of having been too hot. Face looks quite rosy and well. Can't take her fish. Brandy 5oz. The sister states that she gets out of bed herself and goes to the scullery, which is near her bed, to get water.

19th.—Was yesterday apparently moribund and almost pulseless; eyes venously injected; hands cold, but quite conscious. Had vomited a large amount of dark liquid stuff. Ordered opii gr. ¼, 2 dis horis. To-day, contrary to all expectation, she is still alive, quite conscious and rational, but in the same state of utter collapse and pulselessness; hands livid and cold; their temperature 71°5, that of axilla 92°. Her face looks well, calm, with a ruddy patch on the cheeks. Has not been sick to-day, but has not been allowed to take so much liquid as previously. Will drink till she is sick if she is allowed. She was now packed in a hot wet sheet, but no good effect was produced; the fingers turned blue, and the circulation gradually ceased. Death occurred at 8 p.m. Brandy had been given freely during the last 24 hours, besides claret.

At the post-mortem the heart was found well contracted, but the left ventricle was not rigidly closed; the right contained a soft black clot, extending into the pulmonary artery, with a thin layer of pale fibrine upon its upper surface; valves healthy. Lungs quite healthy. The stomach was firmly adherent to the under surface of the liver, and was extremely constricted about its middle by a cicatrix (the result, no doubt, of a healed ulcer), which divided the cavity into two compartments, the left being rather the largest, connected by a channel which would just admit the little finger. There was no trace of recent ulceration or of hæmorrhage. The liver and spleen appeared quite normal; the gall bladder was much distended with dark bile. The kidneys were of nearly the normal size; their cortical substance was rather shrunken; their capsules adhered closely. The intestines were much congested, but there was no enlargement of the agminated or the solitary glands. No trace of peritonitis.

The fatal collapse in this case does not seem to be accounted for by the condition of the stomach, which was evidently of old date, and had not materially interfered with the general nutrition. The kidneys were probably not quite sound, but the symptoms were not such as are produced by uræmic poisoning. It seems impossible to account for the gradual failure of the circulation on the view that the strength was exhausted by the vomiting, for this was certainly by no means so frequent and distressing as it is in many cases which are in no peril. Besides, there was no appearance of ordinary syncope, no pallor of the countenance, or cold sweats. The healthy aspect of the face continued to within two days of death. The duration of the malady was far too long to admit of its being ranked as a case of ordinary choleraic affection; nevertheless, it seems to me most probable that the collapse was produced by some toxic influence acting on the nerves of the heart and arteries, similar to that of the epidemic disease. The lowering of the temperature and the intense thirst, without pyrexia, are features which have a family resemblance to those of cholera.

Case 2.—W. B., aged 60, admitted July 13. Was taken ill on the 9th with pain in his bowels, which has continued ever since. At present he is very prostrate, with cold skin, thready, scarcely perceptible pulse, coated tongue, hiccough, frequent vomiting, which he has had four days, while the bowels have been confined during the same time. The abdomen is distended, is dull in the depending part, resonant in the upper; the pain in it has diminished to-day. Opii, gr. ¼, o. horâ, ad vices iij. Brandy every quarter of an hour.

14th.—Was very sick part of previous evening; remains in same state as yesterday, except that diarrhœa has come on and is almost constant since 10 a.m.; it began at 6 a.m. Stools fluid, bilious, and offensive. Sickness has been checked by repeated doses of chloric ether. Pulse barely perceptible; tongue extremely coated; body exhales a cadaverous odour; is quite conscious, but can scarcely speak; died soon after.

At the post-mortem examination nothing whatever was found to explain the symptoms. There were some blocks of pulmonary apoplexy in the lungs, and the heart was weak, a little dilated, and its walls thin, especially those of the right ventricle; there was no valvular disease. The intestines were free from disease; the solitary glands were not enlarged.

The resemblance of this case to choleraic disorder is sufficiently apparent, and as it occurred at the same time as the one first related, there is some additional probability that both were of the same nature.

CHARING-CROSS HOSPITAL COLLEGE OF MEDICINE.—The annual distribution of the prizes took place on Thursday, July 20. The following gentlemen were the successful candidates:—*Anatomy*—Silver medal, Mr. J. K. Hyde; first certificate, Mr. J. A. Hayden; second ditto, Mr. F. Howse; third ditto, Mr. G. Airey. Bronze medal, Mr. Wm. Powell; first certificate, Mr. F. B. Besly; second ditto, Mr. A. H. Buck; third ditto, Mr. R. Bayley. *Chemistry*—Certificate, Mr. Powell. *Surgery*—Silver medal, Mr. O. W. Berry; bronze medal, Mr. Bayley; certificate and book, Mr. Robert Alcock. *Physiology*—Silver medal, Mr. F. Howse; certificates, Mr. Watkin W. Jones and Mr. S. S. White; bronze medal, Mr. A. H. Buck. *Medicine*—First certificate, Mr. S. S. White. *Materia Medica*—Silver medal, Mr. S. S. White; certificate, Mr. M. Jones. *Botany*—Silver medal, Mr. S. S. White; first certificate, Mr. M. Jones; second ditto, Mr. E. Sandwell. *Midwifery*—Silver medal, Mr. W. G. Sutcliffe; first certificate, Mr. R. Y. V. Packman; second ditto, Mr. J. L. Davies. *Forensic Medicine*—Silver medal, Mr. J. L. Davies. *Practical Chemistry*—First certificate, Mr. C. W. Calthrop; second ditto, Mr. Charles Barlow.

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Medical Times and Gazette.

SATURDAY, AUGUST 5.

THE CATTLE PLAGUE.

This serious epizootic is continuing its ravages not only in the London cowsheds and in the suburban districts, but in various distant parts of the kingdom. On Monday last a meeting of the metropolitan cowkeepers was held at the Marylebone Institute, which was attended by Professor Gamgee, of the Albert Veterinary College. In an address that he made he described the origin and symptoms of the disease. He states the period of incubation at from four to ten days. The post-mortem changes are very interesting. We had the advantage the other day of examining the small intestines of a cow dead of the disease in company with Professor Gamgee and Mr. Jeaffreson, of the London Fever Hospital. The most remarkable feature was deep reddening of the mucous membrane, and interstitial yellowish white exudation into Peyer's patches, raising them above the general surface, especially at the edges. The intestine at this part was full of a chocolate brown fluid. There was no ulceration. An opportunity was afforded of comparing the appearance of Peyer's glands with those of a young girl who had died in an early stage of typhoid fever. Nothing could be more striking than the parallelism between the two portions of small intestine, the exudation being, to all appearance, of the same character in both instances. Since then we have examined some other cows which have died with this disease. We have found besides these appearances intense redness and softening of the mucous membrane of the small intestines with hæmorrhagic spots, redness generally of the mucous membrane of the nares with patches of effused lymph and hæmorrhagic spots and abrasions of the epithelium, effusion of lymph and some reddening of the mucous membrane of the upper part of the trachea and larynx and small abrasions of epithelium. The cows are brought from the dairies sometimes with extensive subcutaneous emphysema, and almost invariably there is some about the kidneys. There can be no question that the disease is thus allied to human typhoid, differing from it in affecting the mucous membrane more generally. There is no doubt of its contagiousness. Professor Gamgee states that this may take effect mediately through other agents than cattle. He related at the meeting the history of the disease in one shed he visited in Marylebone, where on the 20th ult. there were 45 healthy cows. The owner had been to the Metropolitan Cattle Market on the 14th, and was shown some cattle labouring under the disease. He approached them within a yard or two, but feared to touch them. Within a week—viz., on Friday, the 21st—he noticed some of his animals sick, and saw they were labouring under the disease he had witnessed in the market. On Saturday he began to get rid of them, and sold 28 by Tuesday, the 25th. There can be no question whatever, from the facts detailed, by Mr. Gamgee, and what we ascertained of the first outbreak in London, that the Metropolitan Cattle Market has been the focus from which the disease first originated, and by the medium of which it has twice every week since been sown broadcast throughout the country. And yet we understand there is attached to the market an official—an inspector of cattle—whose duty it is to exclude diseased beasts. It would be an inquiry that the City authorities might prosecute with advantage, to ascertain whether this official is habitually present, as he plainly ought to be, at those early hours on market days when the beasts are driven in, and when the most important part of the business is transacted. Mr. Gamgee states that during the month of July 2000 cows have been lost to their owners in London alone. We, ourselves, know of sheds where all, or nearly all, the cows have died or been slaughtered. In Islington alone, we are told, that above 150 have been lost, yet it is remarkable on examining the record of cows brought into the neighbouring knackeries at Belle Isle, that none of them came from either Islington or St. Pancras. The inference seems to be that unless a cow is very much diseased, so as to die spontaneously, the animal is sent to be slaughtered by a butcher, and that the meat finds its way to human consumption. We have examined the carcasses of the slaughtered cows, and all that we find by which the meat may be recognised is an unusual dark colour, and somewhat unusual dryness of the muscular flesh. It has been said to decompose quickly. The knackers have told us that they have a difficulty in disposing of the boiled meat, as cats and dogs refuse to eat it. It would be important to ascertain how far the fresh meat from such diseased beasts is injurious when eaten by man. Is it so at all? We ask this question in sober earnestness, since it is on record that the cattle which followed the allied armies to Paris in 1814, and on which they and the whole population subsisted for some two months, were affected with this very disease, and that even such cattle as died of it were eaten, and this without any increase of general sickness. Still the idea is very revolting, especially to any one who has seen the bloated emphysematous carcasses before being dissected. But is not our population now, as we write, being absolutely fed in good part upon such meat? We have no doubt of it whatever.

The Government inspection is a delusion. We have inquired at sheds where the disease has broken out, and have not been able to hear of any Government inspector having paid them a visit. It was proposed at the meeting of cowkeepers to form an association with the object of co-operating to check the progress of the disease, and a provisional committee was named upon the spot.

The Vestries and District Boards who have the sanitary management of the metropolis should also lend their aid. It is important—vitally important—that young children should not—as is threatened—be deprived of milk, nor yet the labourer of the beef on which he loves to feed, and which strengthens him for his daily work. Meat is now exceptionally dear; thanks to the "lung disease" it promises to be dearer still, and this at no very distant period. Vestries can insist upon the ventilation, cleansing, and disinfection of sheds, the regular removal of dung; and they can prevent, to some extent, all improper use of the carcasses of the diseased animals. But if anything is to be done, they must set to work at once.

MODERN CHEMICAL SCIENCE.

The system of chemistry long taught with such comparative success in our schools is now being rapidly superseded by that which is known as the "unitary" system of Gerhardt; and with as much certainty as the Linnæan system has been superseded by the "natural" system in the classification of plants. The old system has become, with the progress and development of the science, an artificial one—that is, a system in which certain facts hold place as its foundation to the exclu-

sion of a very large number of others. Consequently, interpretations have been given to chemical phenomena which are plainly inconsistent with many facts bearing on them. And as each unconformable fact has come to light it has been treated as exceptional, and as therefore to be ignored in teaching this system of chemistry. Even crude hypotheses put forth at a time when actual knowledge of facts was very deficient have been obstinately adhered to in preference to the evident indications of facts since discovered.

The system of planetary motions in circles upon circles was based not so much upon the fact that the orbits of the planets are nearly circular, as upon the fancy that motion in Nature *ought* to be circular, because the circle is the most perfect figure. Now, in like manner in chemistry has the fanciful assumption been obstinately adhered to in spite of facts, that bodies combine together most readily in equal numbers of atoms. For example, notwithstanding very many facts indicating otherwise, water has been held to result from the union of one chemical atom of hydrogen with one atom of oxygen, not because any facts are in favour of this view, but because it was determined to be inconsistent with natural propriety that such a stable, such an important, and such a familiar body should result from a union of any other than *one* atom of either component with *one* atom of the other. In some cases, however, the nonconforming facts proved too stubborn to be disregarded, and the well-known and well-conditioned body, ammonia, was permitted to trace its origin to the union of *three* atoms of hydrogen with *each atom* of nitrogen. This forced toleration was a virtual yielding of the principle that atoms *ought to pair off*, but this was ignored. In the same way have many other hypotheses been held with dogged determination long after facts had shown them to be false. Common salt consisted of muriatic acid and soda; Rochelle salt of tartaric acid, soda, and potassa; stearine of glycerine and stearic acid; although these assertions were one after another shown to be positively untrue.

All these inconsistencies and scientific fictions are due to the attempt to make facts conform to a system. The characteristic of the endeavours of modern chemical philosophers is the attempt to work out a system conformable with facts. To choose between the old and the new chemical philosophy is not to choose between two more or less plausible theories, but between a system which ignores facts and one which respects them.

So intimately, however, have hypotheses become associated with facts, that many, we believe, do not perceive the unsatisfactory nature of the old system of chemistry. We purpose, therefore, inserting a few articles, so far as space permits, on some of the principles of the new system, developing them in a simple manner from facts, and showing the incorrectness of the hypotheses on which the principles of the old one are based. For the present we shall content ourselves with a very brief notice of some of the more valuable works, written according to the new system, which have been accumulating about us.

Of Dr. Odling's "Manual,"(a) we are glad to speak with the greatest praise, and have much regret in thinking that this work is apparently destined to remain incomplete. But it has the fault of being much too difficult (particularly in its first twenty or more pages) for any one not already familiar with the elements of the science.

The last edition of Professor Miller's "Elements,"(b) also as yet incomplete, is a work of exceeding value to the student, bearing, however, too much evidence of its having been in previous editions a work in conformity with the old system of chemistry.

To those who are already familiar with chemistry according to the old system, and are desirous of studying it in the new, Professor Galloway's "Second Step"(c) must prove a most valuable work. We are sorry, however, to find this writer holding—as expressed in the preface to the last edition of his very excellent treatise on "Qualitative Analysis"(d)—that the student should proceed through the old system to the new,—that is, should learn error in order to acquire truth at its expense.

In Watts' "Dictionary of Chemistry,"(e) still in course of publication, the reader will find a vast store of valuable matter, theoretical and practical, which this writer's extensive acquaintance with chemical literature so well enables him to give us.

(a) A Manual of Chemistry. By W. Odling, M.B., F.R.S. Part I. Longmans.

(b) Elements of Chemistry. By W. A. Miller, M.D. Parts I. and II. Third Edition. 1863-4. Longmans.

(c) Second Step in Chemistry. By R. Galloway, F.C.S. 1864. John Churchill and Sons.

(d) A Manual of Qualitative Analysis. By R. Galloway, F.C.S. 1864. Fourth Edition. John Churchill and Sons.

(e) A Dictionary of Chemistry. By Henry Watts, A.B. Parts I. to xviii. 1863-5. Longmans.

ROUGH NOTES ON SYPHILIS.—No. IV.

MODIFICATIONS IN THE CHARACTER OF VENEREAL SORES BY THE TISSUES ON WHICH THEY ARE SEATED.

INDURATION of the chancre is *neither invariable nor essential* to the infecting process, and we have seen cases wherein no induration was present in the primary sore, and yet secondaries followed. Induration is, however, a very common and valuable anatomical character, and when it is well defined and persistent,(f) even if it be a narrow rim, its positive evidence is most valuable; but the negative evidence from the absence of induration is not of reliable character on which to assure the patient that secondaries will not follow. While the fossa glandis and inside of the prepuce are very common seats of induration, sores upon the glans and external integument of the penis are often soft, pus-discharging, and inflamed. Induration is extremely rare upon the glans penis. Sometimes, however, a chancre at this part assumes the form of an irregularly raised thickening, looking as if deposited upon the glans.

Chancres on the external aspect (dorsum) of the penis are, we think, more commonly infecting than chancres elsewhere—*i.e.*, in a given and indiscriminate number of cases there will be a far larger proportion followed by "secondaries" than after venereal ulcers seated elsewhere.

The characters of the primary lesions at this part are, too, more frequently modified and less pronounced. They are subject to irritation, inflammation, and suppuration from their more exposed seat.

We have observed secondary infection after—

1. Erosions or superficial ulcers, which heal and leave oval, raised, flattened, and somewhat indurated elevations, like flat condylomata or papules. When raised between the finger and thumb, these feel like a piece of cloth or leather set in the skin.

2. A superficial indolent erosion without appreciable induration (or with this symptom of such slight degree and short duration as to have escaped detection), and with little or no suppuration, but showing a tendency to spread by a chronic ulceration at the edges.

3. The same, with a well-defined, strictly limited, and very narrow rim of induration, to be felt like a little knot or oat-shaped line—a millet seed—in the cicatrix.

4. Sores appearing like miniature boils or spots of ecthyma, sometimes covered with a thin adherent scab, discharging pus, indolent, with raised and prominent edges.

When these sores heal they may leave little, if any induration, but a peculiarly dull-reddish or dark brown discolouration appears at the seat of the cicatrix, which after a time (8—12 months) becomes whiter in tint than the surrounding skin. Faint and minute radiated lines and depressions generally remain also, marking a stellate form of cicatrix.

(f) By this we mean that the induration is of firm consistence, of compact close texture; that it has been observed over one week say, and that there is no source of irritation present to inflame or influence the natural course of the ulcer.

Sometimes a lymphatic vessel along the dorsum of the penis assumes a knotted cord-like condition from induration, without any affection of the skin, and this affection of the lymphatics may take the part of the usual enlargement of the inguinal glands.

Of course, the soft suppurating local sore may have its seat on this part, but our experience has taught us to give a very guarded prognosis.

We think that it is impossible to disbelieve the occurrence of rare cases in which the virus enters through a crack or insignificant wound, which has either escaped notice altogether or healed up almost immediately, and the induration which should have appeared there becomes located in the nearest lymphatic gland instead.

THE WEEK.

THE SURGEONCY-IN-CHIEF TO THE METROPOLITAN POLICE.

We are happy to announce that Mr. Timothy Holmes, Assistant-Surgeon to St. George's Hospital, and editor of the well-known System of Surgery, has been appointed to the office of Surgeon-in-Chief to the metropolitan police, vacant by the resignation of Sir John Fisher. We are informed the salary is eight hundred a-year.

THE ALLEGED CASE OF POISONING AT ASHBURTON.

This case, which has been noticed in a previous number, was tried at Exeter on August 1. We are happy to say that the investigation terminated in a clear verdict of acquittal of Mr. Sprague. The evidence proved that the pie alleged to have been poisoned had been made from beef which had been cooked five days before, and which, when it was first cooked, was pronounced by persons who smelt and tasted it to be bad. Mr. Sprague, the accused, was away from home when the pie was made, when the pie was cut, when the pie was eaten. It appears from the report we have seen that there was no satisfactory proof that poison, other than the unwholesome meat, was ever put in the pie. We observe that Mr. Herapath deposed to having produced dilatation of the pupil with some of the gravy of the pie; but we attach very little importance to such a physiological test. What that gentleman meant by saying that "cooked meat did not putrefy—it decomposed," we are curious to know. What is the difference in the toxicological action of decomposed and putrefied meat? We know that they smell marvellously alike. The persons who were made ill by the pie scouted the idea of Mr. Sprague having poisoned them. They said that they had nothing whatever to do with the prosecution. We are very happy to state that throughout the whole investigation not a jot of evidence was produced which could inculpate Mr. Sprague.

THE JOURNALS.

The May number of the *Dublin Quarterly Journal* contains a paper by Dr. Jas. F. Duncan upon the Use of Dilute Hydrochloric Acid in Chronic Gout. The theory on which he prescribes this in preference to alkalies is that, while the latter simply act by promoting the elimination of lithic acid, the hydrochloric acid, by assisting digestion, tends to counteract the influence of a cause which stands earlier in that series of morbid conditions which lead at length to the full development of the disease. He narrates three cases (one being gouty bronchitis) in which this treatment was advantageously pursued. The first was a man on whom the ordinary remedies had had no beneficial effect, but who recovered rapidly under the use of mxv. of dilute hydrochloric acid, with cardamoms and cascarilla, every three hours. In the third case of an acute exacerbation in chronic gout, colchicum was also prescribed at first, but after the first bottleful of the medicine merely a weak solution of the acid was prescribed.

Dr. Draper has a paper in the April number of the *New York Medical Journal* upon the Reduction of Arsenic from the Sulphide. In the course of his observations he calls the attention of Physicians to the fact that arsenic is occasionally present in considerable quantities in some varieties of flour and in many vegetables used as food. We quote his remarks:—

"During the past ten years a class of manures known as the superphosphate have come into very general use among farmers in Europe and in this country. These superphosphates are prepared by the action of sulphuric acid on common phosphate of lime, sulphate of lime and superphosphate of lime being formed. The sulphuric acid employed is made, to a great extent, from various classes of pyrites, which often contain arsenic in large quantities, so that arsenic usually exists in commercial sulphuric acid, and, consequently, in the superphosphates. Plants grown in soil manured by such arsenical superphosphates also contain arsenic, as has been shown by analyses; and the man who subsists on such plants, grain, or vegetables is, of course, introducing day by day small quantities of arsenic into his system, and we must be prepared to find it in the tissues of such an individual. From the above it is evident that the discovery of arsenic in the muscular, osseous, and such tissues cannot prove a murder; and the only case in which the discovery of arsenic can, without doubt, prove a murder independently of other evidence is, when it is found in the stomach, intestines, and, perhaps, in the viscera immediately connected with the digestive apparatus, and does not naturally pre-exist in the flour and other articles of diet before they have been prepared as food."

FROM ABROAD.—REPORT ON THE MOSCOW FOUNDLING INSTITUTION—RAW MEAT AND ALCOHOL IN PHTHISIS.

Dr. Blumenthal has just published his report on the Moscow Foundling Establishment for the last three years, 1862—64. From this we learn that there were admitted during this period 35,387 children, 17,446 of the number being boys and 17,941 girls. There were, therefore, 1028 girls to 1000 boys, which is a proportion in complete contradiction with that observed among the general births in Russia, according to which the number of boys exceeds that of girls at the rate of about 48 per 1000. The deaths during the three years amounted to 10,008—viz., 5278 boys and 4370 girls; those of the boys still exceeding those of the girls by 11 per 1000, notwithstanding the smaller number of boys admitted. Of these deaths 521 occurred within the first twenty-four hours, the children having been brought in in a dying state. The rate of mortality for the three years united was 28·28 per cent., being 30·78 in 1862, 27·38 in 1863, and 26·60 in 1864. Of this general mortality of 28·28 per cent., 9·87 per cent. occurred within the first fortnight and 8·09 during the second and third week. The absolute mortality—*i.e.*, the proportion of deaths at given ages compared with the living of the same ages—was found to be 11·74 for infants a fortnight old, 9·86 for those 4 weeks old, 6·85 for 2 months old children, 4·25 for 3 months old, and 1·35 at 4 months of age. The great overcrowding of the establishment has somewhat diminished, partly owing to the better condition of the peasantry, still it seldom has less than 1000 children within its walls, the minimum number during the three years having fallen to 798, the maximum rising to 1386, the mean number for the three years being 1091. Not more than 650 children can be commodiously provided for. During the three years triplets were twice admitted, and there were 501 twin children—*i.e.*, 1 in 68·62—156 being males, 175 females, and 170 mixed pairs.

The supplying so large a number of children with suitable wet nurses is a difficult matter, especially when so much care is taken in their selection that of 57,206 who applied during the three years, only 34,299 were admitted as suitable, being, therefore, 1088 less than required for each child to have its nurse. During the three years, in fact, there was a deficiency of nurses in twenty-two months and an excess of supply only in fourteen. Deficient supply of milk, their wretched condition on admission, and the overcrowded state of the establishment, engender so much disease that during the three years there were treated 21,851 children in the Infirmary (including 470

already there), of which number 9487 died. During the three years, however, an epidemic of variola and its congeners prevailed at times, furnishing 522 cases of disease. Of the 28,950 foundlings who were vaccinated, as many as 709 resisted the influence of the lymph, although its introduction was repeated four times. The reporter complains, in conclusion, that the advantages of the Institution are excessively abused by being taken advantage of by married people to get rid of the expense of bringing up their children, there having been admitted during the three years 17,489 unbaptised, and 17,898 baptised infants, the former only representing the offspring of the strictly necessitous mothers.

In a subsequent note, which Professor Fuster, of Montpellier, has recently communicated to the Académie des Sciences, he specifies some of the conditions which must be observed in the employment of his plan of treating phthisis by raw meat and alcohol, to which we recently (July 12) adverted. He says that additional experience, now extending to several hundred cases, only confirms his former statement of the value of the means. This renders it the more necessary for him to specify some particulars. 1. In the advanced stages of the disease there always exists well-marked "gastricity," as indicated by disgust at food, oppression, diarrhœa, repugnance for all remedies, etc. This condition must be removed before any amendment can be obtained; and for this purpose an ipecac. emetic is the best of means. After its operation the taste for the raw meat and alcohol, as well as for a substantial regimen, returns. Whenever this gastric condition recurs the meat and alcohol must be suspended, and the emetic again taken, and that even when moderate hæmoptysis is present. 2. When the heats, irritability, and consecutive sweating of hectic fever are very intense, and persist for two or three days after the treatment, the entire surface of the body should be sponged with weak vinegared water, of the same temperature as the apartment. The sponging should be finished in thirty seconds, and, the skin having been superficially dried with fine linen, the operation should be performed once or twice more, well sheltered from currents of air. 3. When the patient is tolerably fleshy, and especially if he be the subject of any humoral dyscrasis, as scrofula, herpetism, syphilis, etc., the efficacy of the remedy is aided by the establishment, by means of the Vienna paste, of an issue as near as possible to the local lesion, and the keeping this open. 4. The sleeplessness and persisting irritability of patients yield much better to belladonna than to opium. The ordinary dose must not exceed five centigrammes of the extract in the twenty-four hours; and the use of this must be interrupted for a day or two if the pupil become dilated or there is any confusion of the intellect. 5. Fixed or fugitive pains of the chest and abdomen may be usually relieved by a mustard poultice or flying blister. 6. M. Fuster has found it of advantage to add to the alcoholic mixture twenty-two grains of the iodide of potassium in the not uncommon cases in which the consumption has seemed to originate in, or become complicated with, a scrofulous or syphilitic affection. It may be slowly and progressively increased to from 45 to 60 grains per diem. 7. In the advanced stages of the disease all other medicines must be absolutely suppressed, such as cod-liver oil, milk diet, etc., which are more likely to precipitate prostration than increase the strength. 8. It is always to be borne in mind that the raw meat and alcohol treatment is always long and very troublesome; but the above, together with modifications of the doses of the meat and alcohol and intervals of administration, are the principal conditions, most likely to secure the efficacy of his mode of procedure.

Ovariotomy in France.—At the last meeting of the Académie de Médécine, M. Pean presented a lady upon whom he had operated for ovariotomy eight months previously. This, it is supposed, constitutes the first instance of success attained in Paris.

THE

THIRTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(*From our Special Correspondent.*)

Leamington, Tuesday Evening.

So far as appearances go, no meeting of the Medical Parliament of Great Britain promises to pass off more successfully than the present. The town of Leamington is so centrally situated that Practitioners from all parts of the kingdom can run into it in a few hours, and the town is so beautiful that when a man is once in it he is in no hurry to get out of it again. Indeed, it strikes me that the Medicals here have shown not a little courage in inviting such a host of rampaging Doctors to the place. If the rampagers were all to set up on their own account, and refuse to leave the town till death them did part? Nobody seems for a moment to dread this catastrophe, however, and so all progresses as merry as a marriage bell. In the streets of the town all this afternoon the wandering Æsculapians have been meeting each other, and rushing across from kerb to kerb to shake hands. They are one and all very free and easy in attire, so much so that I have noticed two hats after the cut of the renowned Charles the First previous to the loss of the head that wore a hat, three of the true Cromwellian right royal brimmed type, and one, at least, the *fac-simile* of the beaver which Hamlet's father wore "up" on the memorable night when he intruded on Mr. Horatio—I forget the rest of the gentleman's name—at Elsinore. But turning from hats to faces, my conscience! how time changes faces! I remember when the British Medical Association was the neatest shaved body in the three kingdoms, and on the second day of the meeting, when a barber, seeing with a business eye what was most wanted, put two special advertisements in the local paper, commending himself as A No. 1 and B No. 2 in a single combination, and although his reasoning was not logical, I believe it paid. But now how changed:

> "Where once the razor briskly flew,
> And not a chin a hair could shew,
> Grow beards of every cut and strength,
> From stubble down to any length."

The alteration of beards is a sufficient change, but there is one thing that changes the man the more, and that is—*age*. How the members of this Association grow more solemn and weighty year by year is almost painful, and I regret to observe another fact—viz., that for the last two or three years very, very few young ones have been added to the old. This at first sight looks unfavourable to the future of the Association, but I doubt not that if it obtains a charter of incorporation and shows a lively interest in the welfare of the Profession at large the infusion of new blood will follow surely. Meanwhile it cannot be but well to ask the juniors of the Profession to consider the influence of this great body of Medical men, and to see if they cannot discover in the Association a sphere for much active and useful work.

To come to the business of the meeting: at noon to-day the directors of the Medical Provident Fund held a sitting, revised its report, and elected several contributing members. Afterwards there was a sitting of the Committee of Council, and later still the General Council met and passed the report of Council to be read to the Association. At 5 p.m. the Committee for the reception and arrangement of papers conducted business.

The first general meeting of the Association was held at 8 p.m. in the large room of the College. There was a full meeting of members. The chair was taken by the President, Dr. Paget, who in a few choice sentences referred to the work of the past year, thanked the members for the honour that had been conferred on him, and resigned his chair to Dr. Jeaffreson, of Leamington, the President elect, who delivered the following address:—

THE PRESIDENT'S ADDRESS.

By Samuel J. Jeaffreson, M.D. Cantab., F.R.C.P. Lond.
Physician to the Leamington and Warneford Hospital.

Gentlemen of the British Medical Association,—Much as I might have felt tempted to select some wider and

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more philosophical subject for my address, I cannot but feel bound, in consideration for the place in which accident has placed my lot for some twenty years, to crave your indulgence whilst I say a few words on mineral waters and spas in general, and on Leamington in particular. Such a subject is not without precedent, as the *Transactions* of our Society in olden times give frequent proof. I trust it may not prove entirely without interest, and I feel assured, could I treat it as I fain would, not without its advantages. In these days, when improved chemical research, the rapid progress of microscopical investigation, the application of statistics, etc., have given a boundless impulse to the study of what may be called the philosophy of disease—namely, its diagnosis, pathology, and morbid anatomy—therapeutics, or the application of these and other studies to its cure, have been too much neglected.

My subject is almost exclusively therapeutic, and dealing, moreover, with a class of remedies of which the Profession ought to know more; especially as the public too often take upon themselves to select between various watering-places, when a choice so important for good or for evil should rest with their Medical advisers. When I say that the Profession ought to know more on this subject than they do, let me not be thought presumptuous enough to suppose that there are not many who know far more than I do, or that in the limits of this address I can tell very much to those less informed than myself; but it will be my endeavour to lay down a few general principles, rather as a chart for the exploration of this study than as a history of the subject itself.

Those palpable distinctions of temperature, taste, etc., which separate mineral from other springs must have attracted the observation of mankind from the earliest prehistoric periods, and have probably suggested the application of them to disease. As Medicine gradually grew up into a science and an art, its professors would naturally inquire into the uses and abuses of this pre-existent application of mineral waters to the treatment of disease; and accordingly we find Hippocrates, more than two thousand years ago, endeavouring to classify mineral springs, condemning the use of some, and advising the greatest caution in the use of others. Herodotus (on the authority of Oribasius) wrote a treatise on mineral waters, which is unfortunately lost.

Most authorities agree that the Greeks were the first to use mineral waters as remedies. The oldest Greek Physicians, says Dr. Althaus, had great faith in the curative powers of mineral springs; and when temples were erected to the god of Medicine, the priests of Æsculapius took care that these should be in close proximity to mineral springs. Places of this description were not only destined for worship, but for the cure of the sick. They were connected with Medical Schools and Hospitals, and with theatres and other places of amusement for convalescents, many of which might have rivalled the contrivances existing for such purposes in a time which continually boasts of its civilisation. Here we have in outline an interesting approach to our modern spas, and also perceive the connexion of early Medicine with a pagan priesthood, to which a parallel was subsequently furnished in the early days of our own epoch, when the religious houses and religious teachers, being the sole depositories of all forms of learning, were in reality the Physicians of the body as well as of the soul. The Royal College of Physicians of London, the oldest chartered purely Medical institution of this country, was obliged to make some concessions to the Church; and even to this day the Archbishop of Canterbury, the primate of our Church, is privileged to confer the dignity and rights of a Physician on a certain number of persons annually. Many curious facts might be quoted, showing the systematic practical application of these springs, side by side with the most fabulous and mystic views entertained with respect to their origin and virtues. Thus, within the sacred grove of Æsculapius, near Nauplia, a great resort of invalids from all quarters, and the birthplace of Æsculapius, stood, according to Pausanias, a number of columns, upon which were inscribed the names of those who had there been cured, as well as the nature of their maladies. Springs were in vogue which turned sheep black, and others which made them white again; that rendered stupid folk clever, and clever folk stupid; that excited and annihilated sexual powers; that created insanity; and, finally, in Bœotia were the famous springs of Lethe and Mnemosyne, of which the one gave oblivion and the other memory. Many Greek thermal springs were dedicated to Hercules, and their heat and roborant effects were attributed to his having bathed in them. These mythical stories and attributes of mineral waters, Dr. Althaus rightly conjectures, may have rather disgusted some of the more scientific Physicians of the time, and turned them somewhat from the recognition of their real therapeutic value. Dr. Thomas Thomson, in a valuable article in the "Cyclopœdia of Practical Medicine," observes on these ancient spas, that, part of their scheme being the introduction of priests and a ritual which was observed in making use of the waters, the priests had address enough to persuade their votaries that the various cures produced by the waters were the result, not of their medicinal properties, but of the immediate action of the divinity under whose protection they were. This circumstance occasioned an immediate desertion of mineral waters as soon as the inhabitants of the Roman empire became Christians, the use of them being considered as a kind of acknowledgment of the power and authority of the heathen divinities. May not this fact account for the entire absence of any notice of mineral waters in the Old Testament? The utter abhorrence of the Jews for every form of polytheism would have rendered them peculiarly adverse to any Medical treatment in the slightest degree connected with the pagan divinities.

This opprobrium hung over the use of mineral waters, more or less, until the ninth century, when the Emperor Charlemagne, together with his family, experienced so much benefit from the waters of Aix-la-Chapelle, that the subject was again taken up by the German and French Physicians. The death of this great prince, and the subsequent division of his vast empire, again plunged the south of Europe into ignorance and barbarism. The term of Akemanceaster (city of afflicted men) applied to Bath, leads us to suppose that as early as the Saxon period Bath was a health resort of English invalids, although it did not come into high repute until the period of Charles the Second.

Towards the end of the fifteenth century, mineral waters began to recover their ancient celebrity, and attracted the attention of some of the most eminent Medical Practitioners of those days. Thus, in 1498, Savonarola, of Padua, wrote on the thermal springs of Italy; in 1596, Baccias, also an Italian Physician, wrote on the hot springs of France; in 1592, Dr. Jones wrote on the virtues of Buxton waters; in 1669, Simpson on the chemical anatomy of Scarborough and other spas in Yorkshire. The first attempt to describe the mineral waters in general was that of Allen, in 1711. To him succeeded Drs. Shaw and Short, and Dr. Rutty, in 1757. The early attempts of Duclos and of the French Academy in 1670-71 to analyse the various mineral springs of France, would form a curious exemplar of the chemical scientific knowledge of that period.

Enough has now been said to show the great antiquity of the cure by mineral springs, and even in the most remote periods their use has risen and fallen in public and Professional estimation, according to the circumstances and caprices of the age. It has moreover been seen, and when speaking of the subject of baths we shall again refer to the fact, that not only were mineral waters used by the ancients, but that spas, or places of resort, were established for their use; and here it is proper to insist upon the broad distinction between mineral waters and a spa. The former is the bounteous gift of nature; the latter is the production of human skill and art, and no small amount of labour and outlay does it imply. First, the waters themselves must be guarded with the most jealous care and protection, and every facility must be created for their application, whether as internal or external remedies, or as both. Next, suitable accommodation will be required for the invalids and their friends who may visit the spa. Thus, then, the spa becomes, in the language of Dr. Spencer Thomson, a health resort, not only for those who desire to restore lost health, but for their friends and others who, being well, desire to retain it. It is necessary that no expense should be spared in the sanitary arrangements of the spa. Last, though perhaps not least, it is requisite that the patients should, as far as possible, be surrounded by all those media which, whether acting through the mind or through the body, most conduce to the comfort, tranquillity, and healthy occupation of both.

We will now attempt a brief sketch of the practical application of mineral waters to the treatment of disease.

The only classification of mineral waters adopted by systematic writers is that which is founded on some salient points of difference in the waters themselves, such as thermal, cold, saline, etc. Without condemning or wishing to disturb this system, it strikes me that, looking at them from another point of view, mineral waters might be also classed in accordance with their physical effects, a plan which may serve to fix the attention of the Profession to their remedial value, and to

the selection of those adapted to special cases. I would suggest the following:—

1. Diluents.
2. Evacuants, whether acting chiefly on the stomach as emetics, on the bowels as purgatives, on the kidney as diuretic, or on the skin as diaphoretic.
3. Tonics.
4. Deobstruents and alteratives.

It may be stated, as an objection to this plan, that most mineral waters possess the qualities of more than one such class; but this is an objection common to most artificial classifications, especially those of therapeutic agents, many of which will be included in a variety of classes, according to their dose and the circumstances of their administration. It is obvious that all waters belong to the first class, that of diluents, whether mineral or not, and that those are the most simply and completely diluents which contain the smallest amount of foreign matter. Thus, the waters of Malvern would stand pre-eminent in this class. So wide, however, is this field of observation, that a book might be written on the uses and abuses of diluents.

The second class—evacuants—is a very large one. The most obvious evacuant effect of mineral waters is upon the alimentary canal, and in this respect, perhaps, sea water as an emetic, and the waters of Epsom as a purgative, stand foremost. Next to these, most saline and sulphurous springs. It is doubtful whether any natural mineral waters are simply diuretic or diaphoretic, or, by the same rule, whether they simply purgative. The *modus operandi* of many of these, like that of most remedies, may be considerably varied by circumstances, over which the intelligent Practitioner will be called upon to exercise a judicious control. Amongst these controlling influences, apart from the idiosyncrasy of the patient, the most obvious are—the quantity taken, the manner of taking, the period of taking, the temperature, and the conduct of the patient after drinking.

Of the third class, it may be asserted that all remedies are more or less tonic which, by removing or diminishing diseased action, give increased tone and vigour to the system; but in the stricter sense of the word it can only be applied to those which produce such effects directly, and not indirectly. Amongst such agents, the chalybeate mineral waters occupy the most prominent place. Recent researches have detected the presence of arsenic in very small quantities in many chalybeate and some other mineral waters—a tonic of no mean importance; and there can be little doubt that in the course of time other ingredients will be found in some of the waters in use or yet to be discovered.

The fourth class—that of deobstruents and alteratives—though the most complex, is, to my mind, the most important; complex because it embraces, more or less, all the other classes. All diluents are, to a certain extent, alteratives; and evacuants which remove certain fluids and solids from the system are largely deobstruent and alterative; whilst tonics, too, may be fairly classed as alteratives, and often as deobstruents. Whilst, therefore, almost all mineral waters and all remedies may be considered alterative or deobstruent, it is just in the ratio in which they possess the least amount of those more obvious powers of evacuants and tonics that they come most strictly under this fourth class.

It is just these qualities of mineral waters that constitute their speciality in a most marked degree, and which are least imitable by art. The rougher and more obvious action of mineral waters as evacuants or tonics admits of far easier imitation than these alterative effects. This point is admirably illustrated in the case of Epsom, so greatly celebrated for its races, yet now scarcely known as a spa; although, in the designation of Epsom, it has given a name, known to the whole civilised world, to that valuable salt, sulphate of magnesia, now chiefly procured from dolomite or the waters of the ocean. The remarks above made on the various action of mineral waters, according to their mode of administration, especially apply to this order. Different waters in this class, closely allied by their more chemical contents, or even the same waters, differently handled, will often be found to have widely varying effects on the system. Nor need this excite our surprise more than those every-day facts we observe in the use of other remedies—calomel, opium, colchicum, and a host of other drugs, produce entirely different effects in accordance with their dose and circumstances of administration. In the use of stimulants, tonics, etc., we are often puzzled, amongst substances chemically closely allied, to select the one which will suit the case or the idiosyncrasy of the patient.

The diluent action of nearly all mineral waters must materially influence their other sensible qualities, and none more so, perhaps, than those which belong to the alterative and deobstruent order; whilst the state of the solution of their mineral contents must, according to the laws of endosmose and exosmose, exercise most important influences in relation to their absorption, permeation of tissues, metamorphosis, and excretion. Hence, perhaps, it occurs that the waters most in public favour are by no means necessarily the most rich.

That the quantitative analysis of mineral waters is a difficult and delicate task is shown by the variety of results often arrived at by different analysts; whilst this great difficulty meets the qualitative analyst, that, having no exact clue as to what he is to seek for, he is liable to overlook some of its ingredients. As to the synthesis of mineral waters, Messrs. Chatin, Poggiale, and Lefort, who constituted a commission appointed by the Société de Pharmacie of Paris, frankly admit that, in the present state of our knowledge, the exact imitation of a natural water is not possible.

It is obvious, therefore, from many circumstances, that a mineral water, whatever it may be (and especially if belonging to the latter class) cannot be regarded, in a therapeutic point of view, as identical with an ordinary prescription. To the distinctions already laid down must be added others not less important. First, their use generally implies change of air and scene—no trivial agent in the treatment of disease. Then those of the home habits prejudicial to the patient's recovery are easier thrown off and changed, and the Doctor's hands are strengthened. Early rising and retirement to rest, and regular exercise, with all which domestic duties interfere at home, may be better enforced. To the latter the patient is often tempted by the mere novelty of the situation and surrounding scenery and circumstances. Much anxiety and care is left behind, as are all the toils of business and of pleasure (for pleasure, too, has its toils). The patient is resolved to make the restoration of his health his only business—a resolution how often urgently, but vainly enforced upon him by his friends and Medical attendant. He starts from home determined to get well; and his determination is half the battle. What profound pathological and therapeutic truths are contained in these few words no one knows better than myself; and, long before circumstances placed my lot in a spa, I have received the grateful thanks of many whom I have almost driven from the desk, the bank, the counting-house, the shop, the pulpit, and dearest of all, their homes, to seek in change of air and scene, and the use of mineral waters, that which they had vainly sought for at home, but which they have happily brought back with them—renewed vigour, energy, and health.

With regard to thermal springs, a theory has been set up that their heat differs in sensible qualities as well as in its physical effects from artificial heat communicated by our ordinary processes of warming. During a tour amongst the German baths some years ago, I made several experiments to test this statement, which I believe, in common with Dr. Althaus and others, to be a mere fiction. Whether any occult differences of physical action exist between them, I will not pretend to say, but should feel equally sceptical on this point. One very important fact in connection with thermal baths is the general equable warmth of all parts of the building, resulting from the warmth of the water,—a condition that has been carefully imitated in our pump-rooms.

It has been asserted that the mineral waters of our own country have been losing favour in popular esteem. I am not aware that such a statement admits of statistical proof, but am inclined to think it not without some foundation. Endless theories have been set up to account for this state of things, which, like the parenthetical remarks of Sir Walter Scott's old lady, are "no way material to the story." One source of this change lies in the fact that during the French Revolution, and the succession of wars that came out of it, the English, ever fond of foreign travel and research, were pent up at home, and on the removal of this restriction a great rush was made to the Continent in search of pleasure, excitement, novelty, change, and also of health. This movement was facilitated by the rapid development of steam-travelling by land and water, and encouraged by the comparative cheapness in those days of Continental living. Another theory, not, perhaps, without foundation, is the rapid rise of many of our spas to large, fashionable, and populous cities; and it is to be feared that not only the Profession, but the governing bodies, have too often neglected the springs,—the real "*fons et origo*" of their greatness and success. This is a great mistake for all

parties, for nothing can be more advantageous for a spa than a large house accommodation, varied in size, locality, aspect, etc. But Dr. Granville, of whose labours and writings on the subject of mineral waters I cannot, in the main, speak too highly, and who, by the way, has most dwelt upon the decadence of popularity of the English spas, has largely contributed to fulfil his own assertions. In his "Spas of Germany," published antecedently to his "English Spas," he gives the following extraordinary advice:—"Haste away, and make the trial" (of German spas) "by any means. Do not waste your life and your purse in swallowing endless drugs, and ringing the change of remedies and Doctors, pent up in a hot house in London during the summer months, or in being lifted in and out of the carriage, the prey of some chronic and insidious disorder, which baffles your vigilant Physician's skill; or in being sent from Brighton to Tunbridge, and from thence to Leamington or Cheltenham, merely to return again to Brighton or London exactly as you left it, having in the meantime tried as many Doctors as places, and as many new places and new remedies as Doctors, to no purpose. Fly, I say, from all these evils; proceed to some spring of health, and commit yourself for once to the hands of nature,—of medicated nature—assisted by every auxiliary which an excursion to a German spa brings into play; and depend on it that either at the first, or at the second, or third occasion you will have reason to rejoice that you have exchanged art for nature." Such remarks need no comment. One great cause of the popularity of foreign spas may be found in the greater simplicity and gaiety of life of foreigners, and in their unwillingness to take, and of their Doctors to give, much medicine. Foreign Medical literature, too, is far richer than our own on the subject of mineral waters.

I have endeavoured to give a brief sketch of the therapeutical powers of some of our English springs; and, whilst unwilling to detract from any, and admitting the superiority of many foreign sources, I must confess that the number of cases amenable to cure under their influence, which could not have been cured at home, is not very great; and I should form rather a hopeless prognosis in the cases of those persons who, having failed of cure here, fly from home evils to plunge themselves into a maze of German spas. *Cæteris paribus*, the home cure is the best, where the patient gets home fare, home habits, and home surroundings; and in those chronic forms of malady, in which he annually resorts to some spa, not for the cure of maladies which have been long beyond cure, but for their alleviation, for change, for repose, and for the mitigation of suffering and prolongation of life, it is comfortable for him and his friends to feel that, with the aid of electricity and steam, a few hours may bring to his bedside the familiar faces of the long-cherished family Doctor, and of loving friends and relatives. And, further, though entertaining the profoundest respect for the learning, skill, and kindliness of many foreign Physicians, it must, I think, be conceded that they are less conversant than ourselves with the habits, feelings, and constitution of our countrymen.

Acting, I presume, on some such views as these, confident in the virtues of its springs, and hopeful for the future, Buxton took the initiative in putting its house in order, and is now, thanks to the munificence of the Duke of Devonshire, in a more finished position as a spa than at any previous period of its history. Leamington has followed, I trust not unworthily, in the wake of her sister spa, and has already expended £16,000 or £17,000 in placing her sanitary springs and appliances in a more useful and commodious form before the public. So far from being actuated by any purely selfish motive, I believe that both places would rejoice to see their example followed by every watering-place in the kingdom.

Leamington derives its name from the river Leam, a small stream which empties itself into the Avon about one mile to the west of the town. Its situation is so central that an oak tree on the boundaries of this parish and Lillington is commonly asserted to be the centre of England. Its average altitude is about two hundred feet above the level of the sea. The existence of the saline springs of Leamington is noted by Dugdale, Fuller, Camden, and Speed; and Dr. Loudon asserts that "Guidot, a Physician of Bath, examined the waters of the old well scientifically as early as the year 1688; and that several analyses of its contents were given in the following century by different Physicians." It was, not, however, till the end of the last century, that any really scientific researches were recorded on this subject. About this period Dr. Lambe, F.R.C.P.L., was engaged in practice in Warwick. Somewhat eccentric in some of his practical views, Dr. Lambe was not the less a scientific man, an intelligent observer of Nature, and an accomplished Physician; and was, moreover, one of the most elegant Medical writers of his day. The springs of the neighbouring village did not escape his observation; and, having carefully studied and analysed the waters, he published an account of them in 1797, in the fifth volume of the *Transactions* of the Philosophical Society of Manchester—a society embracing the respected names of Priestley, Dalton, Watt, etc., and not, perhaps, inferior to any contemporary association in Europe. About the same period the elder Kerr had obtained a justly-merited reputation at Northampton. One of, if not the most successful provincial Practitioners of the day, Dr. Kerr was too sagacious not to see the practical advantages of this neighbouring spa, and was in the habit of sending many of his patients to it during the summer months.

From this period the growth and prosperity of Leamington were truly extraordinary. The village which, at the close of the last century, numbered about three hundred souls, has now grown into a spacious and handsome town of not much short of twenty thousand inhabitants. Abundant notice of these springs exists in the works of most systematic writers upon mineral waters, whether English or foreign; but I am not aware of more than two monographs upon the subject written by resident Practitioners. In the year 1828, the success of Leamington being then well established, Dr. Charles Loudon published his "Practical Dissertation" on the waters of Leamington Spa, a work which is in every way creditable to its author, who, so far from exaggerating, rather underrates the value of the spa. Later, a short pamphlet was published by Dr. Middleton. It may not be uninteresting to state that not only has that popular estimation which has been found to invest this and most mineral springs suffered no abatement in this instance, but that the waters have always been highly esteemed by the great bulk of resident Practitioners, and have by many of them been freely used in the persons of themselves, their families, and their patients.

The great bulk of the town of Leamington occupies the north side of the river from which it takes its name, on a gentle declivity sloping to the south. The lower and middle portions of the town are mainly situated on the "lower-level gravel;" the upper and western portions of it on the keuper or sandstone rock; the extreme northern and north-eastern on the red marle which intersects the keuper rock. In its earlier days Leamington tended to spread to the south; and those parts of it adjoining and to the south of the old London-road are frequently spoken of as "the old town." These parts are mainly situated on a deep bed of gravel, and slope to the north, and are marked by a considerable difference in temperature and climate, as compared with the other portions of the town.

Deficient in any striking architectual features—due, perhaps, to its almost unprecedented rise, which led to a hurried and ill-digested effort to accommodate its rapidly increasing requirements—it, nevertheless, has the rudiments of what will ere long be a fine parish church, a handsome grammar school, a fine substantial building in the Regent Hotel, and a handsome pile of buildings in its pump-room and baths. It also contains a spacious club house, with a fine tennis and racket court; and a Hospital, partially founded and largely endowed by my late revered friend, Dr. Samuel Wilson Warneford, in gratitude for the benefits he had derived from the waters, and with a noble and generous desire of extending their benefits to the humbler classes. In furtherance of this charitable disposition, the Pump-room Company give annually six hundred baths for the use of the Hospital patients. The streets are wide, spacious, and airy; its house accommodation of the first class, meeting the requirements of the most wealthy and fastidious on the one side, or those of the most moderate means on the other. Its beautiful public gardens, comprising some twenty acres, and situated in the very centre of the town, will not escape your attention. Its numerous boulevards, and the general interspersion of fine timber and shrubs throughout the town, give it quite the character of the *rus in urbe*; whilst its cleanliness and thoroughly excellent drainage and water-supply contribute to make it one of the prettiest towns within my experience, also one of the most salubrious. Its climate, by many asserted to be relaxing, is really a very medium one, and consequently well suited to the majority. In a town frequented by visitors from such various quarters, it is curious to observe how each one criticises its climate in relation to the parts they have previously inhabited. Thus, in a single morning's round, I have been told by different persons that they find the place "relaxing," "bracing," "hot," "cold," "damp," "dry," etc. Its rainfall is consider-

ably under the average, and its streets, whether from the nature of the soil, good drainage, or other causes, have the property of drying up with the greatest rapidity—a consideration by no means unimportant to the invalid. There is a certain softness in the air, and I have found it admirably adapted to many cases of phthisis, chronic bronchitis, and asthma, especially during the winter months. Due probably to its soil, rather than its atmosphere, it will be frequently found in the early spring and winter that whilst in Leamington and its immediate environs the ground remains soft, it is frozen at no great distance from the town.

Besides the Pump-room, Leamington contains four other sources of mineral water—Lord Aylesford's well, and one under the railway viaduct, both thrown open to the public for drinking purposes only; Wood's, in Bath-street, and Hudson's, in High-street, to which are also attached bath-rooms. The two latter, in common with the pump-rooms, contain sulphurous as well as saline springs. It is greatly to be regretted that an excellent chalybeate spring, of which the analysis is given, has been allowed to go to decay; but I hope ere long to see this spring restored. It may be remarked that Leamington possesses an inexhaustible supply of mineral water—always a great advantage in any spa, but especially so where bathing is carried on to a large extent. The Leamington waters (for I shall speak of them generally) belong to the class of mild evacuants, their chief evacuant action being on the alimentary canal; they act also on the kidneys, and in some few instances I have found them inconveniently diuretic without some modification of their use. They are also slightly diaphoretic; and actively so when their internal administration is combined with their external use in the form of baths. They also pre-eminently belong to the class of alteratives and deobstruents; and it is chiefly in this respect that they are so valuable, modifying the secretions of the liver, kidneys, skin, and all the excretory glands, as also of the mucous membrane of the alimentary canal, and acting strictly as a blood remedy. The specialty of the action of most mineral waters probably depends more on those minute traces of certain subordinate components in them, than on those that constitute their chief bulk; and I am disposed to think, judging from their effects, that our waters owe much of their virtue to the presence of small proportions of iodine and bromine, as also in some cases of iron. The best period for their administration is the spring, summer, and autumn. They are not inadmissible in the winter if it be mild and open, but should only be given occasionally or in short courses of five or six days. In intensely cold weather I never recommend their use. They should always be taken on an empty stomach, from three-quarters of an hour to an hour before breakfast, in quantities varying in the adult from ten to thirty ounces. I most frequently give from twelve to eighteen ounces; and advise the dose to be divided into two or three draughts, with an interval of a few minutes between each, which promotes their absorption and assimilation, and prevents the inconvenience so often arising from too rapidly swallowing any large bulk of fluid. In some few cases of very weak and irritable stomach they agree better cold; but, as a general rule, I prefer to use them about new milk warm, as most conducive to their absorption and diffusion through the system. It is always preferable that they should be taken at the spring itself, when the weather and the physical powers of the patient will admit of it; if not, they may be brought home to the patient's house. In warming the waters, great care should be taken not to drive off their gaseous contents; and this is best contrived by drawing them into a stone bottle, carefully corking down, and then placing it in hot water. Their administration should, if practicable, be followed by a little gentle exercise, and that, if possible, in the open air. On the principle, I suppose, "that you cannot have too much of a good thing," the older attendants used to persuade their votaries to swallow enormous quantities of the waters, to the prejudice of their stomachs, and to the hindrance of their alterative effects by exciting too great alvine and renal excretion.

Some patients, from the first, rather like the water than not; but any distaste they may at first feel for it speedily passes off, especially when it agrees. I have very generally found that its use is followed, in the course of half-an-hour or so, by considerable increase of appetite, which, however, should be appeased by a simple breakfast, with or without a little broiled bacon, an egg, or a slice of meat, according to the requirements of the system. The duration of a course of the waters should never be less than two weeks, and may often be advantageously carried on to four or five. I have often been compelled from circumstances to give much shorter courses, and have occasionally, from the steady benefit obtained, carried on their use for a much longer period; but, in the main, it is preferable to continue their use from two to four weeks, then lay them aside, and resume them at the end of a week or two, or later in the season, or in the following season. Patients who have been greatly benefited, frequently visit the Spa several seasons in succession with great advantage. On the whole, the Leamington waters are but little injurious when not beneficial; but they should not be used without caution, especially in large quantities, since their accumulation in the system is liable to induce congestion of the abdominal viscera, brain, etc. I have been called to many patients, who, having come here with general instructions to drink the waters, have done this without advice, and have become exceedingly unwell, with fulness and distension of the stomach, loss of appetite, nausea, and even vomiting, with headache and vertigo. The surcharged system often relieves itself by free purgation; if it has not begun to do so, all disagreeable symptoms usually pass off rapidly on the administration of a dose or two of aperient medicine, pills being preferable. I have often had the curiosity to learn the subsequent effects of this mismanaged course of waters, and have found that the patients have got great benefit from them afterwards, in spite of the temporary inconvenience. They are inadmissible except as an occasional mild laxative in confirmed phthisis, and during the febrile stages of chronic maladies. In all congestive maladies attended by febrile symptoms, it is proper that these should be first reduced, and then the administration of the waters generally becomes useful.

The following is a synopsis of some of the cases in which the Leamington waters have been found useful within the range of my own experience. I should state, however, that in many of these cases the mineral and other baths have also been largely used, particularly in the cutaneous, rheumatic, gouty, and some of the hepatic and dyspeptic affections.

In most skin diseases, especially lepra, psoriasis, eczema, acne, acne rosacea, urticaria simplex and inveterata, prurigo, and in many anomalous and secondary eruptions.

In gout and rheumatism, and more particularly in the sequelæ of its acute forms; in obesity; in hypochondriasis, hysteria, and some cases of paralysis; in a variety of hepatic affections, with or without jaundice; in a great variety of forms of dyspepsia; in chronic obstinate constipation; in most forms of hæmorrhoids; in many cases of kidney affection, especially congestion and lithiasis; in some cases of diabetes complicated with hepatic congestion; in some cases of chronic bronchial affections and asthma; in many instances of uterine disturbance, especially in menorrhagia and other functional disturbances associated with liver derangement, and in amenorrhœa connected with torpid bowels, debility, and deficient nutrition.

Time will not permit me to say much about the environs of Leamington. It may, however, be generally remarked that its soil is rich and fertile, abounding in luxuriant crops and fine timber, especially the oak; undulating rather than hilly, although the Campion Hill in the town, Blakedown, Coplow, on the road to Stratford, and the hills of Offchurch, Hatton, etc., are sufficiently high to command very beautiful and very extensive prospects; whilst the Burton and Edge Hills, some ten to fourteen miles off, constitute a lofty and extensive range. The scenery is eminently English, and much enriched by the warm tints and colouring of the soil. For the many interesting objects with which the town is surrounded, I must refer you to the guide-books, and content myself with remarking that the beauties of nature have been amply enriched by art in the many noble parks and grounds by which we are surrounded, the charms of which, as well as of many of the neighbouring mansions, ruins, and towns, are intensified by the most interesting historical associations. The noble churches of Coventry and some other places will afford gratification to the admirers of ecclesiastical architecture, whilst the railways bring within an easy day's excursion the ancient and noble city and University of Oxford, the capital of learning; and the more modern busy manufactures of Birmingham, the capital of industry, machinery, and progress. The naturalist will not find the neighbourhood uninteresting; its botanical riches are fully average, and it contains a great variety of soils. It is especially rich in the carices, grasses, rosaceæ, and orchidaceæ. It is curious that, whilst improved drainage and the cultivation of commons have robbed the neighbourhood of many varieties that abounded formerly, the railway cuttings and embankments and the importation of ballast have intro-

duced many plants hitherto rare in the district. The geological interests of the neighbourhood are not inconsiderable, embracing the study of the drift gravels, the lias, the new red sandstone, the Permian, and the coal fields of Nuneaton and its neighbourhood.

Bathing may be defined as the immersion of the body into any medium. It may be general or local. We may be said to live in an air bath, but that immediate contact of this surrounding medium with the skin is more or less impeded by clothing. Hence the common air bath, which, under the name of actinism, has attracted the recent attention of Dr. Warren, of New York, and some other Physicians; modifying its temperature, we get the hot air and Turkish bath; cold air, not generally spoken of as a bath, but with whose local use in arresting hæmorrhage, and local general application in fainting, etc., every one is familiar. Next we come to various gases, of which oxygen and carbonic acid are the most in use.

But the most common vehicle of bathing is water—hence the hot, warm, tepid, and cold bath, embracing a range of temperature from one hundred and twenty degrees Fahrenheit or upwards, down to thirty-two degrees, at which point water becomes ice, the local use of which is well known. The application of water for the purpose of bathing may be further modified in the shape of vapour—the vapour bath; or it may be thrown with force in large masses on the body—hot or cold douche; or in minute subdivision of this element in the shape of the warm or cold shower-bath, hydrophers, etc.

Endless other media have been used for the purpose of bathing, amongst which are muds of various kinds; nutrient elements, such as animal broths, milk, whey, and even blood, which has lately been considerably in vogue in Paris.

What has been said of the history of Medical springs is equally applicable to the history of bathing, which may be traced back to the prehistoric periods, with this remarkable exception, however, that whilst almost all waters worth calling mineral are somewhat uninviting to the palate, they have seldom been used excepting as remedies; whilst baths have constituted not only the remedies, but the luxury and the fashion, not of individuals only, but of whole classes, nay, even nations. That baths, therefore, under such indiscriminate use, should have often proved useless, and even injurious, is no more chargeable to Medical science than would be the abuse of foods, stimulants, and medicines, so highly beneficial in the nands of skilled Practitioners in Medicine.

The use of baths amongst the Romans, popular before, attained its height after their conquest of, and consequent introduction into, Greece. Their preference seems to have been for the warm bath, whether hot air or thermal springs. Like the Greeks, they established their watering-places, to many of which we find allusions in the literary pages of the day. So necessary had the bath become to the comfort of this extraordinary people, that we find they carried with them their habit over the whole tract of Europe and portions of Africa and Asia; and even in their military expeditions the Roman generals selected stations, if practicable, where they could find thermal springs. The Emperor Augustus having been cured of fever, under the care of Antonius Musa, by cold bathing, this plan became so much in vogue that even newly-born infants were immersed in cold water; a custom in vogue even up to the time of Galen, by whom it was much condemned. Marcellus, son of Octavia, having suddenly died after taking a cold bath, this practice very much abated, and under the reign of Nero hot baths were again preferred. The Romans did not, however, contribute much to the scientific and practical knowledge of the use of baths or mineral waters. With the decadence of the Roman empire the use of the bath much declined, although it is probable that the numerous bath establishments which they left in this and other countries (of which many interesting vestiges still remain) were subsequently resorted to by the inhabitants of their neighbourhood. With the renaissance of the sciences sprung up also a more scientific use and literary account of mineral waters and baths, the founder of which appears to have been the learned monk Clement de Gratz, in 1496.

When we regard the enormous extent of surface presented by the skin, and when we furthur examine the minute anatomy of this complex structure and its functions, we need not be surprised that the bath is a most powerful agent. Looking at the most obvious points in the anatomy and function of the skin—namely, its boundless supply of capillary blood-vessels and nerves, so that it cannot in any place be touched with a pin's point without our perception, or pricked without bleeding, and at the rapid and sudden changes in the amount or character of this blood and nerve supply, as evinced by the sudden change of colour from dark livid blue to the brightest crimson, or to perfect whiteness, and to the various degrees of diminished, increased, or perverted æsthesia—it may readily be supposed that influence directed to this great organ by accident or art must be most powerful for good or for evil.

The first subject of study, then, in connexion with the use of baths, which would suggest itself would be their direct influence upon the vascular and nervous structures of this organ; next the reaction of these effects upon the entire vascular and nervous system.

Again, no one organ probably plays so important a part in the whole question of animal heat as the skin. The truth of this is too obvious to require illustration, and the practical application of it in the rough is almost an instinct of nature.

Regarded as a secretory and excretory organ, none is more important to our well-being than the skin. Looking only at the enormous bulk of fluid exuded from its surface, it is obvious that next to the question of supplies, nothing can more powerfully influence the bulk of the blood, and with the bulk its proportionate qualities, than cutaneous action. This fact is so obvious, that no trainers for racing or fighting have lost sight of it from the earliest times.

The bath was much used in training amongst the ancient Greeks and Romans, the common method of exercise and heavy woollen clothing of more modern times is beginning to be partially supplied by the use of the Turkish bath, as applicable to horses as well as men.

Passing from the mere quantity to the quality of the cutaneous excretions and exhalations, we find the skin to be the outlet not only of many foreign substances taken into the system, but of many chemical compounds originating in the complex laboratory of life, whose removal is essential to life's continuance. Thus, it supplements the kidneys in the removal of nitrogenous, and the lungs so largely in the removal of carbonic acid gas, that an impermeable varnish spread over its entire surface is speedily followed by death.

That the skin is a powerful absorbent organ there can be no doubt, from a host of every-day observations. Divested of its cuticle or varnish, we are enabled to adopt almost any medication with the greatest facility and even rapidity through this organ; and, when we reflect that this cuticle so readily admits of transudation from within upwards, as in the case of the perspiration and its constituents, I cannot see how one can doubt the possibility of a current in the opposite direction, under favourable circomstances. If, indeed, such were not the case, why do we so constantly apply remedies to the skin, and with such marked result? The inunction of mercurial ointments, the application of belladonna to the skin, or of atropine to the conjunctiva, narcotic lotions, and poultices, are of daily occurrence. I have several times succeeded in mitigating pain and procuring sleep by opiate fomentations to the legs, where no opiate could be borne internally; and have long been in the habit of applying alkaline fomentations to joints affected by acute gout and rheumatism, with the most beneficial results. Some years ago, a very celebrated foreign Surgeon fell under my care, suffering under hypochondriasis verging on insanity, whose urine was positively loaded with enormous oxalates. As no persuasions would induce him to take remedies, his Medical attendant and myself got him to keep compresses of very dilute nitro-muriatic acid in the armpits—a practice which was followed in a few days by an entire disappearance of the oxalates. Bathing, therefore, in its widest sense, may be regarded as a part of the system of endermic medication—a subject yet in its infancy, and one of vast interest and importance. The obvious limits of my present task oblige me to treat the whole of this subject in a spirit rather of suggestion than of illustration; and I trust enough has been said for this purpose.

Apart from the wide relations of the skin and its functions with the whole frame, this organ itself becomes the seat of a great variety of diseases, on whose treatment we must bring to bear all the resources of our art, but which present opportunities of topical medication unparalleled by any other forms of disease.

It now remains to say a few words on the facilities presented by Leamington for what may be termed the bath-cure. Apart from other private baths, the Pump-Rooms contain besides a spacious promenade-room, some fourteen ordinary baths of various dimensions, chiefly used for saline baths at different temperatures, but equally applicable for sulphurous, plain water, and other medicated baths. It further contains

shower, vapour, and douche baths, a spacious swimming bath, and a very perfectly contrived Turkish-bath. Some few other varieties of bath I hope to see soon constructed, as the local douche baths for the uterus, electro-magnetic baths, etc.

As several of these baths are comparatively modern, we must regard the saline Leamington water baths as not only the specialities of our spa, but as hitherto the main staple feature of it. These, occasionally used cold as a mere plunge-bath, are more frequently resorted to in the form of tepid and warm baths, varying from 84 to 100 degrees; 96 to 98 degrees being, perhaps, the most common temperature. Their primary effect is very soothing and calming. Persons entering the bath in pain very generally state that their pains either cease entirely, or are much mitigated when they are in the bath. They are usually followed by slight lassitude and drowsiness, with increased action of the skin. It is advisable after their administration for the patient to get home quickly and without risk of chill, and to assume the recumbent position on a bed or sofa, lightly covered with a woollen shawl or blanket, to promote the drowsiness and action of the skin. After half an hour to an hour some light food should be taken. I have frequently observed that general restlessness and insomnia speedily yield to their use; and that the patient feels more tranquil and gets better nights. I have also very frequently found that torpor of the bowels is greatly relieved —partly, perhaps, from some absorption of the saline materials of the water; partly from the general influence of the bath on the nervous and vascular systems. After a few baths, especially where they thoroughly agree, this lassitude is followed by increased mental and bodily energy, greatly improved appetite, and a more normal state of all the secretions. It is seldom desirable to repeat the warm bath more than alternate, often not more than every third, fourth, or fifth day, especially in persons much debilitated; and it will usually be found that in such cases, with improvement of general health, the bath may be oftener used with advantage.

Looking at the statistics of the Leamington Hospital, it is found that the number of bathers for the five years ending December 31, 1859, amounted to 654, giving an average of about 130 bathers per annum. The number of baths used amounted to 7565, which allows an average of about twelve baths to each patient. Many, of course, bathed much fewer, and many a much greater, number of times. From January 1, 1860, to December 31, 1863, the number of bathers amounted to 454; whilst the number of baths is not recorded. Both these statements are probably rather under than over the mark, especially the latter one, which refers to the period in which the pump-rooms were being restored. The cases in which these baths were used, and generally with advantage, were, skin diseases of various classes, rheumatism and gout, and their sequelæ, and in many forms of dyspepsia, deranged liver, uterine affections, paralysis, scrofula, periosteal, and some forms of secondary syphilitic affections.

Of the shower-bath, it is unnecessary to say much, because no form of bath is, perhaps, so generally in use in private practice, whether tepid, as a soothing, calming remedy, or cold, to produce shock, as in many cases of hysteria or other nervous affections, or as a tonic. Its temperature, bulk, and weight of fall require careful adjustment, as its success is mainly dependent on just the right amount of reaction. As a shower-bath, saline is preferable to plain water. In either case, care should always be taken that the patient's feet are placed in warm water.

The saline douche presents many advantages over the plain water douche, as being more stimulating to the part to which it is applied, and also from the partial absorption of the ingredients of the water. Its force, always commencing at a minimum, may be gradually increased; and it, as well as its temperature, will perhaps be best regulated by consulting the comfort of the patient. The application of the douche, occasionally useful in internal maladies, is too well known in the treatment of chronic thickening of the fibrous tissues connected with rheumatism, sprains, etc., to need further comment.

The vapour-bath is an important element in a bathing establishment, and often presents great advantages over the ordinary warm bath. As a mere sudorific, it will often answer when the other fails, and may with safety be carried to a much higher temperature. It is also a convenient mode of applying other specific remedies to the skin, as sulphur, mercury, iodine, sedatives, and narcotics, and is especially useful in many forms of skin disease.

The swimming-bath rarely falls under the notice of the Profession as a remedial agent, but is more frequently resorted to as a pleasure and luxury. That tolerably frequent immersion of the body into water, as a measure of ablution and cleanliness, is salutary, and that swimming is a useful accomplishment and most healthful exercise, cannot be doubted. As a luxury, cold baths, of whatever kind, are frequently abused by too frequent and too prolonged use.

It is, therefore, no mean advantage to possess a spacious swimming-bath, whose temperature is maintained at a point which always renders its use safe and agreeable, and which is rendered still further salutary by a large admixture of saline water. Under these advantages many may safely learn to swim, and many expert swimmers may occasionally indulge in this their favourite exercise whose health precludes them from remaining in perfectly cold water.

Whilst on this point, let me venture a few words of caution on the subject of sea-bathing. Change to the sea-side has of late years become almost a mania throughout Europe, and especially throughout England. That such a change is frequently beneficial cannot be questioned, and especially so when judiciously and advised adopted in many cases of general debility, arising from over-taxed mental or physical work, from too prolonged existence in crowded and perhaps relaxing cities, in the convalescent stages from accidents and acute maladies, etc. The Profession must not be held accountable for the vast majority of visitors to the sea coast, who select such locality from their own choice, and quite apart from any Medical advice, nor for those who bathe in the sea under the same circumstances.

But the Profession should bear in mind that sea air is by no means advisable in some cases, and those are pretty numerous. I would especially cite phthisis, hepatic congestion with over-secretion of bile, and all maladies complicated with febrile disturbance. I have frequently had occasion to repent my permission rather than advice to phthisical patients to visit the coast, and could cite endless cases of hepatic derangement and febrile cases that have been sadly damaged by a sojourn at the sea-side. One serio-comic instance occurs to my mind, in which an atrobiliary patient was married to a lady of the lymphatic temperament. At the latter stage of many of her maladies, she was always set up by a trip to the sea-side, from which her husband always returned more or less of an invalid, and used humorously to charge me with a determination to gain a patient in himself on the loss of one in the cure of his wife. In the case of phthisical patients, merely as a tonic, I have often seen advantage from a visit to the sea-side; but, as a general rule, I think it can seldom be advised for more than a week or two; and it is far better to repeat such short visits from time to time than to risk their prolongation, however much good they may seem to be producing.

Going back to the subject of sea bathing, I feel bound to say that within my own experience it is doubtful whether the great good which comes out of it, when judiciously advised and carried out, is not more than counterbalanced by the mischief accruing from it under its reckless unadvised use in the comparatively healthy or its careless use by invalids. Many cases are benefited by sea air in which sea bathing is utterly inadmissible; and no year passes in which I have not seen deplorable instances of more or less severe mischief coming out of cold bathing, whether in fresh or in sea water. An absurd prejudice pervades the public mind that sea water can do no harm. Truly it is less prejudicial than fresh water; but its beneficial action, whether in health or disease, depends entirely upon the same principle—namely, that of shock and reaction; and if carried on too long to admit of the latter, will induce, if by slower, yet by no less certain degrees, the same form of mischief. I generally premise the cold sea bath by the use of tepid baths gradually lowered in temperature, and for many years have been in the habit of writing down full directions for the plan of bathing for such of my patients as may use this remedy.

My own experience is as yet too limited to warrant my speaking largely on the subject of the Turkish bath; but it is fair to state that the doubts and anxieties with which I first regarded it have greatly subsided, and it continues to gain upon my confidence. In many cases of chronic gout and rheumatism, and especially in the sequelæ of these maladies, in some pulmonary affections, in several cases of diabetes, in sciatica, tic douloureux, obesity, some forms of dyspepsia, sluggish liver, and sluggish bowels, I have had the opportunity of seeing great benefit from this mode of treatment. It must, however, be borne in mind that its success depends upon

securing free evacuation by the skin. In some few cases where it has failed to induce perspiration, the plan has proved rather worse than useless, a mishap, perhaps, less due to the system than to its management.

In some chronic maladies it is extremely probable that a more prolonged residence, if I may be allowed the term, in the bath is required than is implied in the mere prescription of an occasional bath. I have known of greatly improved health in those attacked or threatened with pulmonary disease who have been employed as Turkish bathers. Many years ago, I was called to a person labouring under pleuro-pneumonia at the point of death. I had at the time much reason to fear that tuberculosis was at the root of his malady, and his protracted restoration and great emaciation did much to confirm my fear. A year or two subsequently he set up a Turkish bath, in which he spent many hours daily, with a gradually progressive improvement in his general health, weight, and strength, and an entire immunity from any chest symptoms.

On the wider application of the Turkish bath as the only means of maintaining health, preventing disease, and securing cleanliness, and on the Turkish bath as a fashion, or a mania as the case may be, it is not for me to speak in this place. It is somewhat repugnant to the English notion to be told that we are a dirty set of fellows; that our baths, our sponges, our soap, and flannels, only increase our filth by rubbing the dirt in; and that cleanliness can only be obtained, not "by the sweat of our brows" only, but that we must be washed from within outwards by myriads of rippling streams of perspiration.

But the Turkish bath deserves our study as philosophers and Physicians; and in truth we must study it more, or how can we answer the every-day question put to us—what do you think of the Turkish bath; will it do me good? As a remedy I am free to confess that the Turkish bath, as at present conducted, is a great addition to our therapeutic resources, and promises still further advantages, and I for one should be sorry to see it thrown back into the oblivion which has hung over it in most civilised nations for so many centuries, by the zealous but injudicious encomiums of its supporters!

After the President had delivered his address, Dr. Falconer, of Bath, moved a vote of thanks to Dr. Paget, of Cambridge, for his valuable services as President of the past year. The resolution also moved that Dr. Paget be elected a Vice-President of the Association.

The motion was carried with acclamation.

Dr. Paget returned thanks.

The Secretary then read the following Report of Council:

Report of Council of the British Medical Association, 1865.

Your Council has much pleasure in meeting the Members of the British Medical Association in the beautiful town of Leamington, and trusts this, the thirty-third anniversary, will be found as agreeable a meeting as the most successful of its predecessors.

The Committee of Council has, as usual, held its quarterly meetings in Birmingham, and each time under the presidency of Sir Charles Hastings, to whom the Association generally, but more especially the Committee of Council, owes a deep debt of gratitude for the efforts he has made during the past year to serve the Association, though suffering from very serious illness.

Your Council rejoices to find Sir Charles in improved health, and heartily hopes that his valuable life may be spared for many years.

Since the last annual meeting, a very important addition has been made to the Association by the formation of a new branch for the counties of Durham and Northumberland. A large increase in the number of your members may be expected in this district.

The number of members on the books in 1864 was 2400. During the year 30 died, 65 resigned at the commencement of this year, and the Council, in accordance with Law XVI., has erased the names of 70 members for non-payment of arrears.

This year 133 new members have been added, so that the Association now numbers 2368.

Your Council has again to record its grateful acknowledgments of the very valuable services rendered by the Honorary Secretaries of the several branches.

At a large meeting of the Council held at Cambridge last year, a very hearty and unanimous vote of thanks was accorded to Dr. Markham for his excellent and able management of the journal. Your Council has much pleasure in bearing witness to the efficiency of the journal during the past year, fully justifying the resolution passed at Cambridge.

The following is the Financial Report for 1864, published in accordance with Law XXIV.:—

Financial Statement for 1864.

It is very satisfactory to be enabled to report a very improved condition of the finances of the Association as compared with that of last year. The accounts have been audited by Dr. Melson and Mr. Hadley; and they find that, after payment of all bills due from the Association, the Treasurer held a balance of £243 16s. 8½d. on December 31, 1864; whereas, in December, 1863, there was a balance of £8 0s. 3½d. due from the Association to the Treasurer. This result is the more gratifying, as some extra sums have been paid, not of an ordinary kind, which have added to the amount of the expenditure.

The following is the statement of the accounts:—

Receipts.

1864.	£	s.	d.
Subscriptions	2501	2	0
Advertisements and Sales	633	11	6
	£3134	13	6

Payments.

1864.	£	s.	d.
Balance due to Treasurer	8	3	0½
Journal Expenses:—			
Mr. Richards (Printing)	1792	9	0
Mr. Richards (for Directing, etc.)	50	0	0
Mr. Honeyman (Office Expenses)	81	13	10
Mr. Davidson (Commission)	70	10	1
Mr. Orrin Smith (Engraver)	8	12	6
Editor of Journal	200	0	0
Dr. Henry (Sub-Editor)	50	0	0
Contributors	267	18	6
Dr. Henry (Salary)	50	0	0
Executive Expenses:—			
Mr. Williams and Clerk	157	0	0
Mr. Williams (Petty Cash)	33	10	5
Cambridge Reporter	12	12	0
Mr. Williams (Branch Expenses)	17	12	9
Birmingham Stationer	12	13	10
Anniversary Expenses	3	7	0
Collecting Expenses	9	11	4
Mr. Moore (Gold Medal and Die)	41	0	0
Provident Fund	25	0	0
Sundry Payments	4	3	0
	£2890	16	9½
Balance	243	16	8½
	£3134	13	6

Charles Hastings, Treasurer.

In accordance with a resolution passed at Cambridge, a memorial was presented to the Council of the Royal College of Surgeons in favour of voting by proxy by Fellows of the College similar to that presented in 1863. This year the Secretary received a reply to the effect that the Council of the College saw no reason to alter the decision it had arrived at the previous year. Your Council recommends that the Association should not falter in the course on which it has entered, but persevere until so just a demand shall have been granted.

Public Service.—Your Council has directed a memorial to the First Lord of the Admiralty and the Secretary for War to be prepared and laid before the meeting, for approval, before presentation.

Poor-law Medical Reform.—Poor-law Medical Reform has made but little actual progress in the past year; but your Council thinks that there is a disposition to a more friendly feeling to the Poor-law Medical officers, and suggests that a Committee be formed to report on the proceedings of the Poor-law Board.

The Council congratulates the Profession that a member of the Medical body has been added to the list of the Poor-law Inspectors,—Dr. Edward Smith, F.R.S., a member of your Association.

The Council trusts that this act will be followed by the appointment of members of the Profession on the Poor-law Board.

The Charter.—Your Council begs to report that a Committee has been actively engaged during the past year in drawing out, and considering the means of obtaining, a Charter of Incorporation for the Association. The Report of the Committee, together with the petition and draft of the Charter, have already been made public in the journal. The Council is of opinion that the cost of the Charter will be about £300, and has every reason to believe that the Charter may be obtained by united and unanimous action on the part of the Association. The Council invites discussion on this important subject.

Since the last annual meeting the Medical Provident Society has been established. A report will be presented by the Board of Directors.

Medical Benevolent Fund.—This valuable Society has continued its useful work with increased efficiency, having, during the past year, obtained considerable additions to its funds. A report will be read by the Treasurer. To Mr. Toynbee and his fellow-labourers a large debt of gratitude is due from the Association.

The Hastings Prize Medal the adjudicators have this year awarded to Thomas Herbert Barker, M.D., F.R.S.E., for an essay on "Deodorisation and Disinfection."

The Address in Medicine will be delivered by Professor Stokes, M.D., D.C.L.

The Address in Surgery will be delivered by Professor Syme, F.R.S. Ed.

The Committee of Council has this year instituted open discussions on subjects of Professional and public interest. The Council believes that this new arrangement will prove generally acceptable, and trusts that the members present will vigorously support this effort.

We shall continue our report in our next impression.

Apothecaries' Hall, Dublin.—At a meeting of the General Council held, pursuant to Act of Parliament, on Tuesday, August 1, Dr. Mulock, Governor, in the chair, the following officers were duly elected for the ensuing year:—*Governor*—George B. Owens, M.D. *Deputy-Governor*—William Madden, M.D. *Court of Directors and Examiners*—Drs. Holmes, Leet, Madden, jun., Mulock, Nolan, Shea, Wyse, Messrs. Collins, Harvey, Montgomery, White, O'Flaherty, Dirham. *Secretary and Representative in the General Medical Council*—Dr. Leet. *Examiners in Preliminary Education*—George Atkinson, A.M., M.B., Dub.; William D. Moore, A.B., M.D., Dub., M.R.I.A.

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REVIEWS.

Supplement to the Twenty-fifth Annual Report of the Registrar-General of Births, Deaths, and Marriages in England. Presented to both Houses of Parliament by command of her Majesty. With a Letter to the Registrar-General on the Mortality in the Registration Districts of England during the Ten Years 1851-60. By WILLIAM FARR, M.D., F.R.S. 1864. Pp. 567.

AT definite and convenient intervals the State reckons up its wealth, and, through the medium of Parliament, delivers up to the people the result of the calculation. Once in every year the Chancellor of her Majesty's Exchequer declares the result of the financial administration of the country—lays bare to the view of the whole world its riches and commercial prosperity on the one hand, its poverty, debts, and commercial depression on the other, and tenders to the country his opinion as to the best methods of maintaining the one and of counteracting the evil tendencies of the other. Once in every ten years the Government takes stock of those stores of wealth and power which it assumes to be laid up in the bones and muscles and brains of the population; ascertains in what particular manner these wealth-producing elements are being employed, and, by counting up those yet too young to be productive, estimates approximately the working and adventurous energy of the future. In men, women, and children the State recognises the engines of material progress; but what if the machinery be defective? what if it be weak? what if while some engines work well others do not work at all, or break down sooner than they ought to do? Another sort of stock-taking thus becomes essential, and a calculation of quantity has to be supplemented by an investigation into quality. National wealth is thus closely associated with national health. An engine may be constructed so weak as to break down in the very effort to move the parts of its own machinery, or as soon as it is set to overcome some extraneous resistance, or its force may be too small for the work it has to perform, or, finally, it may be irretrievably ruined by neglect. And so, too, with men and women—a premature break-down, a too great mortality is an index of weakness, either original debility or weakness resulting from neglect. Every year, every quarter, and, for the metropolis, every week the Registrar-General reads off for our information the figures upon his register, and this knowledge serves in the absence of anything better for immediate administrative purposes; but for purposes that require accuracy in data a more extended review is essential, in order to eliminate the influence of accidental perturbations.

"The causes affecting the life of children, of adults, and of old people—of males and females—of persons in different occupations, are so various that we can only hope to unravel their influence by a general analysis of the phenomena in different places through a series of years." Such a review is given us in the volume before us, one of the most valuable of the many important contributions to vital statistics which have issued from the accomplished statistician attached to the staff of the General Register Office of England. It is a thick octavo volume, closely printed, consisting chiefly of tables, and only costs 3s. 6d. Although, therefore, it may fairly be presumed that many of our Professional brethren will possess themselves of it, yet the matters it contains are of such vast national importance that we propose giving it a notice more extensive than we otherwise should consider ourselves at liberty to accord to any one book.

Dr. Farr starts with telling us that "this volume has been compiled to show in detail, from the consecutive records of ten years, the causes of death and the comparative salubrity of every part of England and Wales." Now, it does seem somewhat ungracious to object to a word of this, his opening sentence, but we do so because he is likely to be misunderstood as he has been misunderstood before. We object to the little word "of." A place may in itself be salubrious, but the people, from a variety of causes, may be unhealthy. We think that a misconception of his meaning would have been avoided had he spoken of the salubrity or state of health of the population *in* every part of England and Wales. We need not say we should not have noticed this had it not been Dr. Farr who wrote it. Every word that he writes is open to criticism, as it is liable to be strictly quoted. He shows in an elaborate series of tables, into which a variety of corrections have been introduced, the annual rate of mortality of either sex at all the earlier quinquenniads and the later biquinquenniads of age, as well as the causes of death at all ages, in such a manner that local authorities can ascertain the particulars which relate to any district over which they have control. The general summary of which the text of his letter consists is that which will principally have our attention. It is divided into ten sections.

In the first section he discusses briefly "the Rate of Mortality and the Probability of Dying." The following is the method he lays down for determining the latter:—"If on an average of years out of 1000 children born simultaneously, 149 die in the twelve months following the date of birth, the probability of dying is expressed by the fraction 0·149; that is the *death-chance* of a new-born infant under the given law of mortality. As 851 of them survive, 0·851 is the fraction to express the probability of living; it is the *life-chance*. . . . . By the English Life Table, 1000 infants followed through their first year of age yield nearly 903 years of life; and the mortality is at the rate of $\frac{149}{903}$, or more correctly $\frac{149493}{902781} = 16559$. It is 16·559 per cent. per annum. The probability of dying is 149493, and upon the erroneous assumption that this is the rate of mortality it would be 14·949 per cent. per annum—less by 1·610 than the true rate, with which it should never be confounded. At other ages than the first year the rate of mortality seems to give the probability of living a year, and thus supplies the fundamental elements of a life table."—P. iv.

The second section is devoted to the consideration of the "Mortality at Different Stages of Life." Dr. Farr tells us that there are great difficulties in determining the rate of *mortality among infants* (age 0—1), from the want of exactly observed facts, the non-registration of still-born infants and of some of those children who breathe for a short time, although he is of opinion that, in estimating the rate among children born at the full time, the premature births which are registered compensate for the non-registration of those referred to. A life table is given for each month of the first year of age and annual rate of mortality per cent. of children at each month under 1 year of age. It shows how the mortality, amounting for both sexes to 57·132 per cent. in the first month of age, gradually lessens as age advances, the general result being that of 1,000,000 infants 850,507 survive the year. In France the number which survive is 820,065. As to the causes of death in infancy, we find that of the zymotic diseases bowel complaints were nearly three times as fatal as whooping cough. From all zymotic diseases, 5027 boys and 4114 girls died annually, but this does not represent half the mortality from convulsive diseases and other affections of the brain and spinal cord, which were fatal to 12,448 boys and 9171 girls annually in their first year of age. As to the registration of still-born children, he does not think the difficulties insuperable. We are glad to find Dr. Farr so far in favour of a step which has been urged upon the Registrar-General by the Metropolitan Medical Officers of Health and by Dr. Lankester. No doubt, as Dr. Farr observes, the facilities for burying still-born children unregistered throw open the gate of temptation to crime. But this is not the only facility for crime that lies open, since even after registration the certificate authorising burial is not always given up. In one metropolitan cemetery at least we are informed there is great laxity in this respect, and in such cases the retention of the certificate by the undertakers offers an opportunity for substitution which certainly ought not to be permitted to exist. *Children under five years of age* (0—5).—"The mortality of males by the life table under five years of age is 7014, of females 6125. During the ten years 1851-60 the mortality of males of ages 0—5 in somewhat different proportion was 7·243 per cent., of females 6·274 per cent. The proportion of the first and second years' children are higher in the increasing population than they are in the life table. He finds that for every 1,000,000 boys the zymotic diseases carried off annually 22,420, and of every 1,000,000 girls 21,772. Of the boys small-pox carried off 1047; typhus, typhia, and typhinia together, 1401; measles, 2847; whooping cough, 3246; scarlatina, 4311; diphtheria, 431; and bowel complaints, 5625. "Whooping cough was more fatal to girls than it was to boys in the proportion of 4003 girls to 3246 boys; so was typhus and typhia; all the other zymotics were more fatal to boys than to girls." Hydrocephalus and other brain diseases (convulsion being the fatal result of a variety of conditions) carried off about one-sixth of all the children. Hydrocephalus is, we think, far too readily registered. The proportion of deaths thus registered is too much opposed to the Medical experience of those skilled in diagnosis for them

to believe that some other conditions are not counted into this class of deaths. We have known two, and even three, deaths in different families registered as taking place from "hydrocephalus" in the same house within very brief periods of time. Is it common for a Medical Practitioner to see so many consecutive cases in a house? We strongly suspect soothing nostrums as the cause of much of the mortality registered under this head and under that of "convulsions." With a full apprehension of its importance, Dr. Farr devotes a considerable space to this part of his subject. In 63 healthy districts the annual mortality of boys under 5 years of age was at the rate of 4·348 and of girls 3·720. In 28 selected districts the mean for both sexes was 3·348. "The mortality was at the annual rate of 2·317 in Bellingham; 2·595 for boys, 2·040 for girls. This rate is slightly exceeded in the adjoining district of Rothbury, also on the border of Northumberland; and in Bootle, north of the Duddon, on the coast of Cumberland." He gives also, from sources which are open to any one, the mortality among the children of peers—namely, 2·069 per cent. for both sexes, or 2·227 for boys and 1·882 for girls. That among children of the Society of Friends differs slightly from this. Among the children of the clergy the mean of both sexes is 3·027, boys dying at the rate of 3·729, and girls at the rate of 2·302.

The districts of the lowest mortality are very thinly peopled. As examples of high child mortality, he adduces that of Sheffield 10·022 per cent. per annum; East London, 10·149; Coventry, 10·203; Nottingham, 10·219; Whitechapel, 10·246; Leeds, 10·277; Wolverhampton, 10·480; St. Giles (London), 10·852; Manchester, 11·725; and Liverpool, 13·198. Of the London districts, the following have the lowest child mortality:—Islington, 6·688; St. George's, Hanover-square, 6·697; Kensington, 6·740; and Greenwich, 6·870. "A strict investigation of all the circumstances of these children's lives might lead to important discoveries, and may suggest remedies for evils of which it is difficult to exaggerate the magnitude." We cannot follow Dr. Farr so closely through his summary of the mortality at subsequent periods of life. During the period of age 10—15 years we find that consumption is already claiming more female than male victims, and he thinks that the comparative immunity of boys (·076, girls being ·129) is one of the results of free exposure in the open air. Fever, scarlatina, and diphtheria are more fatal to girls than to boys. After the age of 15 mortality increases; the influence of occupation begins to appear, although its full effect is sometimes only developed in later life. Most of the infectious diseases have now been undergone. Small-pox, however, is more fatal at the age 20—25 than at 10—15, which Dr. Farr is disposed to attribute less to the wearing out of the protection of vaccination than to the operation being less common twenty than it was fifteen years ago. Fever is the most fatal zymotic disease, young girls being exposed more than young men to the sources of typhoid. Half the deaths of young women at these ages are from consumption. From 25—35 years phthisis is the preponderating malady, but diseases of the important organs begin to grow more fatal. From 35 to 45, however, it is that we first see the most obvious indications of wear of the vital organs, and the effects of unhealthy trades become perceptible in the deaths. From 55–65 years, from 65—75, and from 75—85 there is a gradual increase in the proportion of deaths attributed to diseases of vital organs—the heart, lungs, stomach, and kidneys.

Section 3 relates to the mortality of women of the child-bearing age (25—35), which amounts to nearly *one* per cent. The women of London stand lowest on the scale, those of Lancashire highest. The mortality among women of the age of 25—35 was 1·500 in Crickhowell; and this was due to a considerable extent to an excessive number of deaths in child-birth. In this place 56 women died in childbirth in 10 years, the number of births being 8808.

Section 4 relates to the mortality of men in London, the head quarters of the learned professions, the arts and the sciences, and the greatest of our commercial emporia. It is represented in the following table:—

	Ages.			
	25—35.	35—45.	45—65.	55—65.
Healthy districts . .	·818	·928	1·273	2·294
South-Western division .	·932	1·101	1·532	2·738
England and Wales. .	·957	1·248	1·796	3·085
London	1·050	1·629	2·468	4·243

At 45—55 the mortality of London men is double that of men in the healthy districts. But the workmen in large towns suffer as much, and often more, than the workmen in London. To what, asks Dr. Farr, is this due? "It is not want of work. Their hands and heads are sufficiently employed to insure exercise. The drainage of their dwellings and their water supply is in many districts scanty; habits of ablution are not cultivated, and their skin is often unclean. They live too frequently in crowded rooms, from which fresher air than they breathe is excluded. It is the same in the workshops, where the air is in many trades loaded with dust which induces bronchitis. Workshops are sometimes ill constructed for the supply of air for breathing, and the men themselves throw obstacles in the way of ventilation. Spirits and other stimulants are by certain numbers—such as publicans—taken to a fatal excess. The latter causes to some extent account for the excess in the mortality of men over the mortality of women."—P. xxiv.

Section 5 is upon the annual rate of mortality at all ages without distinction. During the ten years 1851—60 the rate of mortality in England was 2·245 per cent. per annum. Thus 1 in 44·54 died, while the mean life time was 40·858." "Assuming the prevalence of the same law of mortality, the rate calculated on the mean population and the deaths at all ages is lower in a rapidly increasing population than it is in a stationary population, because the mortality at all ages from about 4 to 54 is lower than the mean mortality of the whole normal population; and while a regular increase of population has the effect of increasing the proportion of children under 4 years of age who die off quickly, it has also the effect of still further increasing the proportion of the living at the ages of 4 to 54, and of diminishing the proportion of the old people, whose rate of mortality is high. In the healthy districts of England the normal mortality is 20·59 for males, and 2·022 for females by the life table; and it is 1·772 for males, and 1·733 for females, as deduced from the rate of deaths at all ages to the living at all ages. This is the rate of 17 deaths per 1000 of the population, which is so often and so fairly quoted as the standard of comparison applicable to increasing populations. There is another disturbance of the proportion living at ages more or less mortal—by immigration and by emigration. Thus the general effect of immigration into towns is to reduce their rate of mortality by increasing the proportion of the living at ages of less than the mean mortality of the people of the place. The bulk of the emigrants to towns from the country are probably in good health, but a certain number of sick resort to the town Hospitals; upon the other hand, of the emigrants some are consumptive, seeking health in the country or abroad, or returning home to die; but the emigrants are less numerous in the aggregate than immigrants, and so far have less effect on the mortality."—P. xxv. We are not quite certain how far this mode of estimating the influence of immigration applies to London, which receives a large increase from the provinces every year, not only from the rural districts, but also from the larger towns.

The loss of life in the dense town districts is considered in the sixth section. In thirty of these selected the actual average of annual deaths was 71,194. Had the death-rate of healthy districts prevailed, it would have been 38,459, consequently there was an annual excess of 32,735 deaths, which, Dr. Farr says, may justly be ascribed to the unfavourable sanitary condition in which the people live and die.

He then passes on to consider how far the general rate of mortality is affected by the deaths at different ages, and then at section eight he compares the mortality in the two decenniads 1841—50 and 1851—60. This is one of the most important sections, perhaps, of the whole summary. "In London the mortality fell from the annual rate of 25 in the first to 24 per 1000 in the second decenniad. In the south-midland counties the rate also fell from 21 to 20; namely—from 20 to 19 in Hertford, 22 to 21 in Northampton, 22 to 20 in Huntingdon, 22 to 21 in Bedford, 23 to 21 in Cambridge. There was an evident reduction in the general rate of mortality in the fen district." And then as respects the districts of London, which vary greatly in the extent to which their several populations have increased. "The mortality increased in Islington from 19 to 21, where the population has nearly doubled in density; from 26 to 28 in St. Giles's, where the population is dense and stationary. In Stepney also the mortality increased from 25 to about 27; in Poplar from 22 to 24; in St. James's, Westminster, from 22 to 23. In the majority of London districts the mortality decreased; from 20 to 19 in Kensington, 27 to 26 in Chelsea, 27 to 26 in Westminster, 24 to 23 in St. Martin's-in-the-Fields, 18 to 17 in

Hampstead, 23 to 22 in St. Pancras, 24 to 23 in Clerkenwell, 29 to 25 in West London, 27 to 24 in Shoreditch, 25 to 23 in Bethnal-green, and 29 to 28 in Whitechapel. The decrease was considerable in nearly all the districts on the south side of the Thames, except in Wandsworth and Lewisham, where the population became much more dense in the second than it was in the first decenniad. The cholera epidemic of 1854 was less fatal in London than that of 1849, and the water supply became of greatly improved quality. Health officers were appointed, and some sanitary improvements have been carried out." The variation is traced through the several registrative divisions of the kingdom.

Section 9 is devoted to the mortality of cities and the relation between density and death rate. It is illustrated by an interesting table. Arranging the facts in five great groups, the following result is obtained :—"1. When the mortality was 14, 15, or 16, the population was in the proportion of 86 persons to 1 square mile. 2. Where the mortality was 17, 18, or 19, the population was 172 persons to a square mile. 3. Where the mortality was 20, 21, or 22, the population was of the density expressed by 255 to a square mile. 4. Where the mortality was 23, 24, or 25, the population was of the density expressed by 1128 to a square mile. 5. And where the mortality was 26 and upwards, the average density was expressed by 3399 persons to a square mile. Thus in these five groups there is a constant increase of mortality running parallel with the increase of density."—P. xxxiv. When the groups are sub-divided, elements of disturbance are introduced, such as the lodging of the population on a small portion only of the area of a wide district. "The population of the denser districts differs in many respects from that of the thinly-peopled districts of the country; but there can be no doubt that mere proximity of the dwellings of the people does not necessarily involve a high rate of mortality. When any zymotic matter, such as varioline, scarlatinine, or typhine, finds its way into a village or street, it is more likely to pass from house to house than where the people are brought less frequently into contact. The exhalations into the air are thicker. But if an adequate water supply, and sufficient arrangement for drainage and cleansing are secured, as they can be by combination in towns, the evils which now make dense districts so fatal may be mitigated. Indeed, some of the dense districts of cities are in the present day comparatively salubrious."—P. xxxv.

Lastly, in Section 10, Dr. Farr inquires into the mortality of persons in different occupations. This is a very difficult task, arising out of the uncertainty in the naming of trades, and, let us add, in the unnatural manner in which some are grouped together in the Census return. Still, in some well-defined trades the calculation may be effected, and a table is furnished of the annual mortality per cent. of males aged 15 years and upwards, in certain occupations at different periods of life. So far as it goes, it is very instructive, and exhibits results which differ but little from those published in the Fourteenth Annual Report of the Registrar-General, as based upon the year 1851. Thus innkeepers stand highest, with an annual mortality per cent. of 3·078; next come farmers and graziers, 2·940; tailors, 1·997; persons engaged in wool, cotton, flax, and silk manufactures, 1·860; shoemakers, 1·855; butchers, 1·808; labourers, 1·744; carpenters and joiners, 1·646; bakers and confectioners, 1·617; miners, &c., 1·578; blacksmiths, 1·562; grocers and shopkeepers, 1·381; persons engaged in iron, tin, copper, and lead manufactures, 1·220. In the table formerly published (1851) the ages taken were 20 and upwards, so that the totals cannot be fairly compared. At the biquinquenniads over twenty-five years, however, the two tables are comparable. We have only one remark to make respecting the correction for Hospitals, &c., of the London tables of the district mortality and causes of death—namely, that it does not fairly represent the prevalence of certain diseases in the several districts. The correction is based upon the relative population of the districts on the assumption that each district sends patients to each Hospital in the proportion of its population. Now, this is an error, as we could readily prove, and it is one the influence of which might have been avoided, and, in respect of London, ought to have been avoided, by a distinct and accurate distribution of Hospital deaths, each to its proper district. As an example of the sort of error introduced, we may adduce the mortality from typhus in Islington, stated at 1548 for both sexes, and that in St. George's, Southwark, at 474. The records of the London Fever Hospital will show how utterly incorrect this is. Even if the numbers were reversed, the relative proportion in the two districts would probably be not sufficiently contrasted. The same error throughout all the districts occurs in the instance of small-pox. All we have to do is to simply point out this source of error—for, after all, the whole volume is so admirable in conception that one can afford to overlook a few pardonable inaccuracies in view of the vast labour that must have been expended upon its production.

Lectures on the Diseases of Infancy and Childhood. By Charles West, M.D., Fellow of the Royal College of Physicians, Physician to the Hospital for Sick Children. Fifth Edition, revised and enlarged. London: Longman, Green, Roberts, and Green. 1865. Pp. 806. 8vo.

We welcome a new edition of this classical work. It embodies the matured experience of a man who is a profound thinker, an acute observer, and a hard worker, and who has the inestimable gift of expressing his thoughts in pure and elegant English. Dr. West has met with his reward; he has gained the proud position of being looked up to as a teacher and trusted as a safe guide by his Medical brethren. And that his reputation is not merely British, or merely European, is evidenced by the fact that the work before us has passed through three editions in America, through four editions in Germany, and that it has been translated into Danish, Dutch, Russian, and French. An ordinary man would probably have been satisfied with the success of former editions; and the public could not have complained had the fifth edition been a mere reprint of its predecessor. But Dr. West goes on piling experience upon experience, noting cases, recording post-mortem appearances, and coming to more accurate conclusions every day. The present edition, he tells us, "embodies the results of 1200 recorded cases and of nearly 400 post-mortem examinations, collected from between 30,000 and 40,000 children who, during the past twenty-six years, have come under his care, either in public or private practice."

GENERAL CORRESPONDENCE.

SEWAGE IRRIGATION AT LUNATIC ASYLUMS.

Letter from Dr. C. L. Robertson.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have received several letters with reference to my former letter addressed to you on the use of the sewage of this Asylum for the purpose of irrigation. Will you kindly allow me to reply to them through your pages?

I must repeat that I have for four years used the whole of the sewage of this asylum for the irrigation of grass land (meadow and Italian rye) within 225 yards of my own lodging and of the Asylum wards, and that I have had no case of dysentery or diarrhœa during that time. I therefore most strongly dissent from my friend Dr. Clouston's views that it is unsafe to apply sewage on clay soils within 350 yards of human habitations. I rather assert that with reasonable precautions such irrigation is free from all risk or unpleasantness. These precautions, as used here, are:—

1. The addition twice a-day to the sewage at its outlet from the main buildings of a mixture of carbonic acid and lime in the proportion of 1 gallon of the acid to 8 lbs. of lime and 100 gallons water.

2. In order to stop the solid matter of the sewage, it is made to pass through an open tank filled with ashes, which are also a disinfectant, and which by the process are converted into valuable manure, especially for clay land.

3. Thus roughly filtered and deodorised, the sewage is allowed to flow over the meadow by the open-channel system.

I visited last year the meadows near Edinburgh, where the sewage is similarly applied in large quantities, and very near to the cavalry barracks and other dwellings. I am not aware of any instance of epidemic diarrhœa there, although it has been in use for eighteen years. But then the sub-soil is sand, and therefore my own experience on heavy clay soil, though on a much smaller scale, is a better antidote to Dr. Clouston's fears and misgivings on the use of sewage irrigation—a question, indeed, of national importance, and which I should much regret to see in any way retarded by the uncontradicted record of careless experiments like those at the Carlisle Asylum.

I am, &c.,

C. L. Robertson, M.D. Cantab.

Hayward's-heath, July 3.

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REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 27.

Dr. ALDERSON, F.R.S., President.

A PAPER by Mr. THOMAS SMITH was read,

ON THE OBSTACLES TO THE RE-ESTABLISHMENT OF NATURAL RESPIRATION AFTER THE PERFORMANCE OF TRACHEOTOMY: SOME CASES, WITH REMARKS.

The hindrances to the withdrawal of the canula and to the restoration of the passage of the larynx, to which attention is drawn in this paper, are such as only take effect after the performance of tracheotomy, and as a consequence of that operation. They have no reference to the persistence of any cause of obstruction that may have necessitated the introduction of the tracheal tube. The Author in this paper has detailed cases where great and even insurmountable difficulty occurred in removing the canula after the performance of tracheotomy. He enumerates four causes of obstruction to the passage of air through the larynx after that operation:—1st. An accumulation of granulations within the trachea, just above the canula. 2nd. Obliteration of the cavity of the larynx by adhesion of the margins of the rima glottidis. 3rd. A loss or impairment of function in the laryngeal muscles. 4th. A narrowing or partial collapse of the trachea from necrosis of its cartilaginous rings. The Author endeavours to show that a temporary impairment or loss of function in the laryngeal muscles is no unfrequent occurrence after tracheotomy; and suggests that it may reasonably be referred either to the complete interruption of all exercise of function in the larynx which the operation for a time entails, or to a reflex irritability of the muscles of the glottis from the contact of the canula with the mucous membrane of the trachea. With a view to obviate the occurrence of some of the untoward contingencies described in the paper, the Author recommends a small appliance devised by himself to be worn in the orifice of the canula. This instrument, while it allows the air during inspiration to enter through the wound, directs all the expired air through the cavity of the larynx. He claims for this appliance—that it at once restores the voice; that it helps to clear the cavity of the larynx from false membrane or accumulations of mucus; that it forms a safe method of testing the permeability of the larynx; and that its use as a preliminary measure to the final removal of the canula will accustom the rima glottidis to the transit of air, and diminish its irritability.

A paper was read by Dr. BENJAMIN HOWARD, on

THE APPLICATION OF SUTURES TO BONE IN RECENT GUNSHOT FRACTURES, WITH CASES—ALSO REMARKS ON THEIR SIMILAR USE IN SOME OTHER FRACTURES AND OPERATIONS.

The Author exhibited statistics showing the large number of secondary amputations which are rendered necessary in gunshot fractures of the extremities by the inevitable transportation from the battle-field to general Hospital. The disastrous results in these cases are mainly due to the constant motion of the fractured ends of the bones, between which innumerable loose fragments and sharp spiculæ of bone are ground together, mangling the sort parts adjacent, and producing violent irritation and inflammation, which is still further increased by the pressure and constriction of disarranged bandages and splints firmly applied on starting to prevent displacement—an attempt perfectly hopeless without the use of other means. The most careful efforts of this kind are frequently followed by such inflammation during the "middle passage" as to destroy every hope of saving either the limb or the life of the patient. Resection of the shaft of the long bones has been practised, with removal of the loose fragments, but the motion remains undiminished, and the ends of the bone are continually apart. In 1863, the author, in a communication to the Surgeon-General of the U.S. army, proposed a plan of treatment for gunshot fractures of the humerus, which he had since carried out, with a view to obviate the evils referred to wherever the operation might be practicable. The treatment consists in cutting down upon the seat of fracture, enlarging the wound, or otherwise, removing all fragments of bone and everything which can act as a foreign body, making a clean section of the fractured ends transversely, or at such parallel obliquities as to secure the most perfect apposition with the least shortening. The ends are then firmly secured together by two wire sutures, the edges of the wound approximated, and a light splint applied by a simple retentive bandage, so as to leave the wound freely exposed for the repeated application of cold water from the canteen of the patient. The chief points in the operation are to carefully avoid any unnecessary degree of disturbance of the soft parts, and especially of the periosteum; to introduce the two sutures as described through only one cortical portion of each end, and each as nearly as possible in the same line of diameter of the bone, to prevent any hinge-like motion. The sutures, which are of annealed iron, or better, perhaps, of plated copper wire, may be cut off short, or be left protruding through the wound, so that by successive tightening twists, Nature may be aided in her natural process of extrusion. The advantages claimed for this plan of treatment consist,—1st. Negatively.—In the absence of all previous causes of irritation. 2nd. Positively.—In securing complete coaptation and perfect rest. A case of gunshot fracture of the humerus was related in which all the details of this plan were carried out. Although the patient was afterwards left uncared for on the field, and submitted to extraordinary exposure, the limb was in excellent condition, and, as far as it could be ascertained, it continued so until subsequent recovery and transfer of the man to another regiment. Another case also was reported of severe fracture from lodgment of a fragment of shell in the femur, with great shortening. After removal of the missile and fragments of bone, the fracture was reduced, and without section of the bone, by means of one stout wire suture. The refitted, interlocked fragments were permanently secured *in situ*. The patient, who was sixty years of age, and of feeble constitution, was rumoured to have died a few days afterwards *en route* to general Hospital. This plan of treatment not only contemplates disposal of the chief sources of immediate danger, but of those causing great ultimate delay, thus averting the innumerable intercurrent diseases incident thereto. It is new only in its application. Substantially the same operation, including the use of the wire suture, has for a long period been practised, and still meets with general approval as a secondary operation for ununited fracture. Other things being equal, it cannot be less admissible as a primary operation, where, in the absence of all pathological changes, we have a healthy condition of all the parts, with sound bone in apposition and at rest. Although it would be unwise to anticipate too definitely the histories of the Author's cases, which may be hereafter collected from the various Hospitals to which they were sent, and from which a more complete report will be made, his experience so far justifies him in submitting the plan of treatment to the Profession. He would recommend the use of wire sutures in the manner described in certain compound fractures with great displacement, in Pirogoff's operation if practised, and in fractures of the jaw, in which he had used them with great advantage.

A FELLOW asked the Author if he had met with any cases in which the upper and lower extremities had been treated.

Dr. HOWARD replied that the plan was introduced for the treatment of fracture of the humerus, and had been adopted in but one case of fracture of the femur. Dr. Howard then exhibited several diagrams illustrating the chief points in his paper.

Mr. FRANCIS MASON asked if the process was not a difficult one. He had seen Mr. Fergusson do the operation twice, and each time with considerable difficulty.

Dr. HOWARD said it was difficult without assistance. He had, however, once done it in five minutes; but, as a rule, the operation required twenty or thirty minutes.

A paper, by Mr. FREDERICK JAMES GANT, was read on

EXTERNAL LATERO-ANGULAR DISLOCATION OF THE RIGHT ELBOW-JOINT, A NEW FORM OF DISLOCATION, WITH ACCOMPANYING DISSECTION OF THE LIMB.

This injury occurred in the person of a man, aged 50, whose right forearm was jammed between the buffers of two railway carriages. He was admitted into the Hospital under the care of Mr. de Méric, who placed the limb at the Author's disposal for dissection. The articular ends of the three bones which form the elbow-joint were displaced into the following remarkable relative position:—Both bones of the forearm had undergone an external lateral dislocation, as complete as is usually met with, the larger sigmoid cavity of the ulna resting against

the outer condyle of the humerus. But both bones had also undergone displacement upwards and outwards, turning on the end of the humerus as a hinge until their axes formed a right angle, or rather less, with that bone, thus constituting an external latero-angular dislocation. The inner half of the larger sigmoid cavity embraced the condyle and capitellum (of the humerus) just behind its articular surface, the coronoid process resting externally against the one, and the olecranon being underneath the other, as far as the ridge between it, the capitellum, and trochlea. The head of the radius was in close relation, not contact, with the external ridge of the humerus, just above the condyle; the ridge bisecting the cup-like cavity of the radius. The head of this bone was, therefore, neither in front nor behind the humerus; it was not dislocated either forwards or backwards. With this wrenching displacement of the forearm outwards and upwards, all the ligaments of the elbow-joint, save the posterior one, gave way entirely. The disposition and state of the muscles, vessels, and nerves are fully described in Mr. Gant's original communication to the Society; also the external appearances of the limb, and their connexion, as signs of the dislocation above described. A large lacerated wound in the forearm, exposing the flexor muscles, with the radius and ulna, was the direct result of the contusion. A small aperture in the skin, just above and behind the inner condyle of the humerus, and leading into the joint, made the dislocation compound. Amputation of the arm in its upper third having been performed by Mr. de Méric, was followed by an excellent recovery, delayed only by partial sloughing of the stump, consequent on the extensive injury.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.—The following are lists of Candidates who passed the respective Examinations indicated:—

PRELIMINARY SCIENTIFIC M.B. EXAMINATION, 1865.

Pass Examination.

First Division.—Tempest Anderson, University College; Albert Henry Baines, Guy's Hospital; John Galley Blackley, Owen's College; William Arthur Bralley, Guy's Hospital and Downing, Cambridge; William Deane Butcher, St. Bartholomew's Hospital; Henry Cass, University College; Edward Colson, Guy's Hospital; Ethelrid Dessé, University College; Julius Dreschfeld, Owen's College; William Field Flowers, B.A. Oxford, Guy's Hospital; Robert Harris, Guy's Hospital; Adam Payton Hurlstone, University College; Theodore Maxwell, University College; Edward Nettleship, King's College; Temple Augustus Orme, University College; William Price, University College; Thomas Carlton Railton, Owen's College; John James Ridge, St. Thomas's Hospital; Richard Lawton Roberts, University College; Dalrymple Kinloch Robertson, St. Bartholomew's Hospital; Peter Thomas Scott, Guy's Hospital; George William Shipman, Guy's Hospital; Arthur Waller, St. Thomas's Hospital.

Second Division.—William Henry Allchin, University College; Charles Dorrington Batt, St. Bartholomew's Hospital; John Gordon Black, College of Medicine, Newcastle-on-Tyne; John Thomas Darby, University College; William John Davison, Newcastle College of Medicine; Clement Dukes, St. Thomas's Hospital; Francis de Havilland Hall, private tuition; William Murray Johnson, King's College; William Turner, Guy's Hospital.

FIRST B.SC. PASS EXAMINATION, 1865.

Entire.

First Division.—Tempest Anderson, University College.

Second Division.—Sidenham Duer, private study; James Scotson, University College; Alfred Micaiah Smith, Owen's College.

Excluding Mathematics.

First Division.—William Martin, B.A., private study.

Second Division.—Arthur William Kay Griffith, B.A., Spring-hill.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary Examinations for the Diploma, were admitted Members of the College, at a meeting of the Court of Examiners, on the 27th ult.:—

George Samuel Watson, Hammersmith; Ellery Turner, Beverley, Yorkshire; John Wyllie, Edinburgh; Robert Coleridge Powles, Ipswich; Francis William Underhill, Tipton, Staffordshire; Herbert Nankevell, Penzance; Gifford Ransford, Brompton, Middlesex; Pringle Hughes, Middleton, Northumberland; Charles Gore Ring, Clifton, near Bristol; Herbert Tibbits, L.R.C.P. Lond., Charterhouse-square; William Beverley Drinkard, Trinity-square, Southwark; Charles James Hardy Smith, Kentish-town; Albert Baird Seaman, Isle of Wight; Walter Thomas Prideaux, Wolston, Brixham, Devon; and James Frederick Cadle, Usk, Monmouthshire.

The following gentlemen were admitted Members on the 28th ult.:—

Ninian Alexander Williamson, Edinburgh; John Todd, Mile End-road; Thomas Arthur Wood, Isle of Man; Frederick Joseph Greening, Bromsgrove, Worcestershire; Woodforde Finden, Talbot-square, Hyde-park; John Morrison, Stirling, N.B.; Edward Francis Coghlan, Limerick, and Thomas John Saunders, South Molton-street, Grosvenor-square.

At the same meeting of the Court, Messrs. Arthur Borough Johnson, of H.M.S. *Implacable*, Devonport; John Mockridge, of H.M.S. *Boscawen*, Southampton; Alexander Murphy, of H.M.S. *Cumberland*, Sheerness; and Wm. George Ridings, of the Royal Marine Depôt, Deal, passed their Examinations for Naval Surgeons. These gentlemen had previously been admitted Members of the College, their diplomas bearing date respectively June 13, 1856, August 13, 1858, June 28, 1855, July 9, 1855. It is stated that out of the eighty-three candidates who presented themselves at the Pass Examinations no less that seventeen were referred back to their studies for six months. This is the last meeting of the Court for the present Session.

The following gentlemen having passed the necessary Examination, received their Diplomas in Dental Surgery at a meeting of the Board on the 2nd inst., viz.:—

Henry Ezekiel Sewill, of Clifton-gardens, Maida-hill; and Robert John Bell, of Cirencester-place, Regent's-park.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, July 27, 1865:—

John Roberts Dunn, Warbleton, Sussex; Thomas Arthur Wood, 119, Gower-street; Frederick Steele, Infirmary, Carlisle; Henry Horne Popham, Hornsey-road, Holloway; Algernon William Winn, Scarborough; John Kendrick Wynne, Oswestry; Robert Willmot, Stratford-on-Avon; John Batteson, Chesterfield; Henry Aubrey Husband, Green-vale, Jamaica.

As an Assistant:—

Howell Williams, Cardiff.

The following gentlemen, also on the same day, passed their first Examination:—

William Slingsby Mann, Birmingham; George Francis de la Cour, King's College, London; George Spearman, Henry Warlow, Edward L. Crowther, Thomas Birch Dyer, James Wood Cook, and James Hopkins Walters, Guy's Hospital; John Davies Thomas and Thomas Lettis, University College; William Edmund Cant, St. George's Hospital; Robert Charles Brookes, Westminster Hospital; Fred. Stuart Colquhoun, London Hospital.

APPOINTMENTS.

***** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.**

BARNES, JAMES H., L.R.C.P. Edin., has been appointed Consulting Surgeon to the Liverpool Workhouse Hospital.

CAMPBELL, Mr. D., has been appointed House-Surgeon and Apothecary to the Northern Infirmary, Inverness.

HAYDON, NATHL. JOHN, M.D., L.R.C.P., M.R.C.S., has been appointed Certifying Surgeon, under the Factories Act, Boney Tracey, Devon.

HAYDON, NATHL. THOMAS JOHN, M.R.C.S., L.S.A., has been appointed House-Surgeon to St. Mary's Hospital, London.

KING, FRANCIS, M.R.C.S. Eng., has been elected Resident Medical Officer to the Jersey General Dispensary.

LAWRENCE, Mr. H. CRIPPS, has been appointed House-Surgeon to the Coventry and Warwickshire Hospital.

MASON, FRANCIS, F.R.C.S., has been elected President of the Medical Society of King's College, London.

SUTTON, T., L.R.C.P. Edin., has been appointed District Medical Officer to the Salford and Pendleton Royal Hospital and Dispensary, Manchester.

DEATHS.

BEST, HENRY WADDELOW, M.R.C.S. Eng., at Thetford, Norfolk, on July 30, aged 58.

BUTLER, JAMES H., F.R.C.S., Deputy-Inspector-General H.M. Indian Army, at Dalhouse-in-the-Hills, India, on June 2.

CLARK, WM. P. C., L.F.P.S. Glasg., at John-street, Glasgow, on July 23.

COOPER, GEORGE, M.D., at Langford-place, Cork, on July 21, aged 28.

KENNEDY, RICHARD HARTLEY, late Physician-General of the Bombay Army, at the Great Western Hotel, Paddington, on July 24.

WHITE, SAMUEL, M.R.C.S. Eng., at Sherborne, Dorset, on July 25, aged 70.

POOR-LAW MEDICAL SERVICE.

RESIGNATIONS.

***** The area of each district is stated in acres. The population is computed according to the last census.**

St. Giles-in-the-Fields and St. George, Bloomsbury, Parishes.—The office of Assistant Medical Officer of the Workhouse is vacant; salary, £100 per annum.

Plomesgate Union.—W. H. J. Shirley has resigned the Earl Soham District; area, 9732; population, 2629; salary, £60 per annum.

Rotherham Union.—Dr. Hardwicke has resigned the Rotherham District; area, 10,584; population, 12,094; salary, £40 per annum.

Sherborne Union.—The Sherborne District is vacant, in consequence of the death of Mr. White; area, 14228; population, 7398; salary, £140 per annum.

APPOINTMENTS.

Abingdon Union.—William Cribb, M.R.C.S.E., L.S.A., to the Fifth District, until March 25, 1866.

Auckland Union.—Walter M. Kelly, L.R.C.S. Edin., L.S.A., M.D. St. And., to the Crook District.

Blything Union.—James S. Harris, L.R.C.P. Irel., M.R.C.S.E., to the First District, until June 24, 1866. Horatio Girdlestone, M.R.C.S., L.S.A., Dip. St. And., to the Ninth District.

Eastbourne Union.—Bransby Roberts, M.R.C.S.E., L.S.A., to the Second District, until June 24, 1866.

Gateshead Union.—George Douglass M.D. St. And., M.R.C.S.E., L.S.A., to the East Gateshead District. Robert F. Cook, M.B. Dur., M.R.C.S.E., L.S.A., L.M. Dur., to the West Gateshead District and Workhouse.

Hungerford Union.—Henry Palmer, M.R.C.S.E., L.S.A., to the Great Bedwyn District.

Northleach Union.—John D. Eames, L.R.C.P., M.R.C.S., to the Second District, until March 25, 1866.

Redruth Union.—George Michell, M.R.C.S.E., L.S.A., to the Gwennap District.

Salford Union.—Thomas M. Johnson, M.D. St. And., M.R.C.S.E., L.S.A., to the South Salford District.

Shepton Mallet Union.—Samuel S. Larcombe, M.R.C.S.E., L.S.A., to the Third District, until June 24, 1866.

THE CATTLE PLAGUE.—At the meeting which took place on Monday evening, at the Marylebone Institute, it was arranged that a provisional committee should be formed, consisting of Mr. Dexter, chairman; Professors Gamgee, Coleman, and Armitage; Drs. Druitt, Buchanan, Iliff, Burge, and Ballard; and Messrs. Bowron, Minter, S. Drewitt, W. J. Irons, C. Tainter, J. Abbot, J. Tickett, A. D. Phillips, and W. Conway, with power to add to their numbers. Mr. Armitage was appointed secretary, and Mr. Bowron treasurer. The committee met on Tuesday at the office of the Albert Veterinary College, 48, Pall-mall. Resolutions were passed to the effect that addresses should be written to the Lords of the Privy Council, the Lord Mayor and Corporation of London, the Board of Customs, the metropolitan cowkeepers, and agriculturists generally, expressing their desire to receive and afford information regarding the prevalent epizootic known as the Russian cattle plague, contagious cattle typhus, etc. The subject is one of interest to the public; they want to be informed as to the wholesome or unwholesome character of the milk or meat of affected animals. We may state, therefore, that cows affected with the plague do not yield milk, and that it is only in the earliest stages of the disease that the meat can be used, and that no malady can be communicated to the human frame from the consumption of either. There is little doubt that the disease is rapidly spreading. In Surrey it broke out in a dairy farm on Saturday, and out of a number of between 30 and 40 cows, 11 were affected by Monday. On the Plaistow marshes, out of one herd of 100 grazing beasts, five were lost on Monday, and another lot of cows—70 or 80—have been reduced to half their original number in ten days. These outbreaks have occurred where communication with imported stock is of daily occurrence. In Lambeth a cowkeeper purchased two Dutch heifers about six weeks back; he placed them with 14 others; they soon sickened, communicated the disease to the 14 others, and the whole lot had to be destroyed. These are, probably, among the earliest cases which occurred in this country. Since June 27 a dairyman in Surrey purchased 2 foreign cows at the Cattle-market. When he took them home he adopted the precaution of isolating them. Both died of the plague, and his stock of 30 cows was saved by the quarantine he had instituted. It is said that the disease is reported to exist at Leatherhead, where foreign cattle are turned out to graze, Ashtead, and Maidenhead; but there is, as yet, no reliable information on the subject. The association can not only receive and spread information, but can, if well supported, make arrangements by which the public may be protected from the sale of unwholesome meat, and stockkeepers be saved from the loss of being obliged to part with their stock in a panic.

THE seventh annual meeting of the Forfarshire Medical Association was held at the White Hart Hotel, Arbroath, on Thursday, July 13, 1865, at 2 o'clock p.m. Present—Drs. Nimmo, James Arrott, Pirie, Begg, J. L. Coupar, and J. W. Miller, Dundee; Wannan, John Traill, David Arrott, Dewar, and Munro, Arbroath; George Steele, Burness, Lawrence, Howden, and Watson, Montrose; Steel, Smith, and Alexander, Forfar; Mackie, sen., Mackie, jun., John Guthrie, and Hammond, Brechin; Todd, and Polson, Friockheim; Paton, Letham; and Forman, Fettercairn. Dr. Wannan, Arbroath, President, in the chair. It was agreed to hold the next annual meeting in Montrose, and that the following be the office-bearers for the ensuing year:—*President*—George Steele, M.D., Montrose. *Vice-Presidents*—David Johnston, M.D., Montrose; Matthew Nimmo, Esq., Dundee. *Secretary*—J. R. Begg, Esq., Dundee. *Treasurer*—George C. Pirie, M.D., Dundee. *Council*—Drs. Gibson, James Arrott, Christie, Crockatt, J. A. Cowper, and J. W. Miller. *Local Secretaries*—J. A. Dewar, M.D., Arbroath; S. Lawrence, M.D., Montrose; J. Guthrie, M.D., Brechin; G. P. Alexander, Esq., Forfar. Dr. James Arrott said that having had occasion to look into the laws of the Association lately, he thought they were not so perfect as they might be, and that it might be advisable to have them re-considered. He accordingly moved "That it be remitted to Drs. Lawrence and Howden and the Secretary, to revise the laws of the Association, and submit them to the next general meeting," which was unanimously agreed to. Dr. Lawrence said that the minutes which had just been read had suggested the question of Medical Ethics, and it seemed doubtful whether with its present laws, the Association was entitled to take up such a subject as was there alluded to; that on a former occasion he had procured a copy of the laws of the Manchester Medico-Ethical Society, and that if the members thought it desirable, he would, with the assistance of these, consider the subject, and be prepared to bring some definite proposal before the next general meeting. This was agreed to, and Dr. Lawrence was requested to have the result of his deliberations submitted to the Council, and printed and circulated amongst the members previous to the general meeting. Dr. Munro, Arbroath, introduced to the notice of the members an infant about ten weeks of age, the subject of congenital hydrocephalus, with spina bifida. Dr. Wannan, President of the Association, then read a paper entitled "A Short Narrative of a few Medical and Surgical Cases," and on his conclusion, Dr. James Arrott thanked him in the name of the Association for his paper, which he had so carefully prepared and so kindly read to the meeting. This concluded the business of the meeting.

DIAGNOSING POISON AT FIRST SIGHT.—MARYLEBONE.—Mr. Watson Bradshaw, M.D., of Welbeck-street, Marylebone, asked advice under the following singular circumstances:—A short time ago his cook left his service in a very abrupt manner, and two days afterwards he received a message from a house at the West-end that she was at the point of death. On going to the house mentioned he ascertained that two days previously the cook had arrived there, saying she was very ill. A Medical man was sent for, who, after asking certain questions, exclaimed "Good God, you have been slowly poisoned." He then advised that a bottle of medicine which the applicant had prescribed for his servant and also a small quantity of wine his wife had given her should be analysed. When the cook came downstairs to see him she wore a moire antique dress, and was apparently in good health. He called in two Medical men, both of whom stated that nothing was the matter with the woman. He then saw the first Medical man, who would give no explanation of his conduct, and he wanted to back out of what he had said. When the cook was in his service she was much subject to hysterical mania, and the only medicine he gave her was composed of ammonia and gentian. Her disease appeared to have become more serious on reading the report of the trial of Dr. Pritchard. The woman's brother had been to his butler and charged him with having administered mineral poison to his sister. Mr. Mansfield said that, although the application was a proper one, yet he had not any jurisdiction in the matter. Who on earth would poison a cook when she could be discharged at any time? As a rule, hysterical people were full of vagaries, and they would be affected nervously by reading reports of the Pritchard case. The applicant, after thanking his worship, retired.

SEIZURE OF UNWHOLESOME MEAT.—WORSHIP-STREET.—Francis Cousins, a wholesale German sausage-maker, in Durham-grove, Homerton, was charged by the Hackney Board of Works with having unwholesome meat in his possession in preparation for sale as food. Mr. Shorter, clerk to the Board, said that the offence the defendant had committed was punishable under the Act the 26th and 27th Victoria, cap. 117. It rendered the offender liable to a penalty of £20 for each offence, or, at the discretion of the magistrate, to three months' imprisonment without the imposition of any penalty. The Board had caused handbills to be widely circulated expressing their determination to put the law in force in all such cases, and complaints having been made by the defendant's neighbours, his premises were visited by Dr. Tripe, the Medical officer of health, on 7th and 27th of June and the 10th of July, as well as the 24th, when this seizure was made. It was then found that he was using at least doubtful meat in

his business, and he was summoned before the Board of Works and warned that he must not keep pigs to the detriment and danger of the neighbourhood; and, in particular, must be careful not to use any but wholesome meat in his manufacture. This warning appeared to have been thrown away upon the defendant, from whose premises 50 lbs. or 60 lbs. weight of meat, in a most disgusting state of putrefaction, had been brought to that court and at once condemned by the magistrate. The defendant had rendered himself liable to something like £120 in penalties, or eighteen months' imprisonment in default. They did not seek for such a penalty. Dr. J. W. Tripe, the Medical officer of the district, confirmed Mr. Shorter's statement as to the complaints of the defendant's neighbours. He visited the defendant's premises in consequence. On the 24th ult. he inspected them in company with Mr. Valentine, the Inspector of Nuisances. There was no shop for retail trade. It was a factory, with machinery, and in close proximity to the machinery was a large pickle-tub, in which he found six large pieces of flank of beef. The meat was most unwholesome. The fibres were disintegrated, gas was between the tissues, it was wholly unfit for use, and there were great numbers of maggots floating about on the surface of the brine. If used for food, it would produce sickness and diarrhœa; its stench had so affected his hands that he had been obliged to use disinfecting fluid to purify them, and it was altogether so offensive and bad as to make him ill. He had suffered from diarrhœa ever since. On his seizing the meat the defendant obstructed and assaulted him, took away two of the pieces and began to wash them, saying they intended to use the meat themselves. The defendant's wife threatened to bring an action against him for loss sustained by his stopping her men in working up this meat. There were the usual appliances there for the manufacture of German sausages, but only a small quantity of other meat. Mr. Horwood Valentine, Inspector of Nuisances, assisted in seizing the six pieces of beef, which were putrid. They had turned green, and were unfit even for a dog to eat. The six pieces weighed together about half a hundredweight. Mr. Cooke said that, while it was important that a man's business should not be unduly interfered with, it was extremely important, on the other hand, that the public should be protected, and not have passed off upon them, under the disguise of sausages, meat that would produce disease. Here meat was found which was most unwholesome and wholly unfit for food, close to the machinery by which meat was converted into sausages, and the Medical officer was not only met at the outset by opposition from the defendant himself, but his wife showed conclusively that this meat was in preparation for sale by threatening him with an action because, by taking possession of it, he had stopped the workmen from making it up into sausages. The evidence for the defence was, that brine had the effect of staying disease and the decay of meat that had begun to become foul, but in this case he could not help coming to the conclusion that the meat must have been unwholesome and unfit for food when put into the brine. He had hardly ever in the course of his life seen meat more diseased than this was when he saw it at that court. At a time like this, when disease was so prevalent, he very much doubted if he ought to mitigate the penalty at all. It was stated, however, that the infliction of the full amount of penalty upon the defendant, in his circumstances, might be ruinous to him, and he would take that into consideration, and the penalty he should impose upon him would be £5, with the costs, which would be 12s. more. Mr. Shorter then said he should apply for a summons against the defendant for his assault on the Medical officer, and Mr. Cooke said he would grant it if he did so.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Owing to the report of the British Medical Association, the last chapter of Dr. Richardson's Medical History of Oxford is postponed this week.

We are sorry that our present arrangements do not permit us to insert notices of marriages.

"The Medical Student's Guide to the Hospitals of Paris," by John Wilkin, M.R.C.S., was published in 1838 by Renshaw, price 3s.

Mr. Shinkwin's pamphlet has been received. Mr. T. Spencer Wells resides at 3, Upper Grosvenor-street.

Abraham.—Pigs, as well as ducks, dogs, and wild birds, devour human excrement or parts thereof; hence are liable to be subjects and propagators of parasitic diseases.

The Medical Directory.—We have forwarded to the Publishers a complaint of the inaccuracy of an entry in this useful publication. It is a difficult thing to hinder a man from puffing himself.

The Gresham Lectureship.—We learn that the successful candidate for this lucrative appointment is Dr. Henry Powell, of Lansdowne-road, Brighton, described in the Medical Directory as M.D. Oxon., 1839, F.R.C.P. Lond., 1840, late Senior Physician to the Coventry Hospital, and formerly Physician to the Tunbridge Wells Infirmary. We have heard it said that he possessed a few more important qualifications for obtaining the present post, viz., that he was a member of the Mercers' Company, by whom this important piece of patronage is held in trust for the benefit of the public. It is no disrespect to Dr. Powell to say that there were many gentlemen well known as laborious lecturers and experimenters in Physiology who might fairly be said to have earned such an appointment, such as Drs. B. W. Richardson, Lionel S. Beale, Alfred S. Taylor, Black, Herbert Davies, Headland, and Leared, but who were passed over because they were no Mercers.

Medical Defence Association.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Owing to an oversight, I have only to-day read the paragraph upon the Medical Defence Association which appeared in your impression of the 15th ult. I have thus lost the opportunity that was afforded on the 21st of conveying to the Provisional Committee my desire of joining in the furtherance of the object which the Association has in view. Allow me to ask, through your columns, for the address of the Secretary, or that of any one of the promoters of this very laudable undertaking, to whom communications can be made.

I am, &c.,

Birkenhead, August 1, 1865. Essex Bowen.

Fresh Vaccine from the Cow.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Allow me to draw your attention to an advertisement which will appear in your Medical paper for Saturday next upon Vaccination by Animal Vaccine Lymph. At a considerable expense I have been induced to allow a number of experiments to be made upon cows kept for the use of my family, and having entered fully into the subject of animal vaccination as carried on so successfully in France and Naples, I have advertised to the Profession the fact of my having (and, if the Profession and the public support me, I shall continue to have) cows always in a state of vaccination. I trust the importance of the subject will be a sufficient excuse for the liberty I have taken in thus addressing you.

I am, &c. F. Crook.

Vine Cottage, Forest-hill, July 26.

Calabar Bean.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—About two months ago I forwarded a query (*Medical Times and Gazette*, June 3) respecting the active principle of the Calabar bean, and the existing need of some simple name by which to distinguish it. Since my letter was printed, a paper has been read at the French Academy of Sciences entitled "Chemical and Physiological Researches on an Alkaloid Extracted from the Calabar Bean," by MM. A. Vée and Leven. (Sitting of June 5, reported in the *Comptes Rendus de l'Academie.*) The first statement of the memoir is as follows:—"Qu'il existe dans la fève de Calabar, sémence de *physostigma venenosum*, une matière cristallisable, capable de neutraliser les acides, et pour laquelle on propose le nom *d'ésérine*, dérivé du mot *éséré*, denomination indigène de cette semence."

Can any one of your readers, who may happen to have resided in the neighbourhood of the Calabar River or the Gaboon, inform us what this word, which in the French memoir is written *éséré*, really means, and by what people the word is used? Also, whether this spelling really conveys its correct pronunciation? It is always hazardous to adopt into scientific nomenclature words from a barbarous and little known tongue unless those who introduce them are thoroughly acquainted with the language. Several erroneous terms from time to time have been imported into our vocabularies from want of due precaution and investigation.

July 28. I am, &c., Nominis Umbra.

Sharp Practice.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—May I hope for your opinion on the following facts:—A delivers a woman of a child presenting feeble signs of life. He is anxious to try electro-magnetism for the purpose of resuscitation. He directs a messenger to go to the nearest Surgeon to borrow an electro-magnetic apparatus, meanwhile he continues his efforts to save the child. After a short time B, a Surgeon in the neighbourhood, arrives without the instrument. A expresses his astonishment and regret that B should have taken the trouble to come, as he himself, A, could use the instrument without assistance. B says he sent to a neighbouring institution for the electro-magnetic apparatus, and remains in the room. A, seeing that it was useless to delay any longer with the child, is attending to the mother, and while in the act of applying the binder B comes to the bedside and tells how he applies a binder on his patients, etc. The instrument now arrives, and B proceeds to apply it to the infant, of course with no effect. Immediately afterwards B abruptly leaves the room, meets the husband on the stairs, and demands his fee of one guinea. He is paid by the man, and after a little grumbling he returns 5s. When A hears this he is very much surprised, calls on B, tells him there was some mistake, as he never required and never asked his assistance, and that the poor man could not afford to pay so much. B says, "He asked me to go, and I told him my fee would be a guinea." The man denies that B mentioned a word about his fee. A tells him he never heard of such a thing, and appeals to his honour and sense of etiquette in order to refund the fee. B replies "The man made a mistake, let him pay for it; you can insist upon your fee; he can afford it," etc. B says he would leave it to arbitration, and consents to any two Medical gentlemen named by A. The opinion given by these gentlemen is to the following effect:—"B is not entitled to a fee of one guinea, under the circumstances. B may claim a fee for an ordinary visit, but ought to waive his claim under the circumstances. B was guilty of a breach of professional etiquette in animadverting, in the hearing of the patient and her attendant, upon A's method of applying a

binder," etc. Even after B reading the opinion of the two Medical men referred to, he answers by saying "that he submitted the matter to a Medical friend of his, who indeed concurred with him."

I am, &c. ALPHA.

*** In our opinion, B was wrong on every point, if the case be correctly stated.

Monument to Dr. Baikie.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The countrymen of the late distinguished African traveller, Dr. W. Balfour Baikie, R.N., are about to erect a monument to his memory in the cathedral of his native town, Kirkwall, Orkney; and I received a letter a few days ago on the subject requesting me to mention this intention to any scientific or other friends in London who might take an interest in, and aid the project; but as I have to leave town in a few days, I am unable to use such efforts as I otherwise would gladly have done. If you, sir, would kindly give insertion to this note, it will do much more than I or any one else could to further so laudable an object.

Dr. Baikie was as well known to the scientific world for his energy, industry, and scientific attainments as he was to his personal friends for his kindness of heart and genial qualities. Among those whose esteem and good will he gained at an early age was the good and great Sir John Richardson, so recently taken from among us, whose friendship, sincere and true (as it could only be), was an honour to any man.

Dr. Baikie has, I am told, during his seven years' residence in Africa, collected a very large amount of valuable information which has been placed in the hands of another eminent African explorer, also a Medical man, better qualified probably than any other living person to put Baikie's notes in proper shape for publication.

Subscriptions would, I believe, be received and acknowledged by Robert Scarth, Esq., Banker, Kirkwall, Orkney.

I am, &c., JOHN RAE, M.D.

London, July 21, 1865.

What was the State of Pritchard's Mind Before and During the Time of the Tragedy?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the trial of Pritchard we were not, I believe, informed whether abortion was produced in the case of Mary M'Leod by means of instruments or by the administration of drugs; but it would be interesting to know, as the whole system of poisoning was more like that of a bungler, or of a man "*non compos mentis*," rather than that of an educated Medical Practitioner, who, in a sound state of mind, must have seen the folly of giving tartarised antimony with a view to destroy life or to simulate disease in the face of the Physicians who were called in consultation by the murderer himself.

In the second confession made by the wretched man, he acknowledges that he was seized with "a species of terrible madness;" and this appears to have been accelerated by the "use of ardent spirits," which are sometimes had recourse to by those who labour under hereditary suicidal mania. An instance such as this came under my observation some time since: a man not succeeding in the attempt to destroy himself, acknowledged that he was so low spirited that he could not "do it" without drinking a quantity of spirits.

It is remarkable that a man should have laboured under that state of "terrible madness" without attracting the attention of those around him, especially the victims themselves, when the work of destruction was being perpetrated. Had such a state of mind been observed, the fearful tragedy might, perhaps, have been arrested. It would be interesting, however, in a psychological point of view, to know whether Pritchard was labouring under insanity, or whether insanity ever existed in any of his blood relations or parents.

Whenever insanity, especially homicidal or suicidal, has been known to exist in a family, every precaution should be taken by keeping a watchful eye over those who exhibit unbridled propensities, and then society would be better protected and much crime prevented.

I am, &c. A PHYSICIAN.

Means of Averting Death from Chloroform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—One cannot help thinking that the mode of averting death from chloroform recommended by Dr. Bullar, of Southampton (*ante*, p. 127), resolves itself into the otherwise old, but wise, idea of exciting the respiratory, in place of the impossible cardiac system of nerves. If we had not had thousands of experiments on the lower animals, all but dead from chloroform, which animals were restored by electricity to the respiratory system, we might hail this new "wrinkle" from Southampton as of note and notable; but it substitutes one thing for another—a veriest *anceps remedium*—for one that has never yet got fair play, and which never fails, if properly applied, in exciting respiratory action, the one thing essentially needful in chloroform accidents. May there be a "Judeus Apella" who believes in correlation of force to the same extent as Dr. Bullar. Not I, certainly (excuse the egotism), to the extent that when we smack a patient about the trunk, legs, arms, etc., or tickle a schoolboy with a rod, it brightens the intellect, as "the mechanical force," to quote Dr. Bullar textually, "of the hands of the strikers is converted into the nerve force of the patient, and is conveyed to the spinal cord, and is reflected from it through the sympathetic to the heart and capillaries;" and, therefore, the nerve force blotted out by chloroform is restored—the birch rod a veritable cordial!

Dr. Bullar thinks time is lost in trying galvanism—"hinc illæ lachrymæ." No doubt it is a troublesome agent in private practice, but then it ought to get a fair trial in Hospitals, which all such hints as this from Southampton tend to prevent being accomplished.

The case cited by Dr. Bullar is a very interesting one, impending death as one may conceive from injury to the nerves of the neck in removing enlarged cervical glands. Mr. Hilton, of Guy's, has demonstrated some singular interlacings and sympathies between those nerves of the neck and those of the heart; and some experiments on animals with chloroform rather point towards "inhibitory" irritation of the cardiac and cervical plexuses. It is possible, even in operations on enlarged tonsils, a danger not dissimilar may arise, rather than mere asphyxia, as has been supposed in the practice of the Islington Dispensary, the essential or cardinal point to be always kept in mind being rather to attend to the respiration in all such cases than to any theoretic cart-before-the-horse views of acting on the heart first. I am, &c.

Sackville-street, July 29. CHARLES KIDD, M.D.

COMMUNICATIONS have been received from—

NOMINIS UMBRA; AMOR VERITATIS; F. CROOK, Esq.; R. T. CLIFFORD DAVIES; APOTHECARIES' HALL; M.R.C.S.; J. R. BEGG, Esq.; Dr. CHAS. KIDD; ABRAHAM; Messrs. R. ELLIS and SON; Dr. ESSEX BOWEN; Dr. T. C. SHINKWIN; ALPHA; Dr. JOHN RAE; Dr. T. KITCHENER; Mr. F. MASON; Mr. H. C. LAWRENCE; Dr. J. H. BARNES; Mr. THOMAS BURNIE; Mr. J. C. GELL; Dr. W. ABBOTTS SMITH; Dr. R. SOMERVILLE; Mr. C. H. BLACKLEY; X. Y. Z.

BOOKS RECEIVED.

A Peep into the Future of the Metropolitan Railway, and a Forecast of the next Dividend. By One who Knows. London: Effingham Wilson.

The Microscopical Journal. No. 19. July. London: John Churchill and Sons.

The Nineteenth Report of the Commissioners in Lunacy to the Lord Chancellor.

The Quarterly Journal of Science. No. 7. July. London: John Churchill and Sons.

A Dictionary of Science and Art. By W. T. Brande, D.C.L., etc., and the Rev. G. W. Cox, M.A. London: Longman and Co.

Transactions of the Ethnological Society of London. Vol. 3. London: John Murray.

Der Croup. Von Dr. Friedrich Pauli. Wurzburg, 1865.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 29, 1865.

BIRTHS.

Births of Boys, 1005; Girls, 942; Total, 1947.
Average of 10 corresponding weeks, 1855-64, 1733·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	753	661	1414
Average of the ten years 1855-64	635·5	587·2	1222·7
Average corrected to increased population..	..	..	1345
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	2	7	4	4	6	8	24
North ..	618,210	1	..	10	1	9	9	71
Central ..	378,058	1	4	3	1	3	4	26
East ..	571,158	4	..	9	..	9	15	63
South ..	773,175	1	12	12	2	12	8	77
Total ..	2,803,989	9	23	38	8	39	44	261

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·009 in.
Mean temperature	66
Highest point of thermometer	85
Lowest point of thermometer	51·4
Mean dew-point temperature	56·1
General direction of wind	Calm & Var.
Whole amount of rain in the week	0·15 in.

APPOINTMENTS FOR THE WEEK.

August 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

7. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

8. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

9. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

10. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

11. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES
ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

LECTURE I.

(Continued from page 111.)

AMONG the numerous influences which enfeeble nervous power directly, there is scarce any one which acts more constantly and powerfully than prolonged exposure to heat. We have but to think of our commonest experience to be convinced how much more vigour and capacity for muscular exertion we have in cold than in hot weather. This uniform effect of the action of heat on the nervous system cannot, I think, be left out of account in our endeavours to comprehend the pathology of that remarkable malady termed "coup de soleil," or, better, heat apoplexy. One point I merely mention as quite ascertained, that it is the degree of temperature especially which produces the morbid effect, and not the direct action of the solar rays. Travellers returning home by the Red Sea have been found dead in their cabins in the night during the prevalence of intense heat; and the same has been observed among soldiers in barracks and Hospitals. Intemperance and all depressing causes promote the occurrence of the disorder; and, on the contrary, sobriety, energy, and activity give wonderful power of resistance, as memorably exemplified by our men before the walls of Delhi. Sir Ranald Martin records a page of his experience which both illustrates the capacity of resistance afforded by animation and energy, and the prostration induced by the developed disorder. He says:—"We made a forced march of forty miles under as powerful a sun as ever shone in Burmah. The heat oppressed us almost beyond endurance, and many powerful native officers and troopers fell off their horses, vomiting, convulsed, cold, and covered with profuse clammy sweat; yet not one of us European officers, commissioned or non-commissioned, fell sick either on the march or after it; but we were all young, healthy, and temperate in our habits, in the high, hopeful spirits of an active pursuit; we were also well seasoned to the climate, and such men will bear, with comparative impunity, fatigue and exposure almost beyond belief." Whatever influence other causes may exert, it seems to me certain that prostration of nervous power must be ranked as the principal. Some men perish so rapidly that the fatal event must be ascribed to syncope; and Dr. Alison has observed that intense heat applied to the whole body tends to produce death by syncope, as in concussion of the brain. Death has been produced occasionally in this way by the hot bath. The Turkish bath very often causes an uncomfortable approach to syncope in novices. Dr. Aitken, in his excellent article on heat apoplexy, recognises this as one of the ways in which death may occur. The passage just quoted from Sir R. Martin affords evidence of the prostrating action of heat on the nervous system; the symptoms were quite those of a severe cerebral shock or concussion. In another class of cases, oppression of respiration is the most prominent symptom during life, death ensues from asphyxia, and the lungs are found intensely congested. Here it is a matter almost of certainty that the pulmonary affection is induced through failure of nervous power in the medulla oblongata, in consequence of which the respiratory movements are not duly performed. If the congestion were the result of deficiency of oxygen in the air, or of accumulating carbonic acid in the blood, the symptoms would come on much more gradually, and not in the sudden, severe way in which they are described to do not unfrequently by a recent able writer. Moreover, they would not be confined to a comparatively small number of persons. Mr. Bonnyman states that in such cases tetanic convulsions ensue, lasting a few minutes, and followed by profound stupor, from which the patient cannot be roused; the muscles are relaxed; the breathing is slow, deep, and stertorous, sometimes accompanied by a loud, prolonged, painful moan or cry. The skin is intensely hot and dry, but with partial perspiration about the head. The countenance is pale; the face not distorted; sometimes the convulsions recur; the breathing becomes more and more laboured, and the expired air cold. Death may ensue in such a condition in from ten minutes to twelve hours. Now, clearly this is not the history of any mere ordinary congestion of the lungs; and, on the other hand, the phenomena accord very well with the view of primary nervous paresis itself conditionating the pulmonary complication. It is, I think, most probable that the pulmonary plexuses become paralysed, the capillaries lose their tone, and so the conditions favourable to free transit of the blood through the lungs are still further impaired, and actual extravasation to a greater or less extent takes place. A case is related by Beauprè where this had evidently occurred on various mucous surfaces, which were covered with hæmorrhagic spots, while the bladder contained a large amount of blood. The patient had been stricken down suddenly while mounting guard on the ramparts, exposed to the whole power of the sun, was taken up senseless, and died six hours after.

In other instances of slower progress, where the disorder commences with feverish debility in the morning, and terminates in stupor and fatal coma in the afternoon, the cerebral hemispheres are more especially affected, their vessels are found exceedingly congested, and those of the lungs less. I suppose that in these instances paresis of the hemispheres takes place primarily, and that congestion ensues on this partly in consequence of the gradual arrest of respiration, and partly from dilatation of the carotids and vertebrals, and increased blood-flow to the head. In most cases there is more appearance of sanguineous determination than of serous effusion. Pulmonary engorgement, Dr. Aitken says, is not always present, and therefore cannot be of the essence of the malady. He adds, after noticing the modes of death by syncope, by asphyxia, and by coma, that these states may, and generally do, co-exist together, while symptoms of either may predominate. The conception of primary, direct paralysis of some one or more nervous centres, the focus of disorder varying in different forms of the malady, seems to me to supply the link which is needful to connect them together. Thus we may have the cardiac centres directly paralysed, or the pulmonary, or the intellectual, and in many instances they are paralysed in different degrees simultaneously. Primary cerebral affection seems certainly to have occurred in those cases alluded to by Dr. Aitken, in which men started up suddenly and attempted to escape from the tent, staggering about and struggling violently when laid hold of, evidently much alarmed and anxious to escape from some imaginary object of terror, but in a few minutes becoming insensible. In some instances the emotional centres seem to have been first affected where the disease commenced with an uncontrollable burst of laughter. Sometimes the symptoms seem to point to an early and considerable implication of the spinal centres. Duclaux gives an account of various phenomena produced by excessive heat in reapers, whose posture would especially expose their backs to the sun, which were evidently very similar to those of heat apoplexy. The patients were suddenly attacked with headache, muscæ volitantes, general cyanosis, and derangement of the digestive functions. Insensibly and in a short space of time there occurred a failure of strength in the limbs, substances held in the hands were permitted to fall listlessly to the ground, and the gait became uneven and irregular; there was giddiness and frequently syncope. Pain was commonly complained of at various parts of the vertebral column.

The premonitory symptoms are all indicative of nervous exhaustion. Dr. Barclay says the general complaint was extreme debility, weariness, and prostration on any exertion, vertigo, nausea, and in many cases incontinence of urine, especially after exposure to the sun. An early symptom in some cases is a sensation of sinking, or of insupportable weight and uneasiness, referred to the epigastrium. This in all probability depends on a paresis of the solar plexus.

Remittent and intermittent fevers are common results of sun-stroke—a fact which indicates that the same paralytic condition which primarily affected the cerebro-spinal system has also extended to the sympathetic and vaso-motor nerves. Paresis of these nerves is necessarily present in all febrile states, and the connexion of the above-mentioned fevers with a multitude of the most various neuroses is matter of common experience, so that it is only what might be expected according to the original hypothesis that such diseases should be associated with the prostrating effects of heat. Mr. Bonnyman, indeed, believes that further investigations will probably show that malarious fevers and heat apoplexy are due to the same or to closely allied causes.

The after symptoms, as Sir R. Martin truly says, are of extreme interest, and they, as well as the more chronic and subdued influences of insolation, throw much light on the

pathology of the disease. The long continuance of these effects and their varying and ataxic character are very remarkable, and approximate the morbid action closely to some of the severe forms of nervous depression observed among ourselves —*e.g.*, to those existing in the subjects of aggravated hypochondriasis, and baruria. The following are some of the conditions observed by Sir R. Martin: — Severe mental depression, with sense of weariness along the spine; deafness more or less severe, with impaired vision, and inability to use the eyes in reading and writing; various paralytic affections, more or less general, as hemiplegia and local palsies, as of the eyelids, cheeks, or upper extremities, with and without loss of sensation; distressing hysterical states of the nervous system, with absence of self-control in laughing and crying—the paroxysm being followed by great prostration of nervous power. It is of course quite possible that in some instances more or less of actual organic change may have occurred, but in the great majority the character of the symptoms is decidedly that of dynamic derangement. The case has been related to me of an officer who had sunstroke in India some years ago, and still continues to suffer from various sequelæ, though he has been in England for more than a year. His greatest distress has been from periodical seizures of complete blindness lasting some hours. At first he was extremely anæmic, but is not so now. A gentleman, aged 40, under my care, has suffered from the effects of sunstroke for eight or nine years, his chief symptoms being giddiness, inability to read or walk, and more or less deafness and noise in the ear. At first he had no giddiness, but jerkings and twitchings of the limbs. The giddiness is the chief cause of his inability to read and walk; it used to be brought on by the least exertion, mental or bodily. At one time he was for some months unable to go up or down stairs, and required the support of a stick. An eminent authority in nerve disorders who saw him with me diagnosed chronic softening of the cord and anæmia of the brain. His intellect was quite perfect, and he could converse readily for a good while even when at his worst. In relapses which have frequently occurred after improvement, wine is generally very beneficial, and he can take a good deal; but as he gets better he becomes indifferent to it. At times he is very much dependent on his wine for continuous sleep at night. He has taken during the four years he has been under my care iron, tannin, bark, valerian, nitro-muriatic acid, argenti nitras, and strychnia with considerable benefit. The three last have appeared to be most beneficial. The right ear, which used to be very deaf, has improved, and is now better than the left. The variability of the symptoms, the "juvantia," and the gradual improvement seem to me to prove that the phenomena are much more dependent on functional paresis than on chronic degeneration of structures.

Another sufferer from insolation, who had been thirteen years in India, but had been at home the last two, related to me the following curious history:—When he left India he could not use either his legs or arms, he could barely stand, but not without risk of falling: once he did fall, and hurt himself a good deal; he was unable to feed or dress himself; this continued till he got to Suez returning home, after which he gradually regained power, but the left leg is still very weak. The loss of power came on first in the left foot with a sense of numbness: it affected both legs, then the left, and lastly the right hand. After it had continued about a month he sailed for Europe. For the last two or three months of his stay in India he used to have regularly every fifteen or sixteen days about 11 p.m. attacks of purging, retching, and severe abdominal pain. He appears to be a well-made man, in good condition, and presents no manifest traces of syphilis. At present he has attacks amounting to complete loss of sight which come on quite suddenly, and are always preceded by feelings of being quite well. He may be at table when a kind of waving with all kinds of colours before his eyes comes on, and presently he is unable to discern the features of a man on the other side of the table. This state may last three-quarters of an hour, then ceases completely, and is succeeded after an interval of about half an hour by very severe headaches which last about thirty-six hours, and are succeeded by pain in the lumbar region of spine for two or three days more. The attacks are shortened by taking quinine and malt liquor. Whilst the headache lasts he has large whitish urticarious bumps on the left thigh. The attacks now described occur about once a week, but after he reached England he was much better, and was free from them for a long time. He finds very frequently that his mental powers fail: he cannot recollect while he is writing a letter the subject he is dealing with, his memory is notably enfeebled.

In this instance we have motor-paralysis and sensory (both of special and common sensation), headache, spinal pain, and failure of intellectual power, all apparently the result of enfeebling climatic influences, and not depending on organic lesion.

(To be continued.)

ORIGINAL COMMUNICATIONS.

IDIOPATHIC ANEURISM OF THE DISTAL END OF THE ULNAR ARTERY, SUCCESSFULLY TREATED BY COMPRESSION.

By HAYNES WALTON, F.R.C.S. Eng.

I THINK it worth while to publish the case because it illustrates the therapeutic value of the modern treatment of this kind of arterial disease in a minute form. It completes, too, the evidence in detail of the general applicability of compression whenever, as a rule, it may be resorted to. It would be impossible to find an example of aneurism better fitted, in all respects, than this seemed for the treatment by ligature, because of the size of the vessel, the superficial position, the relation of parts, and the nature of the collateral circulation; but, withal, there remained still the peculiar risks incidental to an operation on a blood-vessel, and common to all Surgical operations, for, unfortunately, there is not a diminution in the risk in proportion to the lesser size of a wound; therefore I did not hesitate, but at once resolved on trying pressure.

On December 2nd of last year, a student in the St. Mary's Medical School, aged 21, discovered a pulsating tumour over the ulnar artery, an inch from the wrist, and applied to me; he could find no cause for it. I made a careful examination, and satisfied myself that there was before me an undoubted instance of ulnar aneurism; it was about the size of a horse-bean.

It is needless to go into detail. Suffice it to say, I applied a cork compress with strapping-plaster on the tumour, and over about three-quarters of an inch of the proximal portion of the artery. I took this off a few times, and immediately re-applied it, as occasion seemed to require. The arm was kept in a sling.

Although the aneurismal pulsation was reducing, I thought it right to discontinue this kind of compression, because the hand swelled, and in a fortnight I changed it for a little spring clamp. This appliance, like the other, was kept on perpetually, only shifted a little higher or lower occasionally to afford relief. In a fortnight more—that is, a month from the commencement of the treatment—the aneurismal sac was less in size, and contained a clot. Only a feeble circulation could be felt in it, and a less than natural impulse on the vessel beyond the sac. The force of the artery entering the sac was also less. The sling was now laid aside, and the hand and arm used moderately. Three weeks later there was no pulsation in the sac, which was much smaller, the clot being much less. Neither was there pulsation on the distal side, and but very faint movement in the artery within half an inch of the sac.

The clamp was now taken off occasionally—that is, sometimes during the night, sometimes during the day.

At the present time (July 20), nearly eight months having passed away, there is not the slightest evidence in pulsation or clot of the aneurism. The only difference to be found in the arm is the absence of pulsation of the ulnar artery in the spot where the aneurism was formed and beyond it.

That a better result could be got, with less injury from treatment or even inconvenience, I think very unlikely. I am fully satisfied, and so is my patient. I am well aware that the compression may have been applied somewhat differently and the details otherwise managed; but this really matters not in such instances if principle be kept in view and the processes by which the cure is to be established are obtained.

69, Brook-street, Hanover-square.

MAGISTRACY. — Nicholas McCann, Esq., M.D., of Parliament-street, has been appointed by the Lord Chancellor, on the recommendation of the Lord Lieutenant, to the Commission of the Peace "both for the County of Middlesex and the City and Liberty of Westminster respectively," and took his seat on the Bench at Clerkenwell on Monday last.

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Medical Times and Gazette.

SATURDAY, AUGUST 12.

THE CATTLE PLAGUE—WHAT SHOULD BE DONE?

We are told there was a time when that nation which was most burdened of all with strict and uncompromising laws "did every man that which was right in his own eyes." Government there was none. When we consider how in our days personal interest and greed are apt to warp men's moral perceptions, we often wonder at this strange condition of affairs. Yet there is somewhat of a parallel to it to be seen amongst ourselves to-day. We are blessed, as people say, with a Government which inscribes "Liberal" upon its banner, and which so far carries out its principles as to leave every man free to do what is right in his own eyes; and this in the pressure of a great national calamity which, unless soon brought to an end, will to a certainty issue in something very much like a national dearth of provisions. Through the mouth of Mr. Arthur Helps, we are told, almost in as many words, that the Government of the country mean to do nothing but give good advice. In a letter to Lord Tredegar, the President of the Royal Agricultural Society, the Clerk to the Council writes thus—"The powers vested by law in the Government with respect to the diseases of cattle are very limited; and, moreover, it does not appear that in countries where the Governments possess the amplest powers for dealing with cases of this kind, and where they have exercised those powers with great vigour, any signal success has attended their measures. The Lord President, therefore, thinks that it is upon the care and circumspection of individuals interested in the cattle trade that the chief dependence must be placed for precautions to be taken which may prevent the spreading of this formidable disease." The result of this inaction, which nothing can justify, is that as things are going on now, there will be shortly not a nook or cranny in the United Kingdom where the disease, that might have been excluded with proper care, and having gained admission might have been immediately circumscribed, will not have penetrated. Every market day beasts with this disease are sent to the Metropolitan Cattle Market, and not to that only, but to the store markets in various parts of the kingdom. The diseased beasts are purchased by meat salesmen and slaughtered for food. It was only on Wednesday that the Medical Officer of Health for Islington seized eleven cows about to be slaughtered in the abattoirs of the Metropolitan Cattle Market, all of whom were in advanced stages of this disease. These cows had come from some neighbouring dairies, and were consigned to a salesman in Leadenhall-market, who had sent them for slaughter. Had they not been seized, they would doubtless have been sold as human food.

Well, then, as Government refuses assistance in this emergency, what is to be done? The Vestry of Islington, moved thereto by Dr. Ballard, has taken a step which we would recommend every parish in the metropolis to imitate. They have determined upon the appointment of two Veterinary Surgeons as Inspectors of the cow-sheds and slaughter-houses in that parish, with instructions to visit every cow-shed daily, to advise the cowkeepers as to the best mode of checking any outbreak in a shed, and as to the management or disposal of their healthy stock. At the same time they will have power to seize diseased cattle on their way to slaughtering for food, or any diseased carcases which may come under their observation. Dr. Ballard has also, we are informed, addressed a circular to the cowkeepers in his parish, asking them to receive the Inspectors in the same friendly spirit in which they are appointed, and to co-operate with them in checking the progress of a malady which is a calamity to the general public as well as to themselves. He has recommended them, also, to call a meeting and agree upon establishing a Hospital to which any cow attacked might be immediately sent for treatment. Now this is something practical, and if all the parishes were to follow this lead, very much would be done towards arresting the disease in the metropolis.

HOW TO STOP CHILD MURDER.

The art of doing good has, like all other arts, certain fixed stages of progress. In the rudest states of society it does not exist at all; the notion of doing good to others only dawns upon the mind when the rays of true religion first dawn on the primeval selfishness of animal nature. When first the impulse is felt it is, like other impulses, unreasoning, impetuous, aiming at its main object without regard to other consequences. "There's a poor man; give him something!" That is the first cry of a child who feels the instinct to do good; and it is the first essay of any society whose sense of benevolence has been stirred, whilst its powers of seeing into and thinking out distant results are yet dormant. It is empiricism in its worst and most childish form. There is a hungry man: give him food! There is a man without work: make a job for him! Here are sick people: build them a Hospital! Here are poor women scantily furnished with the comforts needful for child-bearing: build them a Lying-in Hospital! Here are poor girls seduced and betrayed: build them an Institution! Here are babies murdered or deserted: build them a Foundling Hospital! All these things belong to the age of doles, almshouses, Hospitals, charitable bequests, Poor-laws, and the other clumsy machinery of the first untutored efforts of beneficence.

After a while comes a scientific era, even in the art of doing good. Then the benevolent cease merely to gratify their own instinct by "giving," or by supplying a patch to the most obnoxious ulcer of the times. The truth comes to be found out that all help from other people which induces the poor to rely on it, and not to exert their own industry, frugality, and self-control, is a curse, and that to do good it is needful not only to relieve a pressing want or scandal, but to dive into the causes and strike at the root of it. Then it is seen that indiscriminate giving is a cause of idleness, beggary, and profligacy, and that the most lazy, vicious, and immoral districts are usually those where "charitable institutions" most abound.

There is no department of human misdoing and suffering in which these principles have been better illustrated than in that which relates to unmarried mothers and illegitimate children. These last, indeed, seem to have no place in a civilised community. The shame which Christian manners imprint upon their birth is fatal to them. The mother, for the most part, cannot support them if she wishes it; and very few wish it. Spite of all the ascertained numbers of children virtually murdered, or at all events let die by their unfortunate mothers at their birth, spite of the number known to be exposed and cast out dead or alive, the number who perish during in-

fancy must be of untold magnitude. And why? Because nothing is easier than to kill a baby. As for the woman Winsor, who carried on the trade of illegitimate-child-murder near Torquay, she deserves to be hanged, not for her crime only, but for the needlessly bungling way in which she committed it. What need of strangulation by tape or suffocation between feather beds? Deprive a child of the breast, feed it on gruel or pap and brown sugar, let these once now and then be a little stale, or sour, or lumpy; if the restlessness and screams of the little wretch trouble you, give a little gin or sleeping stuff, and then in a very few weeks the child will die a respectable death of "diarrhœa," or "fits," or "atrophy," or "marasmus," or "tabes," or "teething," or "hydrocephalus;" and instead of being hanged as a murderess, you may snuffle out your thanks that "the Lord has taken it," and may look out for another "baby from the month" to "bring up by hand," as the refined art of child slaughter is facetiously called.

To put a stop to such forms of child murder as outrage the common conscience by their publicity and scandal, most countries emerging from barbarism and under the impulse of Christianity have tried the expedient of Foundling Hospitals; and there are even now many persons amongst us whose instincts of benevolence have not survived the first or unreasoning stage, and who still clamour for such institutions. We need hardly repeat the arguments against them. The attempt to rear numbers of children under one roof; to find proper food; to keep them warm at night; to calm that nervous agitation which the youngest babies feel, and which can only be allayed by the sense of comfort and security afforded by the mother's bosom or the arms of the kindest of nurses, is attended with difficulties which have never been got over yet. Any one who has ever had one sickly or troublesome child of his own to rear must be aware of the terrible expense and anxiety, the sleepless nights, the strain upon the mother's health and spirits and temper, involved in the task, even with maternal love, the strongest stimulant of all, as an inspiration. How shall this be possible to accomplish in an institution worked by paid servants?

We have heard of a scheme propounded by some humanitarians that women who have illegitimate children shall be *forced* to suckle them. We have seen children, nevertheless, dying at the mother's breast under conditions which have shown us that all attempts of this sort must be fruitless.

Public Foundling Hospitals are condemned by all experience, for the reason that they encourage improvident marriages, induce married persons to neglect their children, and are standing rewards of incontinence and vice. As for private efforts, God forbid that we should check the stream of charity, but they must be conducted with the greatest discretion. Honest married women must never be let envy the lot of the children born out of wedlock. The case of young women who have been seduced deserves all pity and tenderness, and in every case where an otherwise respectably-conducted girl meets with this misfortune, she ought to be kindly and secretly nursed and helped to take her proper place again, and the best provision available be made for the child.

All this, however, is but a system of patches. It is an elaborate plan for remedying the ill effects of a vice, and running the risk of encouraging the vice itself. It is high time that the vice itself were attacked, and the only way to do so is to subject it to scientific discussion, so that the "predisposing and exciting causes," to use a familiar technical phrase, may be thoroughly explored, and that something may be done by way of prevention. All women do not go astray; what are the influences which keep certain classes virtuous, and how far are these capable of extension to the classes who generally fall victims? These are questions which we shall probably treat of ere long. Meanwhile, we affirm that illegitimate children will be murdered somehow; and that the only way to hinder it is to hinder the children from being begotten.

QUACKS.

Auguste Comte, during the later years of his life, by way of exercising a mental regimen, abstained entirely from the perusal of newspapers and other periodical literature. We need not discuss the effect of such abstinence on the mind of a philosophic doctrinaire, although even in Comte's case it does not seem to have been strikingly good; but it is certain that such a regimen would be out of the question in the case of those engaged in ordinary every-day life. The parting advice of one of our police magistrates to a prosecutor who lately fell a victim to skittle-sharpers was that he should in future make a practice of reading the police reports in the newspapers. To such a man no better counsel could have been tendered, and the principle is capable of far wider extension. To the mass of individuals constituting the general public, a perusal of the law reports is a necessary item of their daily education, if they would avoid being entrapped by the countless schemes of roguery surrounding them on every side. In fact, it is to the published report of the innumerable actions which have been classed under the general denomination of "Fool *v.* Knave," together with the incidental revelations coming out in the course of other proceedings, that we owe the existence of any check to the indefinite multiplication of the victims of fraud. During the trial of the action Ruddock *v.* Lowe, at Croydon on Friday week, it was elicited from the defendant, the proprietor of the Strand Museum, that no less than three-quarters of a million of copies of a certain class of book had been circulated by him. The population of the metropolis comprises about three millions, of which male adults do not constitute much more than a fourth part; and from these facts the deduction is not an unnatural one that nearly every male adult in the metropolis has had an opportunity of reading the trash so industriously scattered abroad. No one knows better than our readers the amount of probable mischief indicated by such a conclusion, and such a fact renders anything which has a counteracting tendency a legitimate subject of congratulation. We should accordingly rejoice if the report of the above-mentioned trial could have an equal circulation with the publication in question. There is a large class who would, with the greatest simplicity, accept the statements in Lowe's book as authentic, but the most stolid victim could not read the report without having his eyes opened. We can imagine the effect on a patient of Lowe's or any of his fraternity that a perusal of the reported cross-examination of that worthy member of society by Mr. Hawkins would have. The patient would learn how the "Doctor" was made to read his statement that he "sought his remedies in far-off climes; some in the distant prairie, where nought has come to denude the vigorous wild herb of its strength and purity; others in the western clime of eternal summer, where the ever-blooming balsam is fanned into perpetual potence by the life-bearing breezes of heaven;" how he was asked on his oath whether he had ever been in "far-off climes," and required, amid roars of laughter, to say what he got from the "distant prairie;" how, in despair at this latter question, he appealed to the learned judge for protection, and ultimately whined out that "he could do all he professed to do in his book, although he was in this 'humble' position at the present time." Nor would the speech of Mr. Serjeant Ballantine for the defence be without its effect; for how peculiar must the circumstances of a case be when the counsel speaks of the client's establishment as a nuisance that ought to be put down, stigmatises the conduct of the proprietor as disgraceful, and finally avows with energy that he never was in a case in which he felt less sympathy with his client or less anxiety on his account.

But, after all, there is something very humiliating in all this. That an evil like quackery as it now is should be held in check only by such actions as those just tried at Croydon is not creditable to society. We abstain from saying anything as to the character of these particular proceedings, but, as a general principle,

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it is inexpedient that it should be left to private individuals to redress by such means a wrong which in reality concerns the public at large. What is the cause of the inaction of the parish authorities? Is it that they are powerless in the matter? or is it the deliberate opinion of the public that there should be free trade in moral and physical poison, and that fraudulent quacks, if they can find victims, should be permitted to prey upon them? Never was non-interference a more inappropriate policy. The quacks of this country are amassing fortunes by a course of cruel and wholesale wrong. From their ill-gotten profits they are ready at any time to raise a fund to resist legal proceedings against them; and, though a museum or two be closed, we believe that a dozen verdicts would have no permanent effect, but for the publicity they would occasion. The Italian Government incurs just contempt at present for its powerlessness to put down brigandage; but the administration of our own country incurs a greater scandal from the existence of the forms of quackery now prevalent. The evil is a far worse one, because infinitely more wide spread. Nor is it at a standstill: new museums are springing up daily in our streets, and the doings of the owners evince more and more audacity. Nothing proves more conclusively the necessity of a public prosecutor than the present impudent exercise of the foulest forms of quackery.

We would call our readers' attention to two disclosures of a significant character in the course of the trial of which we have spoken. One is the apparent existence of tincture of cantharides in the medicine supplied by Lowe to his patient. The other is, the employment of a legally-qualified Practitioner as a "protector" in case of hostile proceedings being instituted. The former fact speaks for itself; as to the latter, we have only to remark that, as a matter of course, the Medical Council will expunge from the Register the names of all persons who are proved to have acted as "protectors," as having been guilty of infamous conduct in their Profession.

THE ATLANTIC TELEGRAPH CABLE.

We have once more failed in bridging the Atlantic with an electric wire. There can be no doubt, however, that success will ultimately crown our endeavours. The very failure has taught important lessons, and will increase the probability of our succeeding in next year's attempt.

No one who has read from day to day the various telegrams which have been sent from Valentia can fail to have been struck with the amount of precision to which electricians have attained. The *Great Eastern* had scarcely started upon her journey when the signals through the cable became indistinct. The electricians on board immediately applied tests, discovered where the fault was, wound in as much of the cable as was necessary, cut out the fault, and spliced the cut ends of the cable. For the second time the signals became indistinct, and at length ceased. The electricians at Valentia applied tests, and have come to the conclusion that the Atlantic cable has parted about 1250 miles from the shore end.

To those who have not paid special attention to the subject, it is difficult to understand how it should be possible to determine in this exact manner the spot at which a fault has occurred.

The great mass of the public depend upon their Medical attendants for information as to general science, and thus it happens that at this moment we are beset with questions as to insulation, conductivity, means of testing, and so forth, to which occasionally it is rather embarrassing to reply. Mr. Saward, the general superintendent of the Atlantic Telegraph Company, whose courtesy equals his scientific knowledge, has been good enough to supply us with some information on the point, and we feel it our duty to lay it before our Medical brethren.

The Atlantic cable consists of a certain number of copper wires, each of which is insulated by a covering of gutta percha, the whole being further protected by a general envelope of iron wire and tarred hemp.

As long as the cable was intact, an electric current sent from the positive pole of a battery at Valentia traversed the whole length of one of the copper wires, and thence went through the bottom of the ship, and through the sea and bottom of the ocean, until it reached the negative pole of the Valentia battery. This return current through the bottom of the ship, sea, and land is what is technically known as the "earth current." Now, although copper is one of the best conductors, it is still not an absolute conductor; it opposes a certain amount of resistance to the electrical current, and consequently requires a certain number of "*cells*" to force the current through it.

The resistance increases in direct ratio to the length of the wire; and as the resistance can be measured, it follows that the length of wire in connection with the battery can be determined.

It is possible to estimate the resistance by the number of cells necessary to transmit signals clearly. This would, however, be a very rough method; but very fine galvanometers have been constructed which show the exact amount of current transmitted. The galvanometer of Professor Thomson, of Glasgow, is perhaps the most delicate, and was the one which was used in the case of the Atlantic cable.

Before the cable started, exact calculations were made as to the amount of resistance per mile of the copper wire. Let us suppose that the resistance of the entire length was found to be 100 units. The cable parted—let us say at its centre—and one end fell to the bottom of the ocean. What would be the result? A current starting from the positive pole of the Valentia battery would now traverse half up the cable, and then return through the earth to the negative pole of the battery. As the current had only half of the number of miles of copper wire to traverse, it would only experience half of the resistance, or 50 units, and thus the force of the electric current would be shown by the galvanometer to be double what it had been previously. This is the principle upon which the electricians at Valentia have decided that the Atlantic cable has parted about 1250 miles from land.

The signals from the *Great Eastern* ceased. The electricians applied their galvanometers, and found that the force of the electric current was greatly increased. They judged that it had a shorter circuit to traverse. They knew the number of units of resistance possessed by each mile of copper-wire. They were able to interpose artificial resistance by means of certain instruments. They added on mile after mile of artificial resistance just like so many weights, until their galvanometers showed that the force of the current was reduced to what it had been when the cable was perfect. They then made an easy calculation, and determined the spot at which the cable had given way. They found that the end of the cable communicated with the ground 1250 miles from the shore end. In technical parlance, they had dead earth at 1250 miles' distance.

The last time that an Atlantic cable parted, voltaic action was set up by the action of the salt-water upon its copper and iron wires. This produced what are termed battery currents. These battery currents have not in the present instance been set up, probably because the iron wire is better protected than it was in the last cable.

We have heard a great deal lately about electrical storms. The atmosphere is always electrical, but usually the electricity is quiescent. Under certain conditions, however, the electrical state of the atmosphere is disturbed. Lightning is not a necessary consequence, but currents of positive and negative electricity keep darting about.

The electricity is of very high tension; that is to say, it is capable of being conducted by substances which are almost

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absolute non-conductors to mere voltaic currents of very low tension. The electricity of the atmosphere, then, is able to strike a wire in spite of its so-called insulating medium. It pierces the gutta percha covering, and darts along the wire, utterly swallowing up the artificial currents which it may meet, and spoiling the telegraphic communication for the time being. A storm of this kind began on Wednesday, the 2nd instant, and continued till Sunday, the 6th, and at first it was fondly hoped that the cessation of the signals from the *Great Eastern* was due to this cause. The storm has ceased, but the signals have not been resumed, and no doubt ere this manuscript be printed the *Great Eastern* will herself have returned to tell us of the loss, and of the manner of it. Under such circumstances, it is idle to speculate. We shall soon know whether the electricians on board were deceived by the electrical storm, and, in trying to remedy a suppositious fault, destroyed the cable, or whether some other accident occurred.

Whatever the cause, we must consider the undertaking as at an end for this year, and must look forward to the summer of 1866 as the auspicious time when the Old and New World will be brought into the closest relationship.

THE WEEK.

THE ASTLEY COOPER PRIZE.

We have much pleasure in announcing that the Astley Cooper Prize of £300 has been awarded to our distinguished *confrère* Mr. Jonathan Hutchinson. The subject for competition was "Injuries to the Head and their Treatment." The next prize is to be awarded in 1868. The subject proposed is "Pyæmia."

THE ALLEGED CASE OF POISONING AT ASHBURTON.

Last week we expressed our doubts as to whether any poison had ever found its way into Mrs. Sprague's rabbit pie, other than the bad meat of which it was composed. Physiological tests are no doubt very useful to confirm chemical, but we hope that the day is far distant when a jury will be found who will pronounce a verdict of guilty upon such exceedingly doubtful proof as the alleged dilatation of a pupil on the application of some suspected matter. As to the supposition of Mr. Sprague being a poisoner, we repeat that not one tittle of evidence advanced proved the charge, but a great deal of evidence completely disproved it. The pie was composed of meat unfit for food, as was clearly shown by the testimony of persons who eat the meat before it was put in the pie. Those who partook of the pie were made ill—although one of them asserted there was nothing the matter with him until the Doctor who was attending on the rest gave him an emetic. By no possibility could Mr. Sprague have meddled with the making or serving of the pie, for during the whole process he was absent from home. But because he had some atropine in his surgery it is charitably assumed in certain quarters that he ought most certainly to be guilty, and he is left in a position which must be one of the most cruel torture to any man of right feeling. For our own parts, we have very little faith in the atropine theory. Symptoms of narcotic irritant poisoning are no new phenomena when unwholesome meat has been eaten. Taylor relates a case in which the eating a hare was followed by vomiting, purging, giddiness, heat in the throat, and general numbness, with severely inflamed eyes; and to show of how little worth the symptom of dilatation of the pupil is as a distinctive sign of poisoning by belladonna or atropine, we may remind our readers of some cases quoted by Dr. Christison, in which rancid goose grease was the poisonous agent, and in which dilatation of the pupil was a marked symptom. Then there are many facts which prove that persons may suffer from eating game fed on poisoned grain, and this brings us to notice a plausible solution of the whole matter, which has been offered by Dr. William Ogle in the following letter to the *Times* newspaper. If Dr. Ogle's theory be correct, it may account for the whole facts of the case. At any rate, it suggests some interesting and useful experiments which might be easily carried out by those of our readers who live in country districts, where Atropa belladonna, and other Solanaceæ are easily to be obtained.

"*To the Editor of the 'Times.'*

"Sir,—The trial of Mr. Sprague for attempted murder has ended in a verdict of 'Not Guilty.' The world will infer that there has either been a failure of justice, or that, if he be innocent, there is some unknown poisoner at large. Either supposition is an unpleasant one. Is there no escape from the dilemma? Is it quite certain that any crime at all has been committed? I think not.

"That the Chalker family were poisoned by belladonna is beyond all doubt. That this poison was contained in the rabbit is also a moral certainty. But is it necessary to suppose that it was put there by any human being? Both prosecution and defence seem to have taken this for granted. Neither seem to have known that though belladonna is a virulent poison to most animals, yet that rabbits eat it, and other poisonous plants of the same family, with perfect impunity.

"It is now some forty years since this fact was demonstrated experimentally by M. Runge, of Berlin. A rabbit was fed for no less than eight days exclusively on the leaves of belladonna, hyoscyamus, and datura—all poisonous plants of the order solanaceæ, and at the end of the time the animal was as healthy as at the beginning. There was not even the slightest dilatation of the pupil, which in other animals results from a very small quantity of this plant.

"Had that rabbit been made into a pie, those who ate of it would doubtless have shown symptoms of poisoning; for M. Runge found that the poisonous principles had not escaped without absorption, but had been taken up into the animal's body.

"Now, the belladonna grows in just such places as rabbits love to haunt—in shady nooks and deserted ruins. It may be found in blossom there in the month of July—the very month, that is, in which this disaster took place. What more likely than that the rabbit which furnished that unhappy dinner had fed abundantly on this plant, and that its flesh was impregnated with the poisonous principle? I, for one, would rather hold this view than believe that so hideous a crime as that of wholesale poisoning had been committed.

"I am, Sir, yours, &c.,

"William Ogle, M.D.

"34, Clarges-street, August 3."

Since the above was in type, we have seen a letter from Dr. MacGill, a Practitioner of Ashburton, to the editor of the *Times*, in which he objects to Dr. Ogle's theory that the analysis which brought to light atropine ought, if that theory had been true, to have shown the existence of malic acid, pseudotoxin, phytolacca, gum, wax, chlorophylle, salts, etc. We thought from Dr. Herapath's published evidence that he relied on the physiological test of dilatation of the pupil as proving the presence of atropine; and we are curious to know what physiological tests are known which would prove the presence of phytolacca. It is well known there is no reliable chemical test for atropine, and we are not aware that there are any for several of the substances which Dr. MacGill enumerates. At all events, we wait to be enlightened from Ashburton on this point. But the simplest answer to Dr. MacGill's objection is, that Dr. Herapath did not look for malic acid, and therefore, if it existed in the pie, was not likely to discover it. In contravention to Dr. Ogle's theory, he advances the fact that goats eat hemlock, and their flesh is not rendered poisonous by it. It probably is so, although there is so little goat's flesh consumed in this country, that—here, at all events—we have not much means of judging. Dr. Ogle, in a reply to Dr. MacGill which appears in the *Times* of August 10, accounts for the impunity with which goat's flesh so fed may be eaten, by the circumstance that conia is volatile, and would be dissipated in cooking. But, on the other hand, it is worth noticing that cows yield poisonous milk when fed on certain species of euphorbia; and if arsenic may poison after having been

absorbed into the flesh of game, we do not know why organic poisons—such, for instance, as strychnia, which has been detected after absorption—should not be capable of producing its peculiar physiological effect under the same circumstances. The cases of poisoning by the flesh of birds fed on the buds of the Kalmia latifolia, and by snails fed on Coriaria myrtifolia, of which we are reminded by Dr. Ogle, support this view. At all events, the whole matter is open to experiment, and we should be very glad to see it made the subject of trial.

COMPULSORY MEDICAL EVIDENCE.

THE *British Press and Jersey Times* of July 18 contains an article with the sensation heading "SUSPICIOUS CASE.—A DOCTOR REFUSING TO GIVE EVIDENCE"—just as if the Doctor was the person implicated in the suspicious case. The facts were that Dr. Kitchener, a respectable Practitioner in the Island, had a child brought to him in a dying state on June 19 at the Dispensary. It was an illegitimate child, which had been slowly done to death in the usual system of dry-nursing. The child soon died, and then the person in charge of it applied to him for a certificate of the cause of death, which he very properly refused to give. It was clear that the wish to get this certificate was the only motive for bringing the child to the Doctor. Thereupon an inquest was held, to which Dr. Kitchener was summoned. As it was a case in which he was summoned in his Professional capacity, for the benefit of the public, he thought himself entitled to payment, and declined giving any "Medical" evidence without. His refusal was, however, overruled by a superior Court, and himself fined. Technically he was wrong, as it seems he was asked as to facts, and not opinions. But, in all equity, it is hard that a Professional man should be despoiled of his time, and forced to give evidence for the public benefit, without fee or reward. It is not like a casual case in which any member of society who witnesses a crime or accident may be called on to give his testimony; but it is a case in which the necessity for evidence arises from a man's Professional position, which ought to be regarded as clear ground for payment.

JONES *v.* FAY.

THE unusually contradictory character of the evidence adduced in the late action against a druggist for mal-practice renders it impossible to arrive at the real facts of the case. If, as the plaintiff alleged, and the jury believed, the defendant salivated his patient by a course of blue pill by way of treatment for painters' colic, and thereby brought him to the condition in which he presented himself in court, the damages will probably not be deemed excessive. If the defendant's story be the true one, the case is undoubtedly one of hardship; but hardship which the defendant would never have suffered had he confined himself to his proper vocation of compounding the prescriptions of qualified Practitioners, and selling such drugs as his customers demanded by name. If the case for the plaintiff was, as the defendant's counsel hinted, a conspiracy, we may remark that the next victim of such a combination may be a Medical man. The substitution of a regular Practitioner for a druggist would not have affected the result of the case favourably to the defendant. Indeed, the fact of Fay's being merely a chemist was urged by his counsel in extenuation of any mal-practice of which he might have been guilty. This case is not an instance of an evil which would be obviated by the proposed legislation on the subject of chemists and druggists. An examination of the defendant in Materia Medica would have been no guarantee against the undue administration of blue pill by him to the plaintiff. Mr. Fay is probably quite aware of the nature and properties of the medicament in question, which is all that a druggist registered under one of the proposed Acts would necessarily know. The jury have found that he prescribed the substance under improper circumstances; against this nothing short of a *Medical* training could guard. The verdict in this case will induce a much larger amount of caution in those druggists who are now in the habit of prescribing, and it is perhaps, on the whole, as satisfactory a one as could be given on the evidence.

THE THIRTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(*From our Special Correspondent.*)

LEAMINGTON, Wednesday Evening, August 2.

IN the note I sent you last night I described the first part of the proceedings of the first meeting of the Association for the present year, and I included the President's Address and the Report of the Council. Time did not permit me to do more. I now take up the narrative from that point.

The Report of Council having been read, its discussion was deferred until morning. The Committee of Council were led to recommend this course because, in previous years, there has been a common complaint that to discuss the Report after ten o'clock at night was, of necessity, to limit discussion on some of the most important subjects presented for the consideration of the members. The Committee thought it this year advisable to devote the whole of the next morning to this one subject, and previously to place a copy of the Report in the hands of every member. Unfortunately, the explanation of this change, in itself most commendable, could not be heard from the chair, the large room of the College, in which the members were assembled, being particularly bad for sound. When, therefore, Dr. Henry was called upon to read the Report of the Medical Provident Society, some confusion arose, and was continued until a full explanation was obtained.

REPORT OF MEDICAL PROVIDENT SOCIETY.

This Report was very carefully drawn up, and was an epitome of the work of the Board of Directors for the past year. Considering that the Directors of the Society are men engaged in the duties of active practice, the amount of work performed by them on behalf of this useful and progressive institution is exceedingly heavy. The Directors met three times in the year in full body, and the Committee the same number of times. The Report is too long for insertion as a whole, but the following abstract will supply the salient points:—

The report stated that the election of directors was the first step taken after it was determined by the Association to form the Society. The branches of the Association elected one to three directors for each branch, who, with five directors appointed by the Council, and the chairman elected by the Association at large, had managed the affairs of the Society. These directors appointed an executive sub-committee, who prepared a draft code of rules, which, after communication with Mr. Tidd Pratt, was approved and registered. By taking this course the Directors rendered the Society financially safe, while they divested the parent Association of any and every possible liability. A copy of the rules was presented with the report. The Society was now open to the whole Profession, and, in accordance with the general wish expressed last year at the Cambridge meeting, its advantages did not cease on a member reaching the age of 60. The Society stood on an independent basis as regarded its government, whilst the control really rested in the hands of the Association. The Directors believed that ultimately the election of its officers might rest with the Society, but that its government was for the present satisfactory to all concerned, and that any immediate alteration would be fatal to the existence of the Society; hitherto, indeed, its existence had practically depended on the energetic support afforded by the Association. The financial condition of the Society was excellent. Through the liberality of members of the Medical Profession an auxiliary fund had been raised of nearly £900; a small part of this had been applied to the payment of expenses; the residue would be invested as a reserve fund in case of emergency. The auxiliary fund, however, was not to be considered as rendering the Society eleemosynary. It was formed by the contributions of honorary members, and was equivalent to the honorary members' fund of ordinary provident societies. A grant of £25 had been made by the Committee during the past few weeks, for the purpose of sending prospectuses to members of the Profession; ninety applications had been received for forms of membership, and £31 2s. had been already forwarded for the contributors' fund. Some of the Profession wished that the premium and the corresponding benefit during sickness should be reduced. This would be considered by the new Board. The cost of the management of the Society was reduced to a minimum, and simply con-

sisted of the cost of printing, occasional advertising, postages, and the secretary's salary. The Directors thanked the Executive Committee, and especially Mr. Jno. Clay, of Birmingham, and Mr. A. G. Finlaison, actuary to the National Debt, for their services; the post of consulting actuary had been offered to, and accepted by, Mr. Finlaison. They thanked the Association for the sum voted last year, T. Taylor Griffith, Esq., of Wrexham, for having collected and forwarded donations to the amount of nearly £100, and H. D. Carden, Esq., of Worcester, for having offered to give £50 in addition to a former donation of £31 10s., if ten other Medical men did the same. The Directors also reported the election of Dr. A. Henry as secretary to the Society, and recommended the re-election of Dr. Richardson as chairman, and the election of Jno. Clay, Esq., as vice-chairman of the Directors. The report concluded with the expression of an opinion, derived from the experience of the past year, that at each succeeding annual meeting of the Association the Society would have to record its continued success and greater usefulness.

After the reading of the Report, the General Secretary ruled that as the Provident Society was now based on Act of Parliament, it was not competent for the Association to discuss the Report or the laws of the Society.

Mr. Steele, of Liverpool, and other members disputed the position taken by Mr. Williams.

Dr. Richardson, as Chairman of the Board of Directors, said there was nothing in the Report which the directors would not wish to have discussed most fully; and he was himself prepared to move formally—"That the Report be received, in order to give an opening to such discussion." At the same time, there were difficulties in the way of any discussion that should lead to the alteration of the fundamental laws of the Provident Society. In order to save the Association from all pecuniary liability the Society had been enrolled, and as its laws were framed on Act of Parliament, under the supervision of the registrar of the enrolled societies, it would be useless to enter on any discussion that should tend to any modification of law. As to the expediency of forming the Society, the result had shown that there was a demand for it, and he regretted, indeed, to find that even a reduced scale of allowance during sickness, on a reduced premium, was solicited by many members of the Profession. The Society came into useful operation for men who, while earning small means, were, without its aid, obliged to continue at their work until those chances of recovery which rest alone could give were past and gone. The Society had only issued a first prospectus within the last few weeks, and already there were ninety applications for the forms of admission for contributing members. He hoped the Association would accept this explanation.

The President felt that after the clear and straightforward explanation of Dr. Richardson it was not necessary to discuss the matter at greater length.

Election of Secretary.

On the motion of Sir Charles Hastings, seconded by Dr. Richardson, T. Watkin Williams, Esq., of Birmingham, was re-elected General Secretary of the Association.

Election of Chairman and Vice-Chairman of the Medical Provident Society.

Mr. Propert moved and Dr. Westall seconded—"That Dr. Richardson be re-elected Chairman, and that John Clay, Esq., of Birmingham, be elected Vice-Chairman of the Medical Provident Society."

Mr. Husband, of York, moved as an amendment—"That it is not desirable for this Association to elect a President or Vice-President of the Medical Provident Society, and that the choice of its officers be left to that Society in future."

Mr. Steele, in seconding the amendment, urged that the Society was not in accordance with the position of the Profession. He considered it to be *infra dig.* for a Medical man to insure in the manner proposed by the Society. He seconded the amendment to save future members from disappointment and regret, because he felt, how unfortunate soever it might be to crush this movement, it was better to do so now than ten or twenty years hence, when members had been contributing for any length of time. Should it prove at any time that there were no funds to pay the sick, it would be a great disappointment. Therefore, it would be far better to stop it now. He thought it extremely unlikely to be successful, and complained of the smallness of the relief rendered by the Society.

Dr. Simson supported the original motion. The idea of not being allowed to discuss the subject was to him, however, objectionable. He should never vote again in that Association for the election of any officer to the Society unless there was discussion on the Report; but he felt it would be a great wrong to stop the action of what promised to be a most valuable institution.

Mr. Heckstall Smith, as a member of the Board of Directors, felt that there was no earthly reason why the Report should not be discussed, and warmly defended the proceedings of the directors, who in everything had but followed out the instructions given to them by the Association. The Association had started the fund, had proposed every member of the directorate, and had desired the directorate to make the laws to govern the Society, and in accordance with the general wish, the laws had been so constructed that the Association was under no danger of incurring liability. After this it was most unfair to strike at the Society by refusing to elect the Chairman and Vice-Chairman. If members of the Association wished to dissever the Society from the Association, let it be so; but the action must be taken in a formal manner by notice of motion.

Dr. Stewart explained the position the directors had taken, and hoped their action would not lessen the interest of the Association in regard to the Provident Society.

Mr. Nunneley (Leeds) expressed his doubts as to the permanency of the Society.

Dr. Richardson, disclaiming all personal feeling, explained that the question raised involved the connection or disconnection of the Provident Society with the parent Association. The position was this: the year before last, at Bristol, the Association determined, by an unanimous vote, to appoint a Provident Fund Committee. Last year, at Cambridge, the Association, on the report of that Committee, deliberately connected the Society with itself, declared the way the Board of Directors should be formed, elected a chairman of the Board, and left with the Board instructions as to the course it was to pursue, to draw up the rules of the Society, and bring it into operation. Acting to the letter on these instructions, the directors had formed the new Society, and had simply carried out the duties entrusted to them. He did not believe it possible after this that the present meeting would so far listen to the seductive speeches of those who were not present at Cambridge as to ignore all that had been achieved. If this were done, the Association would show itself to be destitute of decision of character, and no Committee or Board appointed by any meeting could henceforth work for it. In the present case a decision in favour of the amendment would, for the moment, paralyse the new Society, and would disturb its financial position; the rules must then be recast at great expense, and the Board of Directors must be reconstituted.

After a few remarks by Mr. Husband, the amendment was put and lost; the majority against it being nearly three to one. The original motion for the election of Chairman and Vice-Chairman was then put, and carried by a large majority.

On the motion of Mr. Heckstall Smith, seconded by Mr. Clay, a vote of thanks was unanimously passed to Mr. Finlaison, the eminent actuary, "for his valuable and gratuitous services in the preparation of the tables of the Provident Society."

The Medical Provident Society thus continues in connection with the British Medical Association. Some think this connection should cease so soon as the new Society can stand by itself. This view, so favourable to the Provident Society, is urged singularly enough by those who in opposing the Society imagine themselves to be the supporters of the Association. It is a strange paradox, yet true as strange. In the eyes of these the Association must be as active as Mercury, as strong as Hercules, and as pervading as Jove, but must all the time take no vital share in any project for the general welfare of the Profession. Fortunately, the majority of the Association is led by no such feeling; were it so those who stand outside would have some reason for their everlasting *cui bono* whenever the fact of the existence of the Association is brought before them. The discussion on the Medical Provident Society brought the proceedings of the meeting to a conclusion.

WEDNESDAY.

A public breakfast in the Pump-room was the first business of this day. A large number of members was present, and the start was declared good. Dr. Jeaffreson occupied the chair.

At 10 a.m. the new Council of the Association held a meeting, at which, after the election of the Committee of

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Council, a discussion was started by Dr. Stewart, of London, in favour of opening the Association with some form of religious service. The subject, as might be expected, excited much feeling, and ultimately the matter was referred to the Committee of Council. It is to be hoped, for the quiet of the Association, that this question will be allowed to pass into abeyance. Once introduce into the Association the elements of polemical discord, and its fate is sealed as surely as its most determined enemy could desire.

SECOND GENERAL MEETING.

At 11 a.m. the second general meeting was held. Dr. PAGET, of Cambridge, opened the proceedings by moving—"That law 8 of the Association be altered by inserting the word 'President-elect' after the words 'President of the Association for the year.'" The result of that would be that the President would be made a member of the Committee of the Council. It was desirable that during the twelve months between his election and his assumption of office he should have an opportunity of making himself acquainted with the matters which would have to be brought before the Association. Mr. CLAYTON, Birmingham, seconded the resolution, and it was unanimously carried.

The Report of Council was next submitted for discussion. As matter of form, Sir CHARLES HASTINGS moved, and Dr. MACKESSY seconded, "That the Report be received and adopted."

Charter of Incorporation.—The subject of a Charter of Incorporation for the Association was first discussed.—Mr. STEELE, of Liverpool, commenced the debate. He confessed that at present he was not in possession of the particular advantages which the charter would confer on the Association. He was inclined to think that there would probably be some advantage, but he feared they were scarcely financially strong enough to incur the outlay of £300, which would be required. He, therefore, moved "That the question of obtaining a charter be deferred till the next annual meeting."—Mr. WOOD seconded the proposition.—Dr. RICHARDSON moved, as an amendment, "That this meeting approves of the principle of obtaining a Charter of Incorporation, and that the Committee of Council be instructed to continue their efforts to obtain a charter." He argued that the Charter of Incorporation would give the Association greater influence, whilst it would also give it that adhesion and stability which would be the best guarantee of its permanence after its distinguished founder and his supporters had ceased to exist. He did not apprehend that there would be the slightest difficulty in obtaining the requisite funds, and he would himself undertake to guarantee the necessary amount being raised in a week by voluntary contributions.—Dr. TUNSTALL (Bath) seconded the amendment, and said it was desirable not to defer the obtaining of the Charter, but to apply for it at once.—Mr. STEELE, with the consent of Mr. Wood, then withdrew his proposition.

Sir CHARLES HASTINGS warmly supported the amendment.—Dr. STEWART expressed also his hearty concurrence.—Dr. WATERS (Liverpool) and Dr. GIBBON spoke to the same effect; and ultimately Dr. Richardson's amendment was unanimously carried.

Thanks to the General Council.—It was moved by Dr. SIEVEKING, and seconded by Dr. R. HALL, "That the thanks of the Association be given to the members of the General Council for their valuable services during the past year."—Carried unanimously.

Poor-law Medical Relief.—Dr. HENRY moved "For the appointment of a committee to inquire into the present system of Poor-law Medical Relief, and to ascertain whether any, and what, alterations are required therein to ensure the efficient treatment of the sick poor, and the just remuneration of Poor-law Medical Officers."—Dr. MEAD ably seconded the proposition.—Dr. STEWART, while agreeing with the motion, said he was reminded that—

> "How few of all the ills that men endure,
> Are those which kings or laws can cause or cure."

He thought that the fault, to a great extent, lay with the Medical Profession themselves.—Mr. STEELE argued that the fault was not with the Medical Profession; an alteration in the law was required, and he believed that it was only by that means a remedy could be found.—Mr. PROPERT and Mr. LORD having spoken, the resolution was put to the meeting and carried unanimously.

Parliamentary Committee.—Dr. RICHARDSON proposed, and Dr. MACKESSY seconded, "the appointment of a Committee to promote the election of Medical representatives to the House of Commons, and that £50 should be placed at the disposal of the Committee to assist them in raising a fund to promote such elections."—Mr. CLAYTON (Birmingham) said he could not conceive a more effectual mode of excluding Medical men from Parliament than by passing such a resolution. The Association was not formed for promoting religious or political subjects, and he was sorry to find such a feeling creeping in upon the members. They could not get members of Parliament belonging to the Medical Profession by any agitation from that society.—Dr. GIBBON (London) agreed with the remarks of Mr. Clayton, and after referring to the labours of the Metropolitan Society for Promoting the Parliamentary Interests of the Medical Profession, suggested that the £50 be granted to that Society instead.—After some further discussion, Dr. RICHARDSON said that as he saw the meeting was not largely in favour of his views, he would, with the assent of Dr. Mackesy, and by permission of the meeting, withdraw his motion.—The motion was withdrawn accordingly, and the members thereupon hastened to discuss a sumptuous luncheon provided for them by the Local Committee.

THIRD GENERAL MEETING.

The Association reassembled at 2 p.m.

Presentation of the Hastings Gold Medal.—The Hastings gold medal awarded this year to Dr. Barker, of Bedford, for an essay on "Deodorisation and Disinfection," was presented by Sir Charles Hastings to Dr. Barker. Sir Charles delivered an excellent but short complimentary speech, and congratulated the successful essayist on having dealt, in a most scientific manner, with one of the most important subjects of the day.

The presentation of the award was followed by the delivery of the Address in Medicine by Dr. Stokes, of Dublin. The address is herewith subjoined.

THE ADDRESS IN MEDICINE.

By WILLIAM STOKES, M.D., D.C.L.,
Regius Professor of Physic in the University of Dublin.

GENTLEMEN,—Before entering on the subject of the Annual Address, it is right that I should offer to the Association my thanks for the honour done to me in the request that I should deliver the Address in Medicine in 1865. It is unbecoming for any one to speak of his own labours; but if I have a claim to your consideration it is that, for the whole of my Professional life, I have sought to improve the social position of Medicine in this country. How far those efforts have been successful is not the question here; but that this has been my object I may simply aver. And here let me declare that which I believe to be true, that the cause of Medicine, taken in its broadest sense, whether as to its social, political, or scientific relations, is to be advanced more by the cultivation of the minds, the morals, and the manners of those who are engaged in it than by all other influences whatsoever.

But in your selection of a member from Ireland, I feel that you have honoured its School of Medicine—a school of which all portions of the United Kingdom may justly be proud—a school of which the leading feature has been its devotion to practical Medicine, Surgery, and Midwifery—that is to say, that the application of every discovery in physiology, chemistry, and pathology to the purposes and ends of the healing art in its widest signification is, and has always been, the great object of our teachers.

There is a fitness, at all events, in a member of that school appearing before an Association mainly composed of the workers in Medicine, who bear the burden and heat of the day, and the chill, and darkness, and storm of the night, bringing, as they best may, health and counsel and comfort to the suffering man.

If we look at the contributions to Medicine by the Irish School for the last half century we shall find that, with a few exceptions, they consist of works, reports, memoirs on Clinical Medicine, Surgery, and Midwifery, or of researches in pathological anatomy, mainly having reference to the diagnosis of disease. As compared with other schools, we have not much to show in the way of discovery in pure anatomy, in animal or vegetable physiology, in microscopic anatomy or pathology, or in organic chemistry; but what the School has done, or attempted to do, is, on the one hand, to enlarge our knowledge of Medicine and Surgery by careful clinical study of the characters and history of disease; and, on the other, guided by a sound electicism which neither rejects nor blindly adopts a newly announced principle or observation to test it by the light of experience, and find how far we can give it a place among the aids, the practical aids, of the healing art.

This character or tendency of the Irish School may be traced to traditional and accidental causes. Among the latter, one may be the existence of so large a number of Hospitals in Dublin, which, with a population of about 300,000, has not fewer than twenty-one Hospitals, each with its distinct staff, the members of which are appointed for life. In this way, the attention of a large number of the young men of the Profession was, as they became Hospital officers, necessarily turned to clinical study.

Medicine, in its great quality as a practical art, advances in many directions; of which two may be indicated as the most important.

One is the discovery of new facts, whether relating to physiology, pathology, or therapeutics, each of which, even although its practical bearing be not apparent, enlarges the boundaries of the field of certainty.

The second is the application of those new facts, on the one hand, to testing the value of methods long in use; and, on the other, as a guide in exploring the wilderness of the unknown which stretches around us, which we are seeking to discover, and which we hope in time to reclaim.

For example, it has been long admitted that internal solutions of continuity are so often attended with new, unforeseen, extraordinary, and, above all, sudden symptoms, that their occurrence may be taken as characteristic of this class of internal lesions, as applied to the viscera. Laying hold of this fact, we inquire—Does this formula apply to solutions of continuity of the fluids—say blood? Now, it is found that new, sudden, and extraordinary symptoms, referred to a particular organ, may often so occur, and yet be without change perceptible to any mode of investigation. But the researches of Virchow show that, even here, the truth of the principle is established; for there is, in one sense, a solution of continuity, not, indeed, of the tissues of the suffering organ, but in the current of the fluids which supply it. An embolus suddenly obstructs an artery, and causes symptoms having a common character, though, of course, varying according to the organ affected—symptoms which are new, sudden, extraordinary, often violent. Here the embolic pathology confirms principles already in use so far as the solids are concerned, and extends their application to the fluids.

Take it, again, as a lamp for guiding us to new knowledge, and therefore new power. The embolic pathology has at once discovered, as it were, a new set of diseases. It was long known, that interruption of the arterial supply would induce the death of parts for which that supply was intended, as in the disease described by Mr. Pott. Here the deficiency is caused either by feebleness at the centre of circulation, or disease at the extremity of the arterial tree. The process, as might be expected, was slow and gradual. But in this newly-discovered class of diseases, we observe the sudden obstruction of a nutritive artery from an embolus, which often proceeds from a disease of one of the valves of the heart; so that, from the sudden occurrence of paralysis of function, we may be led to suspect the existence of an embolus, and to seek for its source. But what if we could see the embolus in the central artery of the retina, as Liebreich did, in a case of sudden and complete amaurosis, and so was led to the diagnosis of a disease of the heart never before suspected to exist?

Here the new observation or discovery exhibits its twofold value. It confirms an important principle already acted on—it leads to a new mode of discovering changes far remote in nature and in seat from that which is the immediate subject of inquiry.

If we look at the collective mass of our brethren over the world, we may distinguish two groups, with lines of demarcation not indeed very sharply defined, but yet sufficiently distinct to justify their separation into categories. In one we find the workers in experimental physiology, in pathology, and in animal chemistry. I use the latter term, because it is not yet established that the laws of the inorganic chemistry are identical with those which operate in the living body. In the second category, we place those who practise the healing art as their daily calling, among whom is to be found a large mass of thinking men, who fulfil the great function of testers of the value of newly-announced discovery—men whose minds, originally strong, and essentially of an eclectic mould, are trained and shaped by working on a more extended field, and by having to employ a more difficult, because a less mechanical method.

Now, it is in this class that we find that great body of observers, among which Medicine can point out most of her representative men; and this is true for all time past, and for the present also. The observers of disease in the living man, and the faithful recorders of its phenomena, these are or have heretofore been the men who have made Medicine a science worthy of respect, even before the introduction of physical means of diagnosis; even further, before anatomy was known—before physiology had shed its light upon life in health or in disease—before chemistry was a science—on to the time of Morgagni and Bonetus, who studied the changes of organs in disease,—before the microscope, before the employment of those beautiful instruments and methods which in our day have done such wonders in advancing the certainty of our art—the ophthalmoscope, the laryngoscope, the endoscope, the galvanometer, and spectrum analysis.

But all men are not, and cannot be, both observers and recorders. In the highest and in the lowest classes of our Profession, the lets and hindrance of the daily work are so many and so great as to prevent the mass of Practitioners from adding the fruits of their observations to the written records of Medicine: whether it be from want of opportunity, of ambition, or of time or taste for writing, they simply work, apparently contented with the knowledge provided for them. But even in the hands of such the science does not stand still; for in their individual cases, at all events, it roots, and grows, and flowers; and so, it may be unconsciously to themselves, they acquire more and more the power of dealing with disease. For observation, even though it be best rendered fruitful by study, has its silent influence on our afterthoughts and actions, even when the special fact or circumstance is forgotten. So it happens that in this class there are many who advance the cause of Medicine, inasmuch as they are in themselves exponents of its advance, and must influence more or less all with whom they come in contact.

We are now to study that state of mind by the help of which Medicine is made useful. To acquire and improve this *mens medica*, as it has been termed, should be the labour of our lives. To find out its nature will not be a misspending of our time.

You will easily anticipate me, when I say that the condition of mind implied by the term in question is that which makes the good Physician. It is not the age of the world that produces such a result, for there have been great Physicians and Surgeons from the earliest historic times. It is not—to put this in other words—it is not the number of established facts in Medicine, nor the amount of such facts known to the particular individual, but it is the power of rightly using those which he does know.

And hence we can at once perceive, that what makes the great Physician is less the possession of knowledge of isolated facts, no matter how numerous these may be, than that greater quality of judgment based upon observation—a function of the mind which, like many others, may be indefinitely cultivated and developed, so that in its exercise it may become (if I am permitted to use the expression) an acquired instinct. This power of balance and of combination—ready for use at all times and in all emergencies, exercised rapidly, almost unconsciously, and leading its possessor to do that which is best and safest under the circumstances—is that which stamps, not only the great Physician and Surgeon, but all those who are leaders in government, in arms, in art, or in the liberal professions. We can conceive a Practitioner at the present day who knows all the ascertained facts in physiology and pathology, and who may be, notwithstanding, inferior to many who have lived more than a thousand years ago. There is no more decided evidence of an unexpanded mind in our Profession than the decrying the knowledge and usefulness of our predecessors. This was the fault of Paracelsus and Broussais, and in the present day we do not want examples of it.

Looking at the state of Medicine in our day, and putting aside the consideration of its vast advances in power and usefulness, as derived from discoveries in physiology, pathology, and diagnosis, we observe that there are some great questions still waiting their solution—questions combining considerations so wide, that they may be said to apply to every branch of the healing art. I will indicate one of such questions—namely, that of the change of type; first, as regards essential diseases; next, as to local affections.

There are many of us who can remember the treatment of fevers and of acute diseases in our student days, characterised by a free use of general and local bleeding, and the employment of other decided antiphlogistic methods. Such practice has now fallen, at least in these countries, into disuse; and even on the Continent the employment of an opposite method has been gaining ground.

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We can hardly see a revolution in practice more complete. Venesection is now, from being the most frequent, the rarest of operations. In place of the loss of blood, we have the exhibition of stimulants; in place of a system of almost starvation, we have the careful use of nutriment.

This change has given rise to the charge against our predecessors and teachers, that they were bad Practitioners, ignorant of true pathology, little better than blind followers of traditional error. Not only has their power of observation been questioned, but their morality and honour assailed; for it has been suggested that the doctrine of change of type was an invention to cloak their former errors.

It is interesting to note that this is not the first time that charges of the same kind have been brought against the Profession. Of these, the most remarkable was that of Broussais, who arraigned all existing and former Practitioners for not treating fevers and acute diseases by local bleeding and starvation. Can there be stronger evidence than this, that our modern practice is not a novelty? All his predecessors were in error, because they practised as we do now. I say that this charge was remarkable, inasmuch as its author's views largely influenced European practice for many years.

But the thinking man finds it hard to believe that the fathers of British Medicine were always in error, and that they were bad observers and mistaken Practitioners. They, indeed, have rested from their labours, but their works remain; and he who reads the writings of Sydenham, of Haygarth and Fothergill, of Heberden and Fordyce, of Gregory, Cullen, Alison, Cheyne, or Greaves, must have a very inapprehensive mind, if he fails to discover that there were giants in those days, and that the advocacy of such ideas only indicates a state of mind not consonant with the modesty of science.

The declaration that it has been or can be proved by a more advanced pathology, that bleeding never was the proper remedy for fevers and inflammations, has as yet no scientific ground. It is not yet given to us, notwithstanding all our advance in normal and in morbid anatomy, in the physiology of health or in that of disease, to be able to say, from the most minute examination of the dead organ or structure, what were *all* the conditions which attended it during life, in health, or in disease—what were its local vital phenomena, what was its accompanying constitutional state. The words of Goethe, so well rendered by Dr. Anster, convey a deep practical lesson to those who would base Medicine on anatomical change—

> "Alas! the spirit is withdrawn—
> That which informed the mass is gone.
> We scrutinise it when it ceases to be itself,
> Finger and feel it, and call this
> Experiment analysis."

But let us ask—Which is the most probable of these two suppositions? First, that our predecessors, including such as I have named, were bad observers, incapable of divining the truth, and blind adopters of an antiquated and mischievous method; or secondly, that the type of disease has changed, and that in our own time. It happens, fortunately, that we can examine two living witnesses of great authority in this matter, and can refer to the works of two more who have left us their written testimony. Dr. Watson and Dr. Christison are still among us, in health and intellectual vigour—long may they be so; Dr. Alison and Dr. Graves have been but lately removed.

Now, all these testify that the character of diseases has in our time changed from a sthenic to an asthenic type; that is to say, from a condition in which inflammatory reaction was the prominent feature, to another where that state was absent, or, if present, only ephemeral—a condition observable in essential and in local disease, in which the antiphlogistic treatment was well borne and productive of great relief, to one in which a tonic and stimulant and supporting system was found the best method of guiding the disease to a happy termination.

It is very important to note that these views were not formed from any historical study of the recorded labours of others, but come before us as the actual observations of the great men whose names I have stated to you. They tell us that which they know—that which they themselves have seen. If we refuse this collective though separate and independent evidence—if we hold, with Professor Bennett and with Dr. Markham, that the doctrine of change of type is untenable—we must believe one of two things, either that these distinguished men were themselves deceived or themselves deceivers. From this alternative there is no escape.

Let us hear Dr. Alison:—"When we reflect on these facts we cannot think it unlikely that the result of the inquiry which I have stated as so important may be to show either that all causes capable of exciting diseased action in the animal economy, or, more probably, that the liability to diseased actions in the different departments of the animal economy itself, are subject to variations, which are made known to us only by the variation of such phenomena themselves; occurring merely in the natural course of time—an element affecting all vital phenomena quite differently from its agency or inanimate nature; and the effects of which on living beings we must take as ultimate facts, to be carefully observed, arranged, and classified, but which we are not to expect to be resolved into any others which the study of this department of the works of Providence presents."

When I read these words of Alison—the best man I ever knew—it is with a feeling of wonder how it has happened that men should forget what reverence is due to his memory, whether we look on him personally as a man of science and a teacher or at his life as an exemplar of that of a soldier of Christ. It was my good fortune to be very closely connected with him during my student days in Edinburgh, and to attend him by day, and more often far into the night, in his visits of mercy to the sick poor of that city, to whom he was for many a year the Physician, counsellor, and support. This was forty years ago, and at that time he recognised the change. Often has he said to me, "We cannot bleed this man; we must get him wine;" and the wine was got, and given with an open hand so long as it was required. He used to say, "I am not anxious to put these poor people into Hospital; they will get on better at home if we are guided by looking at their constitutional even more than their local state." This, however, has been well put by Dr. Watson, who dates the commencement of the change from that of the first presence of cholera in London in 1833. We can easily believe, however, that the change in question would not occur in all parts of these countries at the same time.

It is very important, however, to connect that which I have now detailed to you with the observations of Alison, published at the request of Dr. Christison, in part, in 1850, and afterwards in 1856, in another memoir, entitled "Reflections on the Results of Experience as to the Symptoms of Pulmonary Inflammation, and the Results of Blood-letting, during the last Forty Years."

In 1856 appeared Dr. Christison's "Memoir on the Changes which have taken place in the Constitution of Fevers and Acute Inflammation, in Edinburgh, during the last Forty-six Years." This is a memoir eminently characteristic of its author;—full of views and arguments which it becomes much more convenient to ignore than easy to confute. Dr. Christison shows that the change of treatment in acute diseases is to be considered with reference to fever as well as to local affections. He bears witness that the abandonment of bleeding in idiopathic fevers preceded by a good many years its abandonment in acute inflammation, and that this change in practice took place gradually, in all acute inflammations, not alone in pneumonia, because of the improved diagnosis of the disease, but in all others, in many of which no sensible progress in diagnosis had been made. Looking at the epidemics of fever in Edinburgh from the beginning of the present century, he shows conclusively that, in 1817-20, and in 1826-29, their characters were those of Cullen's synocha and synochus,—inflammatory, relapsing, critical. Speaking of the epidemics of 1817-20, he dwells on the hard, incompressible pulse, the ardent heat of the skin, the florid hue of the venous blood, and the impetus with which it escaped almost *per saltum* from the vein, the vivid glow of the surface, and the distracting pain and pulsation of the heart and chest. Similar phenomena occurred in the epidemic of 1826-29; and, in both, bleeding was largely practised with the happiest effects; so that, in the epidemic of 1817-20, the mortality, which was at first one in twenty-two, fell to one in thirty,—a result which disposes of the charge of malpractice against the Profession. But, in 1834, Dr. Christison found that probably for two years previously a change had been going on: synocha had disappeared; synochus had lost vehement reaction of its early stages; typical typhus was much more common; and what did not come up to Cullen's mark of fully-formed typhus was what Physicians would now commonly call mild typhus, with more of introductory reaction than we observe now, but with less than in the two epidemics of 1817-20 and 1826-29.

"Accordingly," says Dr. Christison, "I doubted, and all the Physicians of our Hospital also doubted, whether bloodletting was applicable as a remedy to that fever. We could not bring about resolution by a sweating crisis with it; we

could not lessen by it the depth of the typhoid prostration; and, worse than all this, our patients ceased to sustain free venesection, a few ounces of blood bringing on faintness, and the constitution refusing to rally afterwards."

Lastly, to prove that this statement is not the result of an afterthought of the present day, Dr. Christison refers to his clinical lectures, delivered between 1833 and 1835, to show that he then declared the necessity of a change of practice.

I shall not apologise for giving you another quotation. Speaking of the theory or generalisation of the facts ascertained, he says:—

"In epidemic fevers a change may take place in the constitutional part of the fever; and this change has been exemplified in Edinburgh during the last forty years by a transition from the sthenic or phlogistic character in the first twelve years to the asthenic or adynamic character in the twelve years which has just elapsed."

And he adds these remarkable words:—

"If this change be admitted to have been proved, there is an end to all difficulty in accounting for the abandonment of blood-letting in the treatment of our fevers. In point of fact, I am able to state very positively that the abandonment of bleeding in fever was suggested by observation of a change in the constitution of fever, and in the effects of the remedy on it, and not by any other circumstance, whether extraneous or intrinsic. It is impossible to ascribe such change of practice, as Dr. Bennett has done in the instance of pneumonia, to an improved knowledge of disease. We have improved our knowledge of fever so far as to have been, for some time, well acquainted with the form of enteric typhus (dothinenteritis), which was unknown, or not recognised, at the commencement of our epidemics. But this is a rare form of fever in Edinburgh, scarcely belonging to its epidemics at all; and as to our only undoubted epidemic fevers, typhus and synocha, with their intermediates, we cannot be truthfully said to be better acquainted with them in 1857 than we were in 1830.

"I have given, I hope, a sounder explanation,—less flattering, perhaps, to the rising generation of Physicians, but surely more honourable to Physic itself, more creditable to Medical observation and experience, more consonant with the advanced state of Medical philosophy. My own convictions on the subject are so strong that I regard nothing as more likely than that, in the course of time, some now present will see the day when a reflux in the constitution of fever will present it again in its sthenic dress, and again make the lancet its remedy; and, in that event, it is not impossible that, while we are now charged with giving up blood-letting, because it was discovered to have never been the proper method of cure, we will hereafter be assailed by some new enthusiast in blood-letting, who, in imitation of Dr. Welsh, and regardless of the fate of his doctrines, will accuse us, with equal justice, of having made our late fevers asthenic and typhous by blindly withholding their fittest remedy."

In truth, the alternation of the epidemic character of sthenia and asthenia is established in the case of eruptive fevers, and by an observer who has been held up as a ruthless spiller of blood—Professor Gregory. He has described an epidemic of measles which occurred in 1807 and 1808 in Edinburgh, and which, he expressly states, was not to be treated on the antiphlogistic plan, but rather by tonics and stimulants. This fever was preceded by the inflammatory measles and scarlatina, in which the lancet was used with advantage until the type again changed, and the asthenic fevers, as we have had them for a quarter of a century, reappeared.

The change of type, too, of the local acute inflammations followed, as might be expected, that of the essential diseases; and the change in treatment resulted, not from any new light shed on the practice of Medicine, not from any new views in pathology, not from our advance in diagnosis, vital or physical, but from the observation of the general symptoms on the one hand, and the results of treatment on the other.

I may now add the results of my own experience in this matter. I remember the period when the change of type took place in Ireland, and am under the impression that it was observed earlier in Ireland than in Scotland, or at least in England. The great epidemic of fever in 1828 was a remarkable one from its compound nature, and seemed to be made up of synocha, synochus, and enteric typhus. But nothing was more remarkable than the vehemence of the inflammatory reaction in many cases; and it is a curious fact, that this was sometimes seen at its highest pitch in the relapses, when it was often far more violent and dangerous than in the first attack. Local bleeding was largely employed. In many cases venesection or arteriotomy had excellent results, so that, although there were abundance of cases with prostration and others marked by the typhoid condition, the old sthenic character had not disappeared. The amount of wine used at that time in Hospital was quite insignificant as compared with its consumption for the last twenty or twenty-five years. In Dublin, at least, this epidemic passed into one of intermitting fever, and it was then that I ventured on testing the nature of the practice recommended by Dr. Mackintosh of bleeding in the cold stage. The result of the experiment was against the use of the lancet; but I mention it as indicating the time when it may be said that venesection was abandoned in our wards.

Thus, between 1822 and 1828, the sthenic character of essential and of local disease existed, and the lancet was freely used, often, as I believe, and as I have elsewhere stated, with too great freedom; but I well remember observing the frequent occurrence of the phenomena mentioned by Dr. Christison—the vehement action of the heart, the incompressibility of the pulse, the vivid redness of the venous blood, and the force with which it spouted, almost *per saltum*, from the orifice in the vein. I have myself taken as much as sixty ounces in a case of active congestion of the brain, with hemiplegia, before any impression was made on the arterial excitement: in this case, complete success followed. In rheumatic fever, too, we found the use of the lancet in the early stage of the disease to be productive of great relief. Venesection was seldom used more than once; but its effect was to shorten the duration of the disease, to lower the fever, to lessen the liability to the so-called metastases, and to render the whole case much more amenable to treatment. But I have not bled in rheumatic fever for the last quarter of a century; for the whole character of the disease has changed. We have not had for many years the bounding pulse, the exaggerated heat and sweating, nor the same liability to acute inflammations of internal parts. The action of the heart is often feeble; and the tonic and supporting plan seems called for from an early period. Another point worthy of remark is, that cardiac and aortic murmurs of the anæmic kind have for many years been much more frequently observed, both during the attack and in the convalescence, demanding the use of iron for their removal. Observations of a similar kind apply to other acute diseases; such, for example, as erysipelas and other affections of the skin. Before 1830, we had, as an ordinary disease, the acute phlegmonoid erysipelas, attended with inflammatory reaction, vivid redness, and great swelling of parts. The practice of free leeching gave great relief; so also did that of incisions. All these characters have, to a great degree, disappeared.

It is needless to add more examples; let us rather turn to another kind of evidence. Hitherto the change of type has been recognised and determined less by anatomical observation than by the observation of symptoms, and still more by the application of the therapeutic test. Remedial measures of a certain kind were found to fail and to be hurtful, where they were formerly safe and successful; and, conversely, the use of a supporting system of tonics and the free employment of stimuli were found necessary and safe where formerly they did injury. To the all-important subject of the value of therapeutic study as a means of elucidating the laws of disease, I may presently return. But I think that I am in a position, from actual observation, to declare that morbid anatomy adds its testimony to the truth of these views.

The Pathological Society of Dublin has been now established for twenty-six years, during which time it has held weekly meetings for six months of each year. As one of the Secretaries of that Society, I have had full opportunity of seeing and examining the recent examples of diseased structure brought weekly before the body—amounting to nearly 3000 specimens—the collected products of various Hospitals of the city; and this result is remarkable, that the specimens of acute disease have had a character very different from that commonly met with in Dublin between 1820 and 1830. As a general rule, these specimens all showed appearances indicative of a less degree of pathologic energy. In pneumonia, for example, the redness, firmness, compactness, and defined boundary of the solidified lung was seldom seen; and that state of dryness and vivid scarlet injection, to which I ventured to give the name of the first stage of pneumonia, became very rare. In place of these characters, we had a condition more approaching to splenisation—the affected parts purple, not bright red; friable, not firm; moist, not dry; and the whole looking more like the result of diffuse than of energetic and concentrated inflammation; or we had another form to which

Dr. Corrigan has given the name of blue pneumonia, in which the structure resembled that of a carnefied lung which had been steeped in venous blood.

Let us turn now to the serous membranes, and the same story is repeated. The high arterial injection, the dryness of the surface, the free production, close adhesion, and firm structure of the false membranes in acute affections of the arachnoid, pericardium, pleura, and peritoneum, with which we were so familiar before the time in question, ceased in a great measure to make their appearance. The exudations were more or less hæmorrhagic; the effused lymph lying like a pasty covering rather than a close and firm investment; it was thin, ill defined, and more or less transparent. In many of such cases, during the disease, as the late Dr. Mayne has shown in his memoir on pericarditis, friction-sounds were never presented. Serous or sero-fibrinous effusions tinged with colouring matter replaced the old results of sthenic inflammations, and all tallied exactly with the change in the vital character of the disease.

It has happened to me—and I mention this in evidence that we were not mistaken as to cases peculiar to the sthenic form—that a few instances of disease in its old inflammatory characters have appeared in isolated examples, and at irregular intervals of time; so that we at once recognised their nature, and employed with success the old treatment in all its vigour—employed the lancet, although for many years its use had not been resorted to. This is very important, as showing that there are influences, the nature of which is as yet unknown, that affect the vital character of local diseases in an inconstant manner.

In an address of this kind, it is plain that this subject cannot be handled in an exhaustive fashion; it is enough that we touch upon a few of the larger subjects of inquiry. And now it will, I hope, be admitted that, with reference to the doctrine of change of type, we have brought to bear upon it the great sources of evidence as to the nature of disease.

Of these, the first is the study of vital symptoms—that study in which the older Physicians so excelled, and which, from the very necessity of the case, they probably carried further than we now do, armed as we are with the many aids of physical diagnosis.

The second is the study of the characters of the anatomical changes induced by disease, and this in a comparative way, as referring to successive periods of time.

And the third is that which is derived from the results of therapeutic experiments.

Looking at the question from any one of these points of view, we come to the conclusion that the doctrine of change of type is a true one; while, if we take all these facts, and observe how they point to the same conclusion, we must, to use again the words of Alison, accept the change of type as an ultimate fact in the history of disease.

But are we to conclude that this asthenic type of disease is always to continue? Are we to forget that in our own time we have witnessed its advent and growth? Is it not possible—nay, probable—that we or our successors may witness its disappearance, and, coincidently, the return to an antiphlogistic Medicine, regulated and tempered by the advances in diagnosis and pathology which have been meanwhile made? I have given you the opinion of Dr. Christison on this matter; let us now hear Dr. Watson:—

"I am firmly persuaded by my own observations, and by the records of Medicine, that there are waves of time through which the sthenic and asthenic characters of disease prevail in succession, and that we are at present living in one of its adynamic phases."

It is very important that the change of treatment of fevers and acute local disease be traced to its true sources. This change has not proceeded from any advance in our knowledge of physiology or of pathological anatomy, nor from any new principles of practice announced as applicable to all time, and therefore implying that our predecessors were groping in the dark, or wilfully and ignorantly following a system of traditional error. To each one of us the honour of our Profession, which includes its scientific character and its power of development out of itself, has been entrusted. Medicine, like other professions involving human interests, has been continually assailed from without, and harmlessly. Attacks on her honour proceeding from her own children, no matter what amount of ability may be shown, while they inflict a deeper wound, ever recoil upon their authors. This has been well exemplified in the case of Paracelsus, who burned the books of the Greek, Roman, and Arabian Physicians. It is well exemplified in the case of Broussais, who, in speaking of the Eclectics, spares no term of contempt. According to him, they were guilty of shocking contradictions and absurdities, even of imposture. But, he says, "What matter for all this? Falsehood is no longer a vice. Its apotheosis has been made by this famous party, who think that they are to reign for ever." He goes on to speak of their gratuitous suppositions, of their assertions void of truth, of false imputations, inaccurate quotations, and impudent denials and total perversion of the use of words. He is the only light, and in his devotion to truth he has scorned the miserable ambition of practising in gilded saloons, and the possession of the honours of the Profession.

In common with Dr. Christison, I have to express my regret if, in the discussion of this great question, I have to introduce something of the controversial element. Let us inquire whether the distinguished Professor of Clinical Medicine in Edinburgh, as well as Dr. Markham, have not in some degree followed the examples of Paracelsus and of Broussais; not, indeed, in violence of language and indiscriminate denunciation, of which they are incapable, but in the attempt to show that their predecessors were deficient in observation and erroneous in practice.

In the very limited analysis which I have given of Professor Christison's views on the subject of the change of type, and in the statement of such opinion as I have been led to form on the question, I have at least endeavoured to show that it is not one which is to be lightly disposed of. When I had determined on the general nature of a discourse fitted for this occasion and this audience, I felt a difficulty on recollecting that in 1861 Dr. Markham, who then filled the place that I do now, had in his address argued against the doctrine in question; but, on referring to the Gulstonian Lectures of 1864, I was happy to find that Dr. Markham, when questioning the value of his predecessors' observations, does them the justice of declaring his belief that, as they have advised their followers to try all things by the light of their own reasoning and observation, they will be the last who would object to the freest criticism of their opinions. Let me, who am one of those who hold views opposite to those of Dr. Markham gladly reciprocate the compliment. It is but justice to Dr. Markham to remind you that he holds that general and local bleeding are remedies of great value when employed on fit occasions, and that at the present day cases are sometimes injured from our timidity in using them.

It appears pretty certain that the change in treatment of such Physicians as Alison, Christison, Watson, and Graves did not solely spring from the results of the therapeutic test; but that the study of the symptoms and general characters of disease was equally considered by them. In this change, too, they and their many followers in the three kingdoms have only done that which a knowledge of the history of Medicine has given abundant precedents for. It would be well if it could be remembered that in the study of disease we are to look beyond anatomy and beyond physiology; as Professor Autenrieth well observes, the "*constitutio morborum stationaria*" of Sydenham has been nearly forgotten, or else confounded with the permanent influence of the seasons or accidental atmospheric changes.

"All diseases, contagious and non-contagious, acute and chronic (the latter, however, seldom except when attended with some degree of general excitement) have been observed to preserve a certain constitution or general character, which continues for a number of years in succession, with occasional interruptions, until it is replaced by another constitution of a different kind."

"Again," he says, "accurate observations are still wanting to determine how this periodic constitution is confined to certain parts of the world, or extends over the whole, and whether its different species follow each other in regular order of succession. If such should at any time be determined, it will enable the Physician to foretell the character and most appropriate treatment of future diseases.

"The general indications, of course, vary with the nature of the prevailing constitution, and consequently during one period stimulating remedies, during another alvine evacuations, during a third venesection and the antiphlogistic plan, will constitute the most effectual treatment."

Let me now read a passage from Autenreith. It is not very flattering, I admit; but it is well to know what other people think of us. This was written a quarter of a century ago:—

"This very circumstance has caused much confusion in Medical opinions, and has occasioned the reputation and the

downfall of many an infallible system, each of which is in its urn consigned to oblivion, and perhaps again revived as at novelty at some future period. The English boast much of the astonishing improvements in science, and deride the ignorance of their predecessors, regardless of the old proverb, —'Everything has its day.' Whenever, therefore, the periodic constitution undergoes an alteration, they either obstinately uphold their usual plan of treatment to the manifest injury of their patients, or else blindly embrace some system, to them new, but which really rests upon ancient and established principles. In general, they do not fail to make use of so much exaggeration in support of their opinions, and thus succeed in misleading so many, that none but very well informed Physicians can distinguish the fallacy of their arguments.

"The Medical history of Great Britain affords many striking proofs of the truth of these assertions, and is replete with examples of the singular obstinacy with which the English cling to opinions once formed, a circumstance which has materially contributed to obstruct their attaining to general views and impartial conclusions. Even to this day, a warm contest is carried on (less, however, in books than in debates of learned societies) between the senior and the junior part of the Profession, the former still inclining to Brunonianism, while the latter attribute nearly all diseases to inflammation. Both, indeed, appeal to experience to prove the justice of their principles, and seem entirely to forget that while the propriety of their practice, as applied to particular cases, remains unimpeached, the very nature of the diseases themselves may have been changed."

There is a statement made by Dr. Bennett in his great work on the "Practice of Medicine," which is at least a startling one. It is, that in his treatment the mortality of pneumonia has been reduced by a large percentage. The mortality in Edinburgh, according to him, under the system of his predecessors, was no less than one in three—equal to that in the first outbursts of Asiatic cholera. The statistics belong to two periods—namely, from 1839 to 1849, and from 1812 to 1837. The mortality in the first division was even more than one in three. The results of other statistics are also given, of which the most valuable are those of Louis, who brings out the mortality of those bled moderately, and at an early period, as 1 in $7\frac{1}{4}$, and of those in which the blood was taken at any time from the first to the ninth day, as 1 in $3\frac{1}{4}$.

Now, it is unnecessary to remind an audience, constituted as this one is, of the difficulties which attend Medical statistics in general, and those relating to therapeutics in particular. When I began the study of Medicine, pneumonia was considered to be far more manageable than other acute visceral inflammations; and that its rapid retrocession took place under the old treatment in a vast number of cases, no man can doubt who lived and practised in that time. But in these statistics of pneumonia I find an omission. If we look at the diagnosis of this disease in a purely physical point of view, we run the risk of committing the great error of confounding cases, the constitutional nature of which is widely different—cases on the one hand of original idiopathic pneumonia occurring from accidental causes, and cases in which the change in the lung is secondary to some form of fever. And this makes a most important difference. It is my conviction that many of the so-called cases of pneumonia which have occurred in the United Kingdom since 1830 were really examples of the latter form. But, further, it is certain that in many instances the occurrence of the pneumonia is attended with such a change in the constitutional symptoms as to deceive the Practitioner, and hide from him the fact that he had to deal with a secondary in place of a primary affection. In some cases we see a change from the essential to the symptomatic character, while in others this remarkable circumstance occurs that, coincidently with, or very soon after the development of the symptoms and the physical signs of pneumonia, the fever ceases; so that we have long come to the conclusion in the Meath Hospital that many of these cases with every local symptom and sign, are in truth only examples of aborted fevers, ending critically in pneumonia, just as we see in some cases of variola the fever ceasing with the pustulation of the skin. If these things be true, how important is their recognition—how inconsequential the conclusions as to treatment, based on statistics from which such facts are excluded!

Let us now inquire to what sources Professor Bennett traces the changes in practice, and that success in the treatment which has reduced the mortality of pneumonia from 1 in 3 to 1 in 36 in complicated cases, while in the uncomplicated cases there was no mortality at all. They are stated to be the improvements in diagnosis, on the one hand, and the adoption of a practice founded on the cellular pathology on the other. As to the first, how the improvement in the diagnosis of pneumonia could have led to the change of treatment of fevers and cerebral or abdominal inflammation is hard to understand—this has been well put by Dr. Christison—unless it could be shown that the failure of bleeding in pneumonia led men to think it would also be useless or injurious in other diseases. It must be remembered, however, that the change in treatment began first as to fevers; and it was the observation of the change of type in that class of diseases that led to the idea, and afterwards to the demonstration, of a similar change as to local affections.

But improvement in the physical diagnosis of pneumonia can hardly be said to have advanced since the time of Laennec. And it is clear that, looking at therapeutics, the influence on them of any such improvement is indirect rather than direct. We know better the seat, the period of commencement, the periods of pathological changes—their amount in some cases, and the complications with other forms and centres of diseased action; but we get little, if any, new light as to the proper remedy. Take any or all of the three great cases of intrathoracic inflammation. The physical signs as to character and succession are essentially the same in the asthenic or typhoid forms as in those with the highest inflammatory reaction. Therefore, to say that the alleged improvement in treatment proceeded from the advance of the physical diagnosis is a proposition which must be rejected.

The adoption of practice founded on the cellular pathology of Virchow is a much wider question. It is to be remarked here, that the therapeutic test of the value of these means is still to be applied. We find a treatment indicated as based on, or as directly flowing from, the new pathology. Yet, what is this treatment? It consists in the use of certain measures, and the abstaining from their opposites; but neither in principle nor detail does it differ from that adopted by the older clinical Physicians in asthenic local diseases, from the time of John Peter Frank downwards to that of Bateman in 1809, who was compelled to use venesection—a practice opposed to his former views. It is, then, no new treatment; and it, at all events originally, could not have been based on a pathology of which nothing was known at the time when it was first adopted. I do not say that, if the cellular pathology be finally demonstrated to be true, it will not—to adopt the expression of Dr. Bennett—be attended by cell-therapeutics as its necessary complement. New modifications of treatment may be discovered, and probably will be discovered; while, on the other hand, the old methods stamped by experience, and the discoveries of enlightened observation, may be brought to bear in confirming the new truths.

But in the present state of our knowledge, it cannot yet be said that the views of Virchow have had any direct influence on the healing art—that is to say, they have not led us to any new remedy; they have not explained the action of many of the old ones.

I am not, you will believe me, speaking in a spirit of depreciation of the labours of Professor Bennett, and more especially those of Virchow. Looking at the practical results of Virchow's labours, we may separate the consideration of the cell-pathology from that which belongs to questions of another kind. The demonstration of the whole of embolic diseases, and the investigations of both Bennett and Virchow, as to the part played by the colourless globules of the blood, are priceless additions to Medicine; not, however, as giving us directly any new means of cure, but as enabling us to avoid errors into which our ignorance of these things led us before. We shall not now confound a case of embolus of the pulmonary artery with asthma or with hydrothorax; nor, in a case of amaurosis, from obstruction of the central artery of the retina, shall we be led to treat it as a symptom of disease of the brain. It is plain that, whatever be the result as to practical Medicine of these labours, they are to be held in the highest estimation, as evidencing the onward march of discovery in a certain direction—as enlightened efforts to place pathology on a more definite basis. Yet, I repeat it, the cellular pathology with reference to practical Medicine stands in a position analogous to that of our vastly improved diagnosis. Supposing all that is announced by Virchow, Weber, and Bennett, to b established, still up to the present time it would give to the healing art only indirect assistance.

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Let us permit the elements of tissues, the ultimate cell, or granule, to share with the great compound organs of the body the property of specific action; let us admit that there is no spontaneous generation of cells from an amorphous blastema, but that every cell proceeds from a cell; that cells are the ultimate elements of animal as of vegetable structure; that differences of function depend on differences of their contents; that every animal is a sum of vital unities, every one of which manifests all the characters of life, deriving, it may be, its stimulus and intensity from other sources, but itself alone performing its actual special duties.

Let us hold, further, the whole doctrine of neoplasms, which sets forth that every pathological structure has its physiological prototype; and that even cancer has not its specific difference, any more than pus, but that its supposed peculiarity is traceable to the stage at which we examine it; that the law of histological substitution be accepted physiologically, as when one tissue of a similar type reaches another; and pathologically, when a different tissue, but still one having its physiological prototype, comes into play. Again, if it be found to be true that all dyscrasiæ have a local origin, and are dependent on a permanent supply from a local origin; that fibrine is not a constituent of living blood; that between the pus-cell and the colourless globules of the blood there is no difference, so that the term pyæmia must be given up as a condition susceptible of morphological demonstration, but implying a complex mass of conditions, the central point of which is not a purulent infection of the blood; that embolism is the key to the study of metastasis; and that inflammation is nothing, as Bennett teaches, but an alienation of nutrition,—if, I say, all these things be true, it does not appear that they furnish knowledge that would tell us why this or that line of treatment is from time to time found efficacious—a knowledge that would direct us in the cure, though to a certain degree it might to the prevention, of disease. In truth, such knowledge throws little light on the action of medicines, on the laws of periodicity, and on the great phenomena of essential diseases, as to their origin and specific character, spread, secondary lesions, their crises, and the influence of treatment on them. And therefore I conclude that, even if, under the treatment of a distinguished professor of this science, the mortality of a frequently recurring disease has been annihilated, that result cannot be as yet traced either to a new diagnosis or a new pathology, as exercised by him; nor, conversely, can the great alleged mortality of former times be attributed to imperfect diagnosis on the one hand, or to traditional errors in treatment on the other.

But let us ask, if it be true that the mortality of pneumonia has been in the latter years so much lessened, to what is this to be attributed? It may be that we have to deal with a disease of less organic activity or tension, so that in certain cases it may, like a fever, subside spontaneously; perhaps, too, like a fever, under its own law of periodicity. And it is probable, at all events, that the more a local disease corresponds in its vital character to the epidemic constitution, to use the words of Sydenham, the more will it appear under the laws of periodicity, for good or for evil.

It is very hard to predicate the limits to which the study of healthy and of diseased structure in its mechanical or chemical relations may lead us; and it is possible that even such investigations of the laws of organisation may result in giving us power to infer the existence of phenomena not yet discovered—to proceed, as Adams and Le Verrier have so gloriously done, from the seen to the unseen, and approach one degree nearer to the solution of the great problem of life in health or in disease—or, again, that of the action of medicines. But we must take heed not to leave any path of observation unexplored, nor to despise those investigators who, from necessity or choice, follow a less mechanical method, but who have made Medicine progressive—every day less an art and more a science. Every established microscopic observation in normal or in morbid anatomy—every faithful analysis of any solid or fluid in the body—every discovery as to the spectral phenomena of the blood or of the liquid secretions of any gland, nay, of any cell, in the organism, though to a one-sided view it appears useless, is truly a precious thing.

And here it is fitting to remark that there is nothing in the doctrine of cellular unity, of cellular independent action, and in all the processes of cell-growth, proliferation, and decay, which is inconsistent with the doctrine of change of type of disease. Dr. Bennett allows that change of type may be admitted as to essential diseases, but seems to hold that, as to acute or chronic organic disease, the doctrine is to be rejected. But, if there be a change of type in the essential diseases, it is difficult to understand why there should not be a change in character of the secondary effects of those diseases, whether these are met with in the nervous centres, in the thoracic or abdominal organs; so that we may have sthenic or asthenic cell-growths, cell-proliferations, cell-transmutations, and cell-decay; and all this without referring to the notion that, because local disease, as well as general, exhibits now a lower activity, therefore the physical state of man in health has deteriorated.

We are still very far from determining the laws of the so-called zymotic diseases; but this seems certain, that at the invasion of epidemics the strong man is struck down, and often exhibits the phenomena of the disease in the most aggravated forms. In the epidemic of 1827 in Ireland nothing was more remarkable than this, that its virulent forms, especially that in which it so closely resembled the yellow fever of the tropics, were at first seen in the finest and strongest men. It is ever probable that in these diseases the very vigour of the system may imply a greater malignity or activity of the processes which constitute the disease. The existence, then, of a changed type of disease may be admitted without the necessity for believing that the human species has degenerated.

Before concluding, it is right that we should consider the relation of therapeutics to Medicine. It will be admitted by most thinking men that the study of diseased or healthy organisation has revealed more of the effects than of the essence of disease. So subtle are the conditions by which the quality of life is preserved, that, in a vast proportion of instances of death, the most refined anatomy and chemistry fail in discovering a commensurate change, or in explaining why what was a living creature yesterday lies before us in a few hours a decomposing mass of clay. Hence, we must be cautious in extensively adopting any therapeutical system which is solely based on inference from visible organic change. In the present imperfect state of our knowledge, we must not neglect that study of therapeutics which is essentially experimental and inductive; and if there be one thing wanting more than another in our science, it is that men should know the nature and difficulties of therapeutic evidence. If, as I have often heard Professor Acland observe, only a few of our well instructed brethren who are in charge of public institutions, well aware of the established laws of disease, whether essential or non-essential, and good observers, were to take up any one remedy, whether new or old, say digitalis, and faithfully record on the one hand the character and history of the case, and on the other the results of the use of the particular or other therapeutical proceeding, we should ere long have such a mass of unbiassed statement of facts that safe conclusions could be drawn. Until this is done, the position of therapeutics will be an inferior one. It will not be any trustworthy guide in practice, except in a few salient instances, and will be powerless in its other great function of being the key to, and the test of, pathologic conclusions.

To bring therapeutics up to this level seems to be the great desideratum. We may fairly hold that the time is ripe for the commencement of its study with the view to its higher functions or development. Without placing limits to the material investigations in which we are aided by the microscope and by chemistry, we may believe that our knowledge of the intimate structure and composition of the solids and fluids of the body is so extended, as to give to the therapeutist reason for holding that he is now far better acquainted with the living organism than he was a quarter of a century ago; and that so he has a broader and more secure foundation to build upon. But the therapeutist must also possess assistance of another kind. He must know the principles of accurate reasoning; he must distinguish between the *post hoc* and the *propter hoc;* he must be content still to deal with vital phenomena as constituting a class of the nature of which our knowledge is so deficient, that we have still to study their modifications by external agents, experimentally, and without as yet much reference to their relations to structure or to vital chemistry; he must take into account the laws of periodic action in health and in disease, and determine, or seek to determine as he proceeds, whether the simplest form of acute local as well as of general disease is not under some of these wonderful laws; he must study the question as to whether medicinal interference extinguishes morbid action, postpones it, or by breaking its circle, as suggested by Professor Boeck, though this be followed by temporary good, deranges the process which is

to end in its removal; he must well understand that certainty in Medicine must be approached by the balance of probabilities, and have a full insight into the difficulties of Medical statistics, which result from the labours of more than one observer. Other circumstances will suggest themselves to you—as the influences of locality, of race, of age, sex, habit, and previous history. I will not dwell on them further than to remark that, had Broussais attended to one of them in particular, he would not, I think, have fallen into the error of declaring the non-existence of essential fever from observing disease within a narrow circle of the world.

If therapeutic science is to advance, it must be followed and studied in the most severe scientific spirit.

I have to thank you for the courtesy and patience with which you have listened to this somewhat dry discourse. We have indeed dealt with important subjects; and you will, I hope, believe me when I say that no one in this room can feel more than I do how defective has been their handling. I say this in no guise of mock modesty. But I have endeavoured to speak as a practical Physician, who has worked for forty years, to a body of his brethren engaged like him in fighting the same battle, using the same weapons, and bringing all their powers to insure the same result.

At the risk of breaking the continuity of this report, I place the Address in Surgery, which was delivered on Thursday by Mr. Syme, immediately after the Address in Medicine. The reader will thus be in possession in a single number of the *Medical Times and Gazette* of two of the leading scientific contributions to the proceedings of the Association, and he may compare with advantage the thoughts of a Physician and Surgeon with whom, as belonging to the same epoch in Medicine, we are all proud to be connected.

THE ADDRESS IN SURGERY.

By JAMES SYME, F.R.S.E.,

Surgeon-in-Chief to the Queen in Scotland; Professor of Clinical Surgery in the University of Edinburgh; Member of the Medical Council, etc.

Mr. President and Gentlemen,—It is said, with truth, that those only can appreciate the comfort of travelling by railway who have experienced the delay and fatigue of the old coaching system; and it is no less true that Surgeons of the present day can hardly imagine the facilities they enjoy in discharging their Professional duties, when these are compared with the difficulties experienced by their older brethren. Forty years having now elapsed since my first course of lectures on Surgery, I venture to hope that some account of the changes in practice which have taken place during this long period may not be without interest on an occasion that has afforded me the honour of addressing so many members of my Profession.

But, before proceeding further, I must entirely dissent from the opinion which was expressed by my respected friend who addressed you yesterday, that the progress of improvement implied a censure on those who had previously been in error. On the contrary, I have always understood that there was nothing more creditable than the admission of error, and that every man, instead of being ashamed to do so, should be proud of taking a step in advance, whether he leads or follows.

Commencing with the treatment of inflammation and its consequences, I may notice a most remarkable difference between the old and the present practice, in the almost entire disuse of bleeding instead of its nearly constant employment. On looking back, it is indeed difficult to realise the reckless and indiscriminate profusion with which blood was made to flow. When I was one of the dressers of the Royal Infirmary of Edinburgh, two of us went every evening at a stated hour to bleed the patients, whose names were entered in a book, with the respective quantities due from each. On one occasion, I recollect of sixty-five ounces taken at once, and followed by thirty-five next day. At present few Surgeons carry a lancet, and still fewer ever employ it, so that venesection, instead of being the most frequent, has become one of the rarest operations in Surgery. The reason of this is generally said to be a change in the type or condition of the human system, but may, I think, rather be attributed to the influence of more correct ideas in regard to the treatment of disease; since it is certain that operations no less bloody than those of the old time are now performed without any evidence of less ability to bear them.

Before being appointed House-Surgeon of the Edinburgh Infirmary, I was Medical Superintendent of the Fever Hospital; and there, under the direction of the attending Physicians, both of whom were Professors of the University, I bled men, women, and children, who were brown, emaciated, and reduced to the utmost degree of weakness. Afterwards, when House-Surgeon to the Infirmary, I had under my care a boy who suffered from compound fracture of the leg, which gave rise to profuse suppuration; and, about three weeks after the injury, seeing that his strength was much exhausted, I ordered him some porter and a beef-steak. But, next day, the Surgeon, who was one of the most largely employed Medical men in Edinburgh, disapproved of this, which, he said, would feed the disease, and directed me to take fourteen ounces of blood from the arm. I obeyed with great reluctance, and need hardly add that, before the end of forty-eight hours, the boy was dead. Now, I would ask, could any man at present think of bleeding in such cases as these? and, if not, then I say that, whatever change there may have been in the type, there certainly has been a change in the practice.

In treating the sinuses which remain after the evacuation of abscesses, a great improvement has long been established through the substitution of effectual drainage, instead of the means formerly employed to promote a healing action. These were sponge-tents, stimulating injections, and external pressure. Nothing could be more absurd than the first of these, since their alleged use was to keep the orifice open, while, on the contrary, they effectually closed it, so that at every dressing the pent-up matter issued in a stream. The injections and pressure, though less hurtful, were equally useless and unnecessary; and there can be no doubt that, if recovery be not impeded by an unhealthy state of the system, by some morbid texture, or by the presence of a foreign body, nothing more is required than an aperture sufficiently free and so situated as to prevent any accumulation of fluid in the cavity. The principle of drainage has been applied by M. Chassaignac to the treatment of chronic abscesses, through means of perforated India-rubber tubes; and, from my experience of this method, I can bear testimony to the advantage that attends its adoption.

The dressing of sores tending to heal has been greatly improved by substituting moist applications instead of the ointments previously employed; and any one who can recollect the old method of treatment by means of calamine cerate spread on lint or linen, with its pledgets of carded tow and long bandages, must rejoice in the simplicity, facility, and efficiency of our present system. Mr. Liston, to whom we are much indebted for advocating this method, had great confidence in the "red lotion," as it has been called, and for which the original receipt will be found in the "Surgical Essays" by Mr. Hey, of Leeds; but, for my own part, I have long been satisfied that water alone is sufficient for the purpose.

At the time I commenced practice, the callous or indolent ulcer, from which the labouring classes suffer so much, was treated by means of adhesive plaster and bandaging, not without much time, trouble, and expense. In 1829, I proposed a different plan, which was to apply a large blister over the swollen limb, in order to induce absorption of the indurating effusion, and allow the healing process to accomplish cicatrisation under the ordinary treatment of a granulating surface. In Edinburgh, and by Edinburgh students scattered over the world, this method has been found invariably successful; but it is still, I have reason to believe, not generally known in the Profession, and I am, therefore, glad to take this opportunity of recommending its adoption, as being the most speedy, easy, and lasting mode of affording relief.

The sores that result from the use of mercury were formerly very frequent, and always occupied many beds of the Hospital. My recollection hardly extends to the dark period during which these cases were treated by administering the poison that had reduced them, but well do I remember the shrieks of unfortunate patients who were subjected to the means deemed requisite for their remedy. When superficial, and affecting merely the integuments, their surfaces were repeatedly destroyed by caustic potass, and when more deeply seated so as to expose the bone through opening of periosteal abscesses, they were condemned to scraping, rasping, and the actual cautery, or even amputation. Such cases are now comparatively rare, and in Scotland are hardly ever seen except through importation from the southern side of the Tweed, where the Hunterian doctrines with regard to the use of mercury struck their roots more deeply in Professional confidence; but, when they do present themselves, they are found to yield readily under the application of blisters, with small doses of the iodide of potassium. Through this simple treatment I have repeatedly known patients who had come from distant parts of the world, prepared to suffer amputation, obtain speedy and complete relief.

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The sloughing sore of old people, or senile gangrene as it has been called, used to be regarded as a disease no less hopeless than painful. Mr. Pott had pointed out the impropriety of stimulating local applications, but it was still thought proper to support the patient's strength by wine and brandy. The last case thus treated that fell under my observation was one which the late Sir George Ballinghall and myself were requested to visit at some distance from Edinburgh, as no improvement had resulted from the prescriptions of Mr. Liston, which we found to be two bottles of Madeira and half a bottle of brandy daily. The patient complained that his foot felt as if enclosed in a red-hot iron boot, but we had no alteration to suggest, and he died before long in great agony. It soon afterwards occurred to me that if the disease, as it certainly did, depended on an inadequate supply of blood, through ossification of the arteries, the limb must be nearly in the same state as after ligature of the trunk, when it is well known that the effect of stimulants would be the excitement of inflammatory action, and that the treatment, therefore, should be similar. Under this impression, I tried the employment of a milk and farinaceous diet, with simple poultices and opiates to relieve pain. The result fully answered my expectation, and in 1840 I published a paper on the subject, with the view of showing that the disease might thus be rendered much less painful and fatal than it had been under the stimulating plan, and the anticipation thus expressed has since then been fully realised.

There is nothing more worthy of notice in our present inquiry than the change that has taken place with regard to the old system of dressing wounds, which is painfully impressed on my recollection by personal experience. When about 14 years of age, I was thrown from a pony, and had my knee severely lacerated, just above the patella, from which the integuments were torn down so as to expose the bone completely. A very experienced Surgeon who came to my assistance washed out some of the mud that lay in the cavity, and then brought its edges together by straps of adhesive plaster applied so closely that they overlapped each other, lint spread with ointment, and a roller, six yards in length, completing the process. Intense suffering and fever followed, with urgent petitions for relief, but all in vain, till the fourth day, when the dressings were taken off and reapplied, as they were every day afterwards for six weeks. The gentleman who attended me on this occasion had been House Surgeon of the Edinburgh Royal Infirmary, and pursued the method then regarded as proper in all cases of wounds, whether resulting from operations or otherwise caused. In 1826 I published a paper on the treatment of incised wounds, in order to show the bad effects that necessarily proceed from immediate closure of the aperture, since when this was done there could not fail to be such a quantity of blood or serum accumulated in the cavity, as must effectually prevent primary union, and in support of this position I appealed to the fact that students passed through the whole of their Hospital career without ever witnessing an instance of healing by the first intention except in wounds of the cheek or lips, where there being two orifices the blood could not be confined between the raw surfaces. To avoid this great evil, I advised that the edges should not be brought together until the bleeding had ceased, and that then there should be no impermeable covering placed over them. The principle which I thus endeavoured to establish is now, I believe, generally recognised in practice.

There are few subjects of practical Surgery that in recent times have excited so much discussion as the mode of performing amputation. When I entered the Profession it was the invariable practice in Edinburgh, and I believe elsewhere, to operate by circular incision, even for removing the fingers and toes. At former periods, various Surgeons at home and abroad had not only proposed, but to some extent adopted, the method by flap, and M. Lisfranc, more than forty years ago, taught it in his operative course on the dead subject as applicable to all parts of the extremities; but so far as I saw, it was never then employed in Paris on the living body. While things were in this state, Mr. Liston became a very strenuous advocate of the flap operation, and by his example, as well as teaching and writing, made a strong impression in favour of this method. I also published a paper on the subject, with the view of calling attention to the advantages for which we contended, and more particularly the saving of pain by rapidity of execution, together with the provision of a good covering for the bone. The expectations thus held out were fully confirmed by experience with regard to the arm, forearm, and upper part of the thigh, but led to disappointment in operating at the lower part of the thigh, and through the leg. In the latter situation it was found difficult to prevent the flap from dragging the integuments in front, and making them adhere to the bone, so as to ulcerate, or even slough, and thus occasion a sore of the most unmanageable character, while in the thigh the result was apt to be still more distressing, through retraction of the flaps and protrusion of the bone. For my own part, therefore, I have long abandoned the flap operation in the leg, and employed in its stead the circular method, by making two semilunar incisions from side to side through the integuments, and reflecting them to a sufficient extent for covering the bones, without any risk of retraction. I pursued the same course with regard to the thigh until a comparatively recent period, when I felt great pleasure in adopting the important principle which has been established by Mr. Teale, of Leeds, and Mr. Carden, of Worcester, that a long anterior flap is not liable to retraction, so that it may be safely trusted for covering the bone. Amputation below the knee is seldom required, since all the diseases and injuries which were formerly held to demand it may, with a few exceptions, be remedied by removing the foot at the ankle. This operation, when properly executed, without any of the complications that have been proposed for its alleged improvement, affords the most satisfactory results, by providing a perfect protection for the bones, by shortening the limb merely enough for fitting it with a boot, and by avoiding the risk of life attendant upon dividing the tibia and fibula through their shafts. Upon the whole, then, it would appear that amputation of the arm and forearm should be performed by a double flap, of the thigh by one long anterior flap, below the knee by two semilunar flaps of integuments, and at the ankle by a flap from the heel.

In treating diseases of the joints there have been many and great improvements, of which perhaps the most important is the substitution of rest for counter-irritation as a means of subduing the morbid action. The advantage of this is well illustrated by the different results obtained from the old and present practice in cases of hip disease. Within my recollection they were regarded as nearly, if not entirely, hopeless of recovery; and the caustic issues, always deemed proper for their treatment, were employed rather in compliance with established usage than with any expectation of a beneficial effect, the morbid process being expected to pursue its course until suppuration took place, and left no alternative to the patient but death from exhaustion, or escape from this danger with a distorted useless limb. Instead of the painful feelings with which the treatment of these cases was undertaken in those days, we now, through means of the "long splint," which, by preventing motion in any of the joints, maintains the one concerned in a state of absolute quiet, look forward with confidence to the accomplishment of recovery before the end of many weeks, unless the progress to destruction has advanced too far, and already led to suppuration.

There is another form of articular disease, in which the improvement has consisted, not in the disuse, but in the greatly increased efficiency of counter-irritation. This is that which has been denominated ulceration of the cartilages, and is characterised by intense pain, aggravated through pressure or motion, and other symptoms well known to the gentlemen whom I have the honour of addressing. In addition to the suffering experienced by the patient from this disease, there is a great risk, or, indeed, almost the certainty, of suppuration and caries being ultimately induced by it, so that effectual means of remedy are of no small value. Bleeding, blistering, and caustic issues generally palliate the symptoms, but frequently fail to do so, and seldom, if ever, produce a decidedly curative effect. It was, therefore, with great satisfaction that more than thirty years ago, having, on the authority of the late Professor Rust, of Berlin, adopted the actual cautery for the treatment of this disease, I found there was thus obtained relief no less speedy than complete. The actual cautery, I believe, had then never been used in Great Britain for the purpose of counter-irritation, and for many years made slow progress in Professional confidence, but is now, I fear, encountering a more serious difficulty, from its too free and indiscriminate employment, which must tend to lessen the credit so justly merited in proper cases. In the most frequent form of articular disease, which proceeds from constitutional weakness, leading to scrofulous degeneration of the tissues—there being merely a colourless elastic swelling, without pain or other symptoms of inflammation—it seems difficult to believe that in such a condition local treatment of an active kind should ever have been deemed proper; and

yet, within my recollection, leeches, blisters, and even stronger counter-irritation, were employed for it. The more correct ideas now entertained have, it is to be hoped, greatly lessened, if not altogether prevented, such improprieties, and rendered improvement of general health the great object of treatment, the local means being simply of a protective character.

Notwithstanding the improvements to which I have alluded, and the consequently more satisfactory results of our treatment, it still unfortunately too frequently happens that the disease of a joint terminates in suppuration and caries. But in this event also we have made an advance in many cases by removing the affected bone instead of amputating the limb. The elbow-joint is the one that most frequently requires this procedure, is most conveniently situated for the purpose, and affords the most valuable result by preserving the arm and hand hardly if at all impaired as to either mobility or strength. The success attending the operation on this joint has led to its employment in other articulations, with success more or less complete. In cutting out the shoulder-joint, great difficulty has been experienced in removing the head of the humerus and glenoid cavity through the same incision; and I have, therefore, adopted a different plan, which renders the process extremely easy. This is to cut directly downwards from the coracoid process, so as to accomplish the first part of the operation; and then, if the other is found requisite, to make a second incision through the posterior side of the joint along the inferior costa of the scapula, which affords free access to the neck of the bone. I may here remark that both the scapula and clavicle admit of being treated with great freedom, and even removed completely, without materially impairing the arm in its usefulness. The wrist-joint, from the complexity of important parts lying over it, has until lately been deemed an improper subject for excision; but Professor Lister, by methodically attacking the different bones concerned, has succeeded in establishing a procedure by which the most extensive caries in this situation may be removed without injury to any of the digital tendons, blood-vessels, or nerves, and with the effect of preserving a perfectly useful hand. In the year 1830 I cut out the knee-joint, and four years afterwards exhibited the patient in the most perfect state of recovery at a meeting of the Medical Section of the British Association for the Promotion of Science. It may be asked why I did not continue to employ this operation; and my reply would be, for three reasons, since I feared, in the first place, that in adults recovery would be tedious; secondly, that in children the limb would be stunted in its growth; and, thirdly, that some small sinus or oozing of matter, so frequent after excision of the elbow, might prevent the body from having a firm and useful support. It appears that these anticipations have been only partially realised; and that, in favourable cases, the operation may be performed with a fair prospect of success. There still, however, remains the question as to expediency in choosing between the prospect of a result thus obtained and that of a comfortable stump with an artificial limb; and here, I regret to say, the discussion has been characterised by a degree of fervour that savours more of personal acrimony than a simple regard for the relief of suffering. For the future I hope that the exercise of a free choice on this point will not expose any of us to unworthy imputations.

The cartilaginous bodies, which are so troublesome in the knee-joint, were formerly regarded as an unsatisfactory subject of treatment, on account of the inflammation that was apt to attend their excision; but the subcutaneous operation suggested by myself in 1841, and afterwards improved by Mr. Square, of Plymouth, has afforded a means of remedy both safe and easy.

With regard to the pathology of the osseous system, instead of the vague and erroneous ideas entertained forty years ago respecting the formation of new bone, we now possess a clear understanding of the source from which it proceeds. My probationary essay on necrosis was written with the view of showing that the periosteum had nothing to do with ossification; but, ten years afterwards, I was led by the observation of some facts in practice to take an entirely different view, and to perform experiments which completely removed any doubt that could have remained on the subject. By detaching the periosteum of dogs, and either removing the denuded bone or surrounding it with tinfoil, I obtained results that proved beyond all question the periosteum to be the great agent of osseous reproduction. Of late years, much attention has been devoted to this subject in France, especially by M. Ollier, who came to Edinburgh with his preparations of rabbit-bones, and was not a little surprised to find them anticipated by my own from dogs, which had been made and published twenty years before.

Our knowledge of the ossifying power which is possessed by the periosteum has improved the treatment of necrosis, and led to other applications, of which the one most worthy of notice is that employed for the remedy of fissure through the hard palate, where, by detaching the periosteum and obtaining sufficient relaxation of the dense superjacent textures by means of lateral incisions, we are enabled not only to close the gap, but to do so by the formation of new bone.

In the early part of this century, a large share of attention was devoted to the suppression of hæmorrhage, which consequently became so perfect as hardly to admit of any improvement during the period at present under consideration. Mr. John Bell, followed by Mr. Guthrie, had established the great principle that bleeding should always be arrested by means applied at the seat of injury; and that, if the access for this purpose was not sufficiently free, it should be enlarged by extension of the existing wound, rather than by making a new one. Dr. Jones, by his ingeniously devised and carefully executed experiments, had fully explained the different steps by which the blood is spontaneously prevented from continuing to flow. The tenaculum had given place to the forceps, and small silk ligatures had been adopted instead of the bookbinders' twine previously in use. Some attempts have lately been made to throw discredit on the ligature by attributing the most injurious effects to its action, and by proposing in its stead various contrivances of needles or wires, or a combination of both. Such proposals must be received with regret, as evincing an uneasy desire for innovation, and as calculated to confuse the sound principles of practice which have been established by men of experience and reputation. The truth is, that the ligature occasions no irritation, inflammation, or gangrene, as it has been said to do, and merely prevents union to the extent of its presence. Thus, when the femoral artery has been properly tied, the wound heals completely by the first intention, except at the point where the ligature lies, and from which a few drops of matter are discharged. Indeed, so far from regarding the ligatures as injurious, I believe them to be of great service, by maintaining an outlet for the discharge of fluids that might otherwise accumulate in the cavity; and, therefore, instead of cutting off one of the threads, as was formerly the custom, always preserve both with a view to this effect.

The treatment of aneurism also seemed to have been rendered perfect by the operation of Hunter being applied to all the branches of the aorta, primary as well as secondary; but during the latter half of our forty years' period there have been symptoms of a revolutionary tendency, which has led to important alterations of practice. Of these may be first noticed a revival and improvement of the treatment by pressure as a substitute for the ligature, which we owe to our brethren of Dublin, and more especially Drs. Hutton and Bellingham. There can be no doubt that by means of properly constructed apparatus, and with sufficient endurance on the part of the patient, aneurisms, and more particularly those of the femoral artery, may usually thus be remedied without any long delay. But, on the other hand, it cannot be denied that pressure sometimes fails, and may also be attended by unpleasant consequences; while it appears that, in so far as the femoral artery is concerned, the operation, if carefully and correctly performed, is nearly, if not absolutely, free from danger. I have done it in thirty-five cases, and never met with any bad result, except on one occasion when an attempt had been made, without success, to accomplish the object by pressure; and the sac suppurated without any blame being attributable to the ligature. The method by pressure, therefore, while justly regarded as a valuable addition to the resources of Surgery, should hardly be considered as a substitute completely superseding the operation. The treatment of popliteal aneurism, by simply bending the knee, has frequently been successful, and seems the perfection of simplicity, but is by no means certain in its effect, and, as I have had occasion to see, may prove injurious by rupturing the sac. Various attempts have been made to induce coagulation by introducing foreign matters into the cavity, and of these the injection of perchloride of iron by M. Nelaton has been most successful. This plan seems most suitable for aneurisms affecting arterial branches of secondary size, and even here would appear to be not altogether free from serious danger, through its effect upon

the circulating system. In another way I have endeavoured to improve the treatment of aneurism by showing that the artery at the seat of rupture is not necessarily unable to bear a ligature, and that, therefore, in cases where the Hunterian operation is either impracticable or beset with peculiar difficulty and danger, it may be better to open the sac and secure the bleeding orifices.

Passing from general to more particular considerations, we may begin with the head, where much has been done in the way of improvement. The eyeball, instead of being roughly scooped out along with the contents of the orbit, is now delicately detached from its conjunctival covering and muscular attachments, so as to be removed with little disturbance of the neighbouring parts, which quickly heal, and, before the end of many days, may be able to receive an artificial substitute, except for the office of vision, in every respect perfect. Fistula lacrymalis, which was formerly, with justice, regarded as an opprobrium of Surgery, and admitted of treatment only by the clumsy expedients of tubes or styles permanently retained in the duct, is now, through the ingenious suggestion of Mr. Bowman, no less easily than effectually remedied by slitting open the canal from the inferior punctum, so as to obtain room for the passage of probes sufficiently large for removing the obstruction. The distressing deformity of squinting, also, which was formerly deemed incurable, is now subject to an operation that, when properly performed, leaves nothing to be desired. Then the different sorts of nasal polypus are accurately discriminated, and, when proper for extraction, instead of being nibbled away by the repeated application of clumsy forceps, are attacked by instruments sufficiently small for being insinuated to the point of attachment, and thus removed entire. Enlarged tonsils, too, no longer permitted to torment the patient by frequent sore throat, impeded respiration, and husky voice, are readily removed by the simple means of a hook and knife, which are infinitely better than any of the complicated apparatus that has been contrived for this purpose.

But the most remarkable evidence of progress in this situation is afforded by tumours of the jaw-bones, which were formerly dug out from the centre towards the circumference without the slightest prospect of any better result than frightful deformity and increased activity of the morbid growth. It was, therefore, a great improvement which accomplished removal by dividing the bone beyond the part affected, where it was known to be sound. My attention was early directed to this subject by my respected friend, the late Mr. Cusack, of Dublin, who adopted the new method before it was employed in either England or Scotland; I had thus an opportunity of performing the operation upon a very remarkable case after it had been dismissed from the Royal Infirmary of Edinburgh, and also by Mr. Liston, as incurable. Some years afterwards, on May 15, 1829, I removed the superior maxillary bone, for the first time in Great Britain, upon the same principle of cutting through the sound bone beyond the confines of the disease. It would be difficult to estimate the number of lives that have been saved by these operations; and I beg to express my hope that no love of change or desire to act the part of an improver may ever resuscitate the old system of operating, with its chisels and gouges, and abortive efforts to accomplish what can be done effectually only in another way.

Descending from the head, we come to the neck, where the first difference between old and present practice that presents itself is in regard to the operation for admitting air into the lungs. Within my recollection it was rarely performed, and still more rarely, if ever, with success, the reason of which was twofold: for, in the first place, the tube employed was so narrow that, independently of obstruction from mucus in its cavity, there was not space sufficient for the passage of air; and, secondly, instead of being introduced into the trachea, it was thrust between the cartilages of the larynx, too near the seat of disease for rendering any service. It is needless to say how different the case is now, and how frequently life is saved by the timely performance of tracheotomy. But as it may not be generally known that we are indebted to Mr. Liston for the wide, conical, and slightly-curved tube so generally in use, the circumstance which suggested its contrivance seems not unworthy of notice. This was the case of a gentleman nearly related to myself, who suddenly suffered from obstructed respiration, which, having resisted the ordinary means of treatment, urgently required an opening into the air-passage. Mr. Liston, finding that the tubes in his possession were quite useless, cut off a portion from the extremity of his largest catheter, and inserted it into the trachea. Soon afterwards a case of œdema glottidis occurred, and afforded time for making the requisite preparation, when tubes of the present form were contrived, and found to answer the purpose perfectly.

Cancer of the tongue has always been regarded as a very unsatisfactory subject for Surgical treatment, on account of the extreme tendency which the disease has to a rapid return; but complete removal of the organ has been found productive of more lasting benefit than a partial operation, and if supported by further experience may perhaps be available for the relief of a condition otherwise so hopeless and distressing.

The treatment of wry-neck has been greatly improved by the introduction of tenotomy, which was employed for this purpose long before its application to club-foot. On November 2, 1832, in the Edinburgh Surgical Hospital, I operated by subcutaneous incision on a boy suffering from wry-neck with complete success, and the case so treated stands first in the records of British Surgery. This I mention to account for the interest which I have taken in tenotomy, and the regret which I feel in seeing so excellent a means of affording relief to a large extent withdrawn from the ordinary practice of Surgery by specialists, who, through the use of complicated and expensive mechanism, alleged to be requisite for the purpose, have been allowed in no small measure to appropriate its employment. But the members of our Profession who tacitly sanction such an arrangement and decline to practise tenotomy may be assured that they must frequently withhold the assistance required when it would prove most useful, and by allowing the evil to gain strength through delay, afford occasion for the requirement of apparatus beyond the reach of those who suffer from poverty as well as deformity.

The thoracic region presents no more remarkable evidence of progress than that afforded by the method of treating serous cysts in the mamma, for which we are indebted to the late Sir Benjamin Brodie. Within my recollection there was hardly any attempt to discriminate tumours of the breast; and all of them passing, as they did, under the title of schirrous, were equally supposed to require removal of the whole gland. But even after the distinction had been drawn between those that were malignant and those that, being of a simple or local nature, did not require the knife to go beyond the confines of their own extent, the cysts containing serous fluid were still believed to demand excision, until the late distinguished Surgeon showed that mere evacuation of the contents followed by a rubefacient applied to the surface constituted an effectual remedy. I can bear ample testimony to the success of this treatment, and would only suggest that, instead of the lancet and embrocation employed by its author, a small trocar and blistering plaster will be found to facilitate the procedure.

The radical cure of hernia, so long an object of desire in the practice of Surgery, has at length been to some extent attained by the method which Professor Wutzer, of Bonn, proposed some years ago; and the complicated apparatus originally employed having given way to more simple means calculated to produce the same effect, the procedure is now within reach of any one who chooses to execute it.

We now come to ovariotomy, which has of late been the subject of so much attention; and it will here, perhaps, be supposed that a claim for the honour of priority may be advanced on the part of Edinburgh, where the operation was first performed. But, to confess the truth, I fear that the northern metropolis, so far from deserving any credit on this account, should rather plead guilty to having invested the procedure with an aspect so repulsive as to impede rather than promote its adoption. It was brought forward by the same person who had proposed to remedy hypertrophy of the heart by blowing air into the pericardium, to puncture the brain in acute hydrocephalus, and to treat enlargement of the prostate by cutting out the entire gland; so that the Profession in Edinburgh were not either disposed to adopt the excision of ovarian tumours, or at all surprised by the results of its attempted performance. From these it appeared that one woman was laid open from sternum to pubes without any tumour being found; that another so treated presented a mass of disease entirely beyond the reach of removal; and that a third, after having what was supposed to be an ovarian tumour extracted, was found, on dissection a few days afterwards, to retain both ovaries in a healthy state. These, and similar cases so ludicrous, if they had not been so shocking, led Surgical teachers to conclude that the operation laboured under three serious objections,—1. The uncertainty of prognosis; 2. The difficulty of diagnosis; and 3. The danger of execution; whence it happened that, notwithstanding more favourable reports that after a time reached us from Manchester, with the exception of a few cases, all of which

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proved fatal, no further attempt was made in Scotland to establish the procedure until a recent period, when the successful experience of some gentlemen in London, and more especially Mr. Spencer Wells, gave the matter an entirely new position. The objections originally entertained with regard to both prognosis and diagnosis have been in a great measure removed through the careful discrimination of cases, while the operative procedure has acquired a corresponding degree of perfection, and the results are so satisfactory, that the proportion of deaths does not exceed from 30 to 35 per cent. The most successful operator in Scotland is my friend and former House-Surgeon, Dr. Thomas Keith, who has operated in thirty-two cases, and lost only nine of his patients.

Descending to the pelvis, we find a great improvement in the treatment of hydrocele through the substitution of iodine for port wine, which very frequently failed, and, when unfortunately allowed to enter the cellular texture, produced the most violent disturbance, constitutional as well as local, or even proved fatal. When there was no better alternative than this, it is not surprising that many Surgeons clung to the method of incision, which even now, in some parts of the world, is still deemed the most expedient means of remedy; but every one who has witnessed the certain success and freedom from unpleasant effects which result from the injection of iodine cannot hesitate in preferring it to any other mode of treatment. In order to obtain the good effect in full perfection, it is necessary that the tincture of iodine should be of proper strength, such as that of the Edinburgh Pharmacopœia; that the contents of the sac should be completely evacuated; and that the fluid injected, which need not exceed two drachms, should be diffused over the surface by a rough shake. The advantage of this treatment is not limited to hydrocele, since it is equally efficacious for the remedy of all cysts containing albuminous fluid, such as those of the thyroid gland or other part of the neck, and also those met with on the trunk or extremities.

Forty years ago, diseases of the rectum, being very imperfectly understood, were regarded with no less horror by patients than apprehension by Surgeons. Fistula *in ano* was believed to require division of the septum to its summit, however high up the bowel this might be, whence followed profuse bleeding, protracted dressing, and frequent failure, from the internal aperture not having been included. Internal hæmorrhoids, under the title of prolapsus, were viewed with especial dread, on account of the hæmorrhage resulting from excision, and the inflammation apt to be caused by partial or imperfect ligature. Fissures and ulcers, when recognised, which was seldom the case, were held to require a complete division of the sphincter; while an ample field for quackery was afforded by the belief that curable strictures existed high up in the colon. The state of practice is very different now, when fistula is easily and effectually remedied by an incision extending merely to the internal opening, and therefore so slight as not to require any dressing or hardly any confinement; when internal hæmorrhoids, and all the discomfort of prolapsus, are removed no less safely than certainly by ligatures comprehending the whole disease, and tightly drawn; fissures and ulcers are known to require merely an incision no deeper than their base; and strictures, whether malignant or simple, are ascertained to exist only within reach of the finger.

For removing stones from the bladder, many attempts have been made to improve the process by cutting, though with little success; since, I believe, most Surgeons are satisfied that the operation as performed by Cheselden is still the best for the purpose. But during the period under consideration, another method of affording relief has been devised, improved, and I may also say perfected, so as to render the knife of comparatively little value in the treatment of calculous complaints. Sir Astley Cooper's plan of extracting small concretions by means of curved forceps was soon followed by the introduction of straight tubes containing branches that expanded, and held the stone while it was acted upon by a central drill. This lithotrity, in its turn, gave way to the safer and more efficient procedure of lithotripsy, by which the calculus, instead of being attacked from the centre, was broken into fragments by external compression — at first, through the force of a hammer, and afterwards through that of screws differently applied. From the improvements which have taken place in these instruments, and the mode of using them, there seems reason to hope that patients who apply for assistance before the disease has advanced too far, may, in general, obtain relief without submitting to lithotomy, which, however well performed, must always be regarded in adults as much more formidable than crushing, while in children the absence of a developed prostate renders cutting perfectly safe.

During the last forty years, few Surgical derangements have attracted more attention, or been the subject of more keen discussion, than stricture of the urethra. It would be no less tedious than unprofitable to review the controversies that have hence arisen; and it will be sufficient for my present purpose to consider the various modes of treatment under some general heads, to which they may be referred. These are—1. Caustic; 2. Dilatation; 3. Internal incision and rupture; 4. External incision. But before inquiring into the merits of particular remedial measures, it may be proper to remark that two pathological facts, ascertained in recent times, have had an important bearing on their application. It was formerly supposed that strictures were frequently impermeable, and consequently limited with regard to the means of relief, but they are now known always to admit the introduction of instruments, if sufficiently small and properly guided. It was also supposed that the seat of contraction lay most frequently in the membranous part of the urethra, while we know now that it is almost always anterior to the bulb.

The treatment by caustic has been so generally abandoned, and labours under so many objections, that it need not detain us at present. The process of dilatation may be conducted in three different ways, each of which has its respective advocates, and which may be distinguished as the gradual, speedy, and sudden methods. The first is effected by the gentle passage of bougies at considerable intervals of time, so as to induce absorption of the thickened texture that causes contraction; the second is accomplished by keeping a succession of gradually enlarged catheters in the bladder; and the third is completed at once by a sufficient amount of mechanical stretching. By the first of these methods, in the great majority of cases, perfect and more or less permanent relief may be obtained, while the two latter are apt to produce only a temporary advantage by leaving the texture in its original state, and ready to contract when relieved from distension.

The plan of remedying strictures by internal incision or rupture has called forth an infinite variety of ingenious contrivances for accomplishing the object in view. Of these the instrument brought into use by Mr. Holt appears to be the most efficient and safe when properly employed, but, like others of a similar kind, labours under the objection of requiring previous to its use such a degree of dilatation as in general yields readily to the simple bougie. It also cannot ensure complete division of the contracted texture, as I have seen in a stricture at the orifice, where the largest instrument produced merely stretching of the part; and my experience would lead me to believe that a similar condition may exist at other parts of the canal.

The remedy of strictures by external incision has long seemed to me the best way of affording relief in cases not amenable to simple dilatation. It met with strenuous, I might almost say intemperate, opposition, but has kept its ground, and will, I believe, continue to prove useful in cases of peculiar obstinacy. In cases anterior to the scrotum it is best executed by sub-cutaneous incision, and whether here or elsewhere may be performed upon a director of the smallest possible size, which greatly adds to its value.

With regard to the female organs, the most remarkable change that has taken place in the way of improvement is in the treatment of vesico-vaginal fistula, which was formerly held to be nearly, if not altogether, incurable, and is now remedied no less easily than certainly through means of silver sutures, for the introduction of which we are indebted to Dr. Marion Sims. But our American brethren have laid us under a still more important obligation, by the grand discovery of etherisation, or the induction of insensibility by respiration of an ethereal vapour. To Drs. Morton and Jackson, of Boston, we owe this procedure, which has so wonderfully facilitated the practice of Surgery, and divested it of its most painful features.

In conclusion, Mr. President and Gentlemen, I beg to express my hope that from what has been said Surgery will not appear to have stood still or pursued a retrograde course during the last forty years, but, on the contrary, to have been improved in many important points of practice, and to hold out the prospect of further advance; so that when forty years hence some senior member of the Association shall take a similar retrospect he will find no lack of materials for illustrating the march of progress

LEGAL INTELLIGENCE.

SUMMER ASSIZES.—HOME CIRCUIT, CROYDON, August 3.

(Before Mr. Justice Crompton.)

RUDDOCK v. LOWE.

This was an action in which the plaintiff complained "for that the defendant, falsely and fraudulently representing to him that he was a duly qualified Physician of the Royal College of Surgeons of England, induced the plaintiff, who then believed the representation, to employ the defendant, and place himself under his treatment, and pay him fees; and whereas, in truth and in fact, the defendant was not a duly qualified Physician of the Royal College of Surgeons in England, by means of which the plaintiff was greatly injured in health, and lost the moneys he had paid." The plaintiff further complained in a second count that he employed the defendant at his request as a Physician and Medical Practitioner (which he then professed and represented himself to be) to attend upon and treat the plaintiff for a certain malady with which he was then afflicted for reward to the defendant on the terms that he would use due care and diligence in the treatment of the plaintiff. But that he so carelessly and improperly conducted himself in the matter, and prescribed such improper and unskilful medicines and treatment, that the plaintiff's malady was aggravated, and hindered instead of being alleviated or cured, and the cure thereof was retarded, and the plaintiff was put to great expense, and suffered unnecessary pain, etc. Further, the plaintiff in a third count complained that the defendant professed himself to be a Medical Practitioner, undertaking, among other things, the treatment of a certain disease and disorder, and that the plaintiff employed him, for reward, to attend upon and cure him of the disease, the defendant guaranteeing him that he would effect a perfect cure, but that the defendant did not do so.

Mr. Hawkins, Mr. Laxton, and Mr. Philbrick were for the plaintiff; Mr. Serjeant Ballantine and Mr. J. P. Murphy for the defendant.

The plaintiff was described by his counsel as the keeper of refreshment-rooms at theatres, but described himself as a waiter. The defendant was stated to have been for some months the proprietor of the "Anatomical Museum" in the Strand, the suppression of which was avowed to be one of the objects of the action. At the "museum" in question busts of celebrated personages are, it appeared, put outside, and figures of portions of the human frame are to be seen inside. Admission was gratuitous, but it was stated that visitors were told that there were other things to be seen inside on payment of 6d. This, it was suggested, was to attract to the defendant patients suffering under the disease alluded to, and which it was said he professed to cure. With the same object it was said he had put forth a publication replete with those devices to excite terror and alarm which are usual in publications of a certain class. Passages were read from this publication, which it was said was put forth by the defendant to attract patients. At the end of the publication the defendant, who, it was said, was not a regular duly qualified Practitioner, added "A few words about myself," in which he held himself out as a master in the art of healing sexual disorders. "I have," he said, "established a free college of physiology and anatomy" (the exhibition in the Strand). He denounced the use of mercury or mineral medicines, and declared that he relied solely on vegetable antidotes. "I seek my remedies abroad," he wrote, "where the ever-blooming balsam is fanned into health-giving potency by the freshening breezes of heaven." "Thus," he added, "I have been able to establish a practice in which I stand alone, and am to be seen every day between the hours of 10 and 4, and on Sundays between 11 and 3." "I never" (he subjoined) "undertake a case unless I can guarantee a perfect cure." To which was added his address, at the "Strand Museum." This pamphlet, it was said, was circulated among those who entered the museum; and in December last it was represented that the plaintiff, attracted by these means, was induced to consult him, and place himself under his treatment, with results which he declared had been extremely injurious. The defendant was denounced by plaintiff's counsel as a "quack Doctor," who had entrapped and terrified the plaintiff for the purpose of extorting his money out of him.

The plaintiff being called as a witness, described himself as a waiter, and produced and verified the book referred to. Passing the museum, he said, a man at the door invited him in, and while he was there one of these books was put into his hands. Having a certain disease, he took the book home, and having read it, he went again and saw the defendant, and after asking him if he was Dr. Lowe (which he said he was), desired his advice. The defendant said it was a "very bad case," and gave him medicine, etc. He said his charge was two guineas, and it was paid. The plaintiff stated that the defendant said he "was not one of those quacks who advertised themselves, and that he never undertook a case unless he could guarantee a perfect cure." As to this, however, it was observed by the learned Judge that the real and substantial question would be, whether there had been any negligence or want of due care and skill in the treatment of the plaintiff? which was assented to by the plaintiff's counsel. The plaintiff stated that there were many other visits and a good deal more medicine, etc. The visits were once or twice a week up to February, when the plaintiff, as he said, found he was getting worse instead of better, his mouth being sore and his teeth loose in his head. He complained of this, but the defendant advised him to go on, until at length, having paid him between £30 and £40, finding, he said, that he was no better, but rather worse, and that his "funds were getting low," he left him and went to a Dr. Donoghue, and placed himself under his treatment. This was in March, and after this, in consequence of his state of health, he had to resign his situation. Such was his story. But it was elicited that —although his counsel had been instructed to state that he told the defendant he was "going to be married"—he had already been married for some years. He had paid defendant, he said, £37 out of his savings, though his wages were only 25s. a week. His attorney, he said, was Edward Laurence Levy, to whom he had been recommended by a scene-shifter, a friend of his. He was pressed as to whether he did not know that Levy was a friend of Lowe, that Lowe had sued Levy, and that this was really Levy's action, and that Levy had put him forward to sue Lowe in consequence of Lowe's having sued him. This, however, he denied. In re-examination he stated that he had taken some of the medicine to Dr. Donoghue, who said he had been "treated very badly." Dr. Donoghue was called to support this by his testimony, and stated that he found the plaintiff under salivation, and suffering from the action of mercury, and that he had been treated improperly. He examined the plaintiff's medicine, and found that it was composed of bichloride of mercury and camphor, and colouring matter; and there seemed, the witness said, to be also some tincture of cantharides, for there was a smell of cantharides in it. There were four grains of the mercury in the bottle, and if the patient took two tablespoonfuls a day he would take a grain a day. He stated that in such a case as the plaintiff's, this mercury, which was corrosive sublimate, was never administered at all by any one who knew anything of medicine, and the symptoms described by the plaintiff would arise from the administration of it. It would never cure, but only aggravate the disorder. The mercury had done the plaintiff, he added, so much injury that he would be weak for some time, and such a course of mercury would have an injurious effect upon his constitution. He stated, further, that he had seen several other persons who had complained of maltreatment by Lowe. Every Hospital student, he said, would know that corrosive sublimate was not a proper medicine in such a case, but this was not the first case he had examined as to the effects of Lowe's treatment. The plaintiff might have been cured in about three weeks by any one who knew anything about medicine. Mr. Canton, one of the Surgeons of Charing-cross Hospital, and who had examined the plaintiff, was likewise called to confirm his case. He described him as in a weakly state, and still suffering from soreness of his mouth, loss of appetite, and restless nights. He stated that to administer in such a case two tablespoonfuls a day of a mixture containing four grains of corrosive sublimate would be improper treatment; nor ought it to be given at all in such a case. Soreness of the mouth and loosening of teeth would be symptoms arising from its administration, and he saw traces of a sore in the mouth, but did not himself observe the loosening of the teeth when he examined the plaintiff a day or two ago, when, it will be observed, the plaintiff had been for some time under other treatment. To give corrosive sublimate, in solution, in any such case would, he said, be excessively improper; nor was it at all, in any form, a proper remedy in

such a case as this was stated to be, though it was still used in another class of cases. He could not positively say whether it had been given in this case, for he had not seen the medicine, and the symptoms were such as might arise from it or from other causes. He was asked, in cross-examination, on the part of the defendant, whether he did not know a Dr. Abercrombie, who practised at the museum, and he said he had met him in practice and supposed him to be a regularly qualified Practitioner. And as the plaintiff had been asked if he had "Dr. Lowe" in court, it was understood that it was intended to convey that the person who had treated the plaintiff was really Dr. Abercrombie, and not Dr. Lowe. It may be stated that two persons were sitting behind the defendant's counsel, one of whom was said to be Lowe, and the other Abercrombie. As to this curious question, Mr. Canton was asked, on re-examination, whether he knew anything of this Dr. Abercrombie, and said he had never seen him but once, on this single occasion, and he knew nothing at all about him. Upon this question of identity the plaintiff was recalled, and a stout person, who had been sitting behind the defendant's counsel, standing up, the plaintiff was asked whether that was Dr. Lowe, and he said it was, and that it was the person who had attended him all through the case, and he had taken a bottle a week of his medicine all through the time from December to the end of March. He was then asked as to the person described as Abercrombie, who also was present, and sitting beside Lowe, behind the defendant's counsel, and the plaintiff stated that he (Abercrombie) had never treated him at all.

This was the plaintiff's case, and terminated the first day's proceedings.

On the second day, Mr. Serjeant Ballantine, in opening the case for the defendant, said he was not insensible to the difficulties by which he was surrounded. If the question had been the propriety of keeping a museum of this description there could be but one opinion upon it. No doubt it was a nuisance, but that was a question for the parish authorities irrelevant to the present issue, and a topic introduced for the purpose of prejudice and to induce the jury to find their verdict on a collateral ground. The sole question for the jury was whether the defendant, by an act of negligence, had inflicted an injury upon the plaintiff. Whether the defendant was living reputably, and carrying on a reputable trade, was perfectly immaterial. Except for the obligation cast upon him by professional duty, he would not be a party to defend a man who had resorted to the publication of such pamphlets as those which had been referred to in order to obtain patients. Such practices were most mischievous and injurious; he denounced and discountenanced them in the strongest terms. They admitted of no palliation, and he agreed with all that had been said upon that point. He quite admitted the evil of such an establishment as that kept by the defendant, but there were other evils even greater than that. It was a greater evil for persons to endeavour to make a property of their vices and their crimes, and to set up unjust claims against those whom they imagine are at their mercy for the purpose of extortion. The jury would see that the present case was of that description. It was a sham and a trick, and the case for the plaintiff had been created out of non-existent facts. The whole case for the plaintiff he declared to be an utter fabrication, based upon the grossest falsehood and deception. "I," said the learned serjeant, emphatically, "say nothing whatever in defence of the means adopted by the defendant to carry on his business. Such means are, I consider, disgraceful, and I should be ashamed of myself if I said a syllable in their favour. I feel bound to go further, and to declare that such means of carrying on such a business are a disgrace and a scandal to the metropolis, and that it is most desirable that the proceedings of such persons should be put a stop to, if they can be, by any means which are just, proper, and fair, but not by persons no better than themselves, and seeking to make a profit and property out of them." The idea of any intention of extortion in such a case, the learned serjeant said, was absurd. Such extortion was attempted in cases of this class against persons whose wealth, rank, and position in society made them averse to resort to regular Practitioners for the treatment of such disorders, and fearful of disclosure and exposure. It was not against waiters and potboys that such measures of extortion were likely to be attempted, for what cared they about exposure? The defendant, no doubt, might be very unfit to practise in Medicine; very likely the jury would be of that opinion before the end of the case. But it did not follow that he was to be subjected to a process of persecution and extortion at the hands of others worse than himself. He was placed in a position of great difficulty in conducting the defence, and still greater difficulty now than yesterday, for since yesterday Abercrombie had disappeared. Perhaps that person might fancy that by skulking out of court in this way he might escape the consequence of his conduct in connecting himself with such practices and such an institution. But he (the learned serjeant) hoped that in this Abercrombie would prove quite mistaken, and that proper inquiries might be made by those to whom the care of the Profession was intrusted, which might lead to the exclusion from its ranks of a person who could lend himself to the purposes of such an establishment as this. Continuing his opening of the case for the defence, the learned serjeant said his client, the defendant, would deny ever having seen the plaintiff, and it would be shown that this and other similar actions had been got up by Levy out of spite against Lowe. In conclusion, the learned serjeant said with energy that he avowed he never was in a case in which he felt less sympathy with his client, or less anxiety on his account. He avowed, he said that he felt far more anxiety on account of the interests of public justice in this point of view,—that while it was no doubt of the utmost importance that such a nuisance as this should be suppressed, it should not be by means of actions so scandalous as this and the other actions which had been instituted under the auspices of Levy against the same defendant.

The defendant was then called and examined as a witness. He admitted that he was not a regular Practitioner, and that he had connected himself with Abercrombie in December as a "protection," Abercrombie being, he said, a registered member of the Royal College of Surgeons. He stated that he had been threatened with a prosecution in December for practising without being registered. But he stated that for this reason he had not himself after that seen or treated patients, and that he had never seen the plaintiff (before yesterday) and never treated or attended him at all, and that there was no corrosive sublimate in his establishment that he was aware of, and that he never used mercury as a medicine in any disorder whatever. He was, moreover, examined as to his former acquaintance with Edward Lawrence Levy, the plaintiff's attorney, and as to differences between them, which it was suggested had led to these actions. To this there was a vehement objection on the part of the plaintiff's counsel on the ground that such matters were wholly irrelevant in this action.

Mr. Justice Crompton observed that the case for the defence was in substance that these actions, including the present, were the result of a conspiracy, to which the present plaintiff and his attorney were parties, and that the whole case for the plaintiff was a fabrication, the result of that conspiracy. That being so, he did not clearly see how he could exclude matters which were put in evidence as means of proving the defence; though, on the other hand, the limits of such evidence might be open to considerable doubt and difficulty. On the whole, he was disposed to admit the evidence, but only in a general way, and not entering into particulars.

The defendant then stated that he had been intimate with Levy, the plaintiff's attorney, and brought an action against him, and that after that action the present and other similar actions were brought, the writs in which were issued by Levy, and, as he believed, out of spite, and as the result of a conspiracy.

In cross-examination of the defendant by Mr. Hawkins it was elicited that he had since the age of 16 or 18 been connected with the turf, and taken an interest in racing. He had not qualified in this country as a Medical Practitioner, and had been threatened with a prosecution for practising without being qualified, but he said he had a diploma from the "Reformed Medical Society of America," for which he was examined and paid the sum of two guineas. He had practised in Glasgow for some years in the cure of these disorders, and had issued there, as here, little books of the character which had been described. Copies of two of the books put forth from the "Strand Museum"—one under his own name, and the other in the name of Abercrombie, were put into his hands, and passages therefrom were read to him, and he was challenged amid roars of laughter to verify them upon oath. He admitted that as many as three-quarters of a million of copies had been issued, and he admitted also that some of them had been distributed at the doors of the

museum or in the street. He declared that the letters put forth, purporting to have been received from patients had been so received, but he admitted that some addressed to himself had been published as addressed to Abercrombie. He was challenged particularly with this passage in his book,—"I seek my remedies in far-off climes; some in the distant prairie, some in the ever-blooming balsam; in the western climes where eternal summer reigns," and amid roars of laughter, he was asked to state what remedies he got from the far-off climes or the distant prairie, and after much pressure admitted that he could not state any, though he had been, he said, abroad—in America. He was asked whether he had not been with Abercrombie last night, and he admitted that he had been, and that he wanted him to appear to-day, but that he would not, being, as he said, "afraid of exposure in the public press."

In re-examination, it was elicited that in December he had been written to by Mr. Bowen May, who, it was stated, was attorney for some Medical society, and that to protect himself from the perils of penalties for practising without qualification, he had not after December treated or attended any patient, but had employed Abercrombie to do so, and he positively swore that he had never seen any of the plaintiffs in these cases.

This was the case for the defence; no other witness but the defendant himself was called in support of it.

Mr. Levy was then called in reply, to rebut the suggested case of the conspiracy. He said he had no concern in the other action on the list of these assizes—"Adams v. Lowe"—and though he admitted that he was attorney for the plaintiffs in two other actions against Lowe by persons named Nevill and Norton, he denied having sought them out or in any way instigated them to bring these actions. He swore that Nevill consulted him in November or December, and the present plaintiff not until after March last, and he said he saw Mr. Lowe about Nevill's case, and continued to see him as before.

After speeches by the counsel on both sides,

Mr. Justice Crompton summed up the case to the jury. He said the main ground of complaint was that the defendant had treated the plaintiff badly and improperly, and with such want of proper skill and knowledge that, instead of getting better, he got worse, and had to endure a great deal of suffering, and sustained serious injuries to his health; and if the plaintiff was entitled to maintain this cause of complaint, then he would be entitled to recover compensation for the injuries he had thus sustained. The great question seemed to be whether his story was true, for the defence, in substance, was that it was a fabrication, and the result of a conspiracy. Whether that was so or not seemed to depend entirely upon the evidence of the defendant. He denied ever having seen any of the plaintiffs, and said the whole case was the result of a conspiracy between them and Levy, the plaintiff's attorney, out of spite or revenge on his part; that, in short, the whole case was a fabrication and a sham. It was certainly a very strong thing to set up this defence, and it was for the jury if they could believe it, and really suppose that the entire story was a fabrication. In substance, the question came to this,—whether they believed the story on one side or the other. The plaintiff's story was certainly confirmed by Dr. Donoghue, and it hardly seemed likely that he would be a party to any such conspiracy; and the jury would consider whether it was at all probable that these plaintiffs would be parties to it, and come here to set up stories, all of which were pure fabrications. Levy might have been ready enough to bring these actions, but the idea of a conspiracy to bring them really seemed somewhat far fetched. There was positive evidence of a competent Medical man that mercury was in the plaintiff's medicine, and that he had no business to have had it, and, indeed, the defendant in his books himself denounced it as improper, and professed to deal in "balsams" and vegetable medicines, which he described in very flowery language. (Laughter.) The real question was whether the plaintiff really saw Lowe, and whether Lowe gave him this stuff, to the presence of the mercury in which Dr. Donoghue had positively spoken. It was too much to suppose that he was a party to the suggested "conspiracy," and yet the defendant denied giving any mercury at all, or having any in his establishment. And Dr. Donoghue, who saw the plaintiff immediately after the alleged treatment by Lowe, said distinctly that he had not been suffering from any complaint for which mercury was proper, so that it came to this—whether the plaintiff got the stuff from Lowe, for it was proved by Dr. Donoghue to have contained mercury, and it was admitted that mercury would be improper. The plaintiff's case in substance was that the defendant had injured him by giving him mercury, and if the jury were satisfied of this, then he was entitled to recover compensation for the injuries he had sustained.

The jury, after a brief consultation, returned a verdict for the plaintiff—damages, £100—a verdict which seemed to give general satisfaction, and, indeed, elicited some audible expressions of it.

ADAMS *v.* LOWE.

This was a similar action against the same defendant.

Mr. Ribton was for the plaintiff; the same counsel appeared for the defendant.

The learned Counsel suggested a short adjournment with the view to a settlement, and such an adjournment accordingly took place. Ultimately a verdict was taken by consent for £70.

The other cases were not entered for these assizes.

MONDAY, AUGUST 7.

(Before Mr. Baron PIGOTT.)

JONES *v.* FAY.

This was an action against a chemist for malpractice. The declaration stated that the plaintiff had retained and employed the defendant for reward, to bestow care, diligence, and skill, as a Surgeon and Apothecary, in and about the endeavouring to cure the plaintiff of a certain complaint and disorder under which he then laboured, but that the defendant conducted himself so carelessly, negligently, ignorantly, and unskilfully, that by reason thereof the plaintiff became, and was, and still is, greatly injured in health and constitution. The defendant denied his retainer and employment as alleged.

Mr. Serjeant Ballantine and Mr. Haselfoot were for the plaintiff; Mr. M. Chambers, Mr. Denman, and Mr. Willoughby were for the defendant.

The plaintiff was a common painter at Islington, and the defendant a chemist at Kingsland. The plaintiff, who had twice been married, and had a large family, had some years ago had an attack of painters' colic; but how far from that time to the period of the matter now in question he had been in good health was a matter rather in dispute. In May last the plaintiff, having a pain in the bowels, went to the shop of the defendant (to whom he had already resorted on similar occasions) for a medicine. What then took place, and what followed, was in controversy, and must be gathered from the evidence. The case for the plaintiff in substance was that attack was one of painters' colic, and for which treatment by castor-oil, opium, etc., would be proper, but that the defendant had given him mercury, which had caused salivation and seriously impaired his constitution.

Mr. Serjeant Ballantine, in opening the case, said it was one of a very deplorable character, and one also of great importance. The plaintiff, he said, had gone to the defendant's shop a hale and hearty man, and had been utterly destroyed.

The plaintiff's wife proved that her husband when he consulted the defendant was in good health, and had worked regularly every day. She knew of his taking pills, and she administered them herself, and he took them every night, or every other night, for nearly a month. He got, she said, no better, but rather worse, and she went to the defendant and asked him if the pills were right, and he said "Yes," and gave her some more. She asked him, she said, if she should call in any other Medical man, and he said "Certainly not," and that he would "get her husband round soon." She went, she said, every week for some time, and asked each time if she should call in more assistance, and he always said "No." At the end of the month, however, she called in a Mr. Trend, who still attended him. Her husband now, she said, was in a very bad state, and could do nothing.

In cross-examination it was elicited that after the man complained he went on with a painting job he had, and that he had also been to Cambridge with a cold upon him and a cough, which was very bad. He said he had taken castor-oil before, but had not taken much medicine. She had asked for a "mild pill." The defendant's shop was a large one, and sometimes she saw one of several assistants.

The plaintiff himself was called as a witness. He appeared in a very enfeebled state, and could hardly be heard; indeed, his answers had to be repeated by the Clerk of Assize. He

had to be carried into and out of court upon a chair, on which he sat during his examination. He stated that he was 54 years of age, and had enjoyed good health, and had never consulted defendant before the occasion in question, when he went into his shop and said "Can you oblige me by making me up something to relieve a pain in my stomach; perhaps castor oil will do?" He said, "You had better not take that, I will make you up a little stuff which will give you relief." He did not, he said, go for it, but sent his wife for it. He took many pills by the defendant's direction. He had handed over some of them, he said, to his attorney. He asked defendant whether he had not better have a Medical man to attend him, and he said "No. I will make you up some strong medicine which will make you well." I took all the pills he gave me, except those I gave my attorney. I grew worse, and called in Dr. Trend. My tongue was then out of my mouth, rolling about, and I could not taste or swallow anything.

In cross-examination it was elicited that he had for many years worked at his trade and mixed the paint; and after he took some of the pills he went to a funeral at Cambridge. Witness continued:—I told defendant I had painters' colic. He never advised me to go to a Medical man. His assistant never made up medicine for me. The second time I went the defendant handed me some pills. There were not more than four pills in each of the boxes until the last few days. When I went again I said I was better. He said I should be all right, and he gave me a box of pills with about four pills in it. The next time he gave me a box with six pills in it, and a draught. On one occasion he gave me a box with twelve pills in it. I was to take two a night.

Re-examined, he said that he had a box of pills on each occasion, and took two boxes to his attorney. There had been a previous attack seven or eight years ago, but he never was in Fay's shop before.

A chemical analyst, who had received from the plaintiff's attorney two boxes of the pills—one containing ten and the other six pills, which had been submitted to his analysis along with a bottle of medicine, was then examined. The pills, he said, were "blue pills," and averaged four grains each. The medicine in the bottle was a simple magnesian mixture, with a little ether and some saline element. The pills in one box were marked, "One to be taken every night," and those in the other "Occasionally at night."

Mr. Trend was called as witness for the plaintiff, and stated that on May 31 he was called in to attend the plaintiff, and found him "suffering from profuse salivation, the result of mercury. His tongue was swelled, and partly protruded." The whole of the salivary glands were enlarged and painful, and he complained of severe pains in his limbs, "as if he had been beaten." These were symptoms of mercury, which was not, under any circumstances, proper for the "painters' colic." The proper treatment would be a full dose of opium, followed by a dose of castor oil, and then a saline mixture, with common Epsom salts. He had treated the plaintiff with a view to get rid of the mercury, the results of which were, he said, most injurious. Unless carried off, the mercury would remain in the system, and blue pill, which was, he said, "a favourite with the public," ought always to be carried off by some aperient medicine. The plaintiff, however, was in so weak a state that he could not give a very efficient aperient. He caught a cold, and bronchitis ensued. The mercury would make him more liable to cold, and render the case more difficult; and he thought the mercury had a good deal to do with the bronchitis. As to his present condition, he was sorry to say that he believed that he had but a short time to live. This he believed to be in a great degree owing to the mercury, though not entirely, partly to the cold and bronchitis which supervened. But these, on the other hand, he ascribed in a great degree to the mercury.

In cross-examination, it was elicited that the plaintiff's present age of 54 was a "good average for a painter." The diseases to which painters were subject—such as palsy and colic—tended, he said, to shorten life. This witness was cross-examined a good deal with a view to show the existence of a hostile feeling towards the defendant, and certain expressions supposed to have been uttered by the witness were put to him; but these expressions for the most he denied, and the rest he said he could explain. He was then challenged with the opinions of Hunter, and Warren, and Clutterbuck, and Clark, and others, cited in Dr. Copland's work on Medicine, that salivation was good for painters' colic; but he said that he should think those views obsolete, and that such men as Dr. Watson, who were followed now, were of a different opinion. There could be no objection, he said, to a single dose of calomel, followed by aperient medicine, but he should not think continuous doses of blue pill proper. The use of mercury had a good deal gone out of late years in such cases, and among qualified Medical Practitioners he believed there was no difference of opinion that mercury should not be used in such cases, carried to the extent of salivation. Purgation, he pointed out, was one thing, salivation was very different, and he was not aware that any Medical man had ever recommended salivation in such cases. He had attended the plaintiff's family for three years prior to this matter, and, so far as he knew, the plaintiff was in good health.

In re-examination, he said that the effects of the paint were too often aggravated by intemperance, and that in this particular instance he knew of no indications of a short life.

Dr. Guy, Professor of Medicine in King's College, and Physician to the Hospital, was called for the plaintiff, and stated that the proper treatment for painters' colic was, in a slight case, castor oil; if that was not sufficient, opium and then castor oil, the patient being meanwhile kept carefully in bed and warm. In his judgment, mercury remaining in the system to the extent of salivation could never in such cases be proper treatment. If mercury were admissible at all, it would only be as a purgative in combination with opium. The symptoms stated showed excessive salivation, calculated to have a very injurious effect upon the system; while, on the other hand, it would not materially affect the disease. Such salivation produced great depression, and rendered the person more liable to catch cold, and would make diseases worse when contracted. He had seen and examined the plaintiff, and found him in a very weak state, with a severe cough and dropsical legs, and he thought it very improbable that he would ever recover; and even if he should survive, he believed he could never do a day's work.

In cross-examination he said that blue pills of four grains each had a large quantity of mercury, and he was asked if they might not carry themselves off, but he said he had never known an instance. Blue pill was, in fact, quicksilver, or finely divided mercury, made up with certain confections. He was pressed as to whether the use of mercury had indeed gone out, and he said with a smile that he thought so. Upon this he was pressed with Dr. Copland's *Dictionary of Medicine*, which, he said, was "a very learned work," and that formerly, no doubt, mercury was used, but not now. He was pressed with the passage, "Calomel in large doses with or without opium has a good effect." To which he answered that, used with opium as an aperient, and followed by aperients, it might be admissible. Calomel and black draught, no doubt, was a common treatment for constipation, not colic. Dr. Watson, in his treatise, laughed at mercurial treatment of colic, observing that giving mercury was merely adding one poison to another, the colic coming from the lead. He was asked if the white and red lead did not affect painters, and cause some of the symptoms of mercury, especially the red lead, which contains mercury. He said that no doubt they tended to produce injurious effects, but he had not known them produce those mercurial symptoms, as a great deal must be absorbed to produce such effects. At present the plaintiff was suffering from bronchitis, and to that, principally, his state was to be ascribed—that is, he said, to bronchitis supervening upon the mercury. Bronchitis, he said, was one of those diseases with which the faculty could deal as well as any others, unless the patient was very weak or very old; but the bronchitis would be worse for the weakness. The importance of taking cold in bronchitis he thought was exaggerated, but still, no doubt, it was to be avoided.

In re-examination he said that the symptoms here had come on so soon after the pills that, looking to the materials, he could not doubt the relation of cause and effect, and that the pills produced the symptoms. Unfortunately, he said, mercury had formerly been very largely used, and it was a substance which required to be administered with great caution.

Dr. Harley, Professor at University College, gave similar evidence. Painters' colic, he said, was a very simple disease, and easily treated. The treatment was sedative and purgative. Opium to relieve the pain; some mild purgative to open the bowels. Mercury to the extent of salivation was never given. In cross-examination he said if opium could not be taken some other opiate should be given. Some skill might be required in the use of the opiates or purgatives; but he never knew or read of a death from painters' colic. Painters lived as long, he said, as many other workpeople

engaged in arduous occupations. The work was not considered healthy, and there was a danger of being poisoned by the lead; but if they were not so poisoned there was no reason why they should not live as long as other people. Vermilion was mercurial, but red lead was not, and he had never known, from the use of either by painters, mercurial symptoms to be caused.

This was the plaintiff's case.

Mr. M. Chambers, in reply, urged that the defendant here had acted as a mere chemist. He had simply sold some boxes of pills. He had not prescribed as or held himself out as an apothecary any more than as a Surgeon.

The learned Baron said he thought there was evidence that the defendant had held himself out and acted as an apothecary. The plaintiff and his wife said they had repeatedly asked him if they should call in any other Medical man, but he said, "No; that he would make up some medicine, and that the patient must persevere." If a person proposed to act as an apothecary he was liable as such, though only a chemist.

Mr. M. Chambers, in addressing the jury for the defendant, said there was a strong Professional prejudice against chemists selling medicines, and he thought that one of the Medical witnesses was affected by that prejudice, though he admitted that the other eminent Medical men who had been examined were entitled to every respect. Contrasting, however, the opinions of the new school with the old, he said it was a case of Doctors differing, and it was hard to hold a chemist liable for a course which was sanctioned by those of any school. His client, however, would deny that he ever gave as much as a grain of mercury in any of the pills; and it had not been proved that the pills analysed were his pills.

Mr. Serjeant Ballantine said he was surprised at the objection; he was ready to prove at once that the pills given to the analyst were those given by the defendant. He never supposed that it would be disputed, nor had any suggestion been made that it was disputed.

The plaintiff's attorney was then called, and proved that he had the pills from the plaintiff which he had given to the analyst.

Mr. M. Chambers having elicited that this was on July 11, observed that this was some time after the action was brought. He should call his client to prove what he had actually given to the plaintiff, and that there was not a grain of mercury in the pills. How the blue pill got into the boxes he declared he could not imagine. He suggested that the whole case arose out of the ill-will and jealousy of Mr. Trend, and that if any injury was produced by mercury it was not mercury administered by the defendant.

To support this defence, the defendant was called, and said his father was a Surgeon, who had carried on business in America, and that he had himself intended to be a Surgeon, and had studied Surgery, and had acted as an assistant to several Surgeons. He had thus been engaged ever since the age of 14, and, as he was now 47 years old, he had been thus engaged for upwards of thirty years. He had carried on business where he was for six years, with two or three assistants (one of whom had left), and during the past two years had repeatedly seen the plaintiff, who, he said, had always appeared in an "extremely emaciated state," and walking in a stooping state, as if suffering under some affection of the bowels, and so as to warrant the impression that he was labouring under painters' colic. On several previous occasions he said he had prescribed and administered medicines for him for that complaint. In May last, when the plaintiff came to his shop, he looked depressed, sickly, and emaciated, and very seriously ill. He complained of a pain in his bowels, and being asked by witness if he had not administered medicine to him upon former occasions for a similar disease, he answered "Yes; and that he had done him a great deal of good." Witness said, "Well, I must try and do so again," and proceeded to prepare medicines for him, being told that it was painters' colic. He particularly asked if his bowels were open, and he said they were. He told plaintiff that if he did not get better he should go to a Medical man, mentioning Dr. Forshaw particularly, a Medical man residing in the neighbourhood. He made up a mixture for the man, a usual form he gave in cases of colic—1 drachm of chloric ether, 2 of compound tincture of cardamoms, 2 of tincture of lavender, and 3 ounces of camphor mixture, the whole filled up in a six ounce bottle with distilled water. This mixture he gave as an anti-spasmodic, and he gave no pills at all the first time. He saw the man again on May 23, and the man said he had been relieved, but that when the medicine was gone the pains came on again, and he wished for more. Witness asked him if his bowels were open, and he said, "No, rather constipated." Witness told him it would be advisable for him to go to a Medical man, but he answered that he was doing very nicely, and should get on if his bowels were opened. Thereupon witness directed an assistant to make up twelve compound rhubarb pills. The pills were made up according to the prescription in the London Pharmacopœia—of rhubarb, aloes, Castile soap, and oil of carraways. He did not himself prepare the pills, but an assistant. These pills were to be taken daily at night. Being shown the boxes containing the pills which had been produced by the plaintiff's analyst, he said the pills were in a box like that, but he could not say it was in that box. The next time the man came was on May 27, and he complained still of pain. Witness gave him the same pills and some more anti-spasmodic mixture, and again advised him to go to a Medical man. On May 29 the man came again, and said he was free of pain, but he was weak; and the witness recommended him to go to a Doctor, but he said "Oh no, you have always done me good; I am only very weak; and want strengthening." Witness gave him more of the anti-spasmodic mixture with some bark in it. Once more the witness advised him to go to a Medical man, saying that he wondered he had not died before from the quantity of lead he must have imbibed in his system. Next day plaintiff's wife called and said her husband was in pain, and witness again advised her to go to Mr. Forshaw, but she declined doing so, as it was too expensive and their little money was nearly exhausted. She further said her husband was confined in his bowels, and he directed an assistant to make up some mild aperient pills, adding only a little jalap. He once more impressed upon her the propriety of going to a Medical man, and he never saw either of them afterwards. In the whole of the prescriptions he had given to him or her there was no mercury. It was contrary to his practice to give it unless under Medical prescription, or except in the ordinary case of a single blue pill; nor did he keep blue pill made up in his shop. The total value of the medicines he sold was about 9s. He contradicted the statements of the plaintiff and his wife, and declared them to be fabrications. They never asked him whether they should call in some Medical man, nor did he ever dissuade them from it, and he only saw the wife once.

By Serjeant Ballantine: The boxes produced are mine, nor have I any doubt that they came out of my shop; but they may have come out of it a year and a half ago, and I say that if they came out with mercurial pills in them they were substituted for the rhubarb pills, and could not have altered into mercurial pills. I never send out mercurial pills unless ordered. I may have sent out mercurial pills, but not to the plaintiff. Therefore, if he produces them, with mercurial pills in them, it is not for me to account for it; that is for the jury to account for. I have not got my books here. I had notice to produce them, and they are not here. There is no entry as to the plaintiff in them, and the notice is to bring any book containing any entry relating to the case. I have no book containing any entry of medicines supplied or sold by me except by prescription. I have a book containing prescriptions entered; a prescription-book for prescriptions brought to me. I do not give credit. I have a book of petty accounts,—credits for small matters. There are only these two books, the prescription-book and the petty-book. There is a third book. I never prescribe mercury. On May 29 the plaintiff seemed better, and there were no symptoms of mercury—none of the fœtor which indicated the presence of mercury; nothing to show that within a day or two his tongue would be protruding and the glands enlarged by salivation. He should say there were no symptoms of mercurial salivation then, and if in a day or two afterwards the tongue was protruding and the glands swollen with salivation there must have been symptoms of it several days before, which any Medical man could detect.

Re-examined: If a person buys a box of pills over the counter there is no entry of it in any book; the cash being paid, there is no entry of it; but if it is not paid for there is an entry in the prescription-book. This man always paid for his medicines. I have a book which would show when a box of rhubarb pills was made up. The material called "blue pill" is kept in a jar, and it is served as required—so many grains; but I don't keep blue pill ready made up, and if we sell it made up to order we put "blue pill" on the boxes.

By the learned Baron: If I prescribed blue pill I should not put "blue pill" on the box. But I don't ever prescribe

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it myself; I give compound rhubarb pill, unless a person comes and asks for a blue pill and a black draught, in which case it is marked on the box.

The defendant's assistant was called to confirm this evidence. By order of Mr. Fay, he said he had put up a dozen of compound rhubarb pills. He did not make them up at the time; they were kept ready made, and he had made them himself before, and on other occasions the same pills were given. He swore distinctly that he and his master had advised the plaintiff to go to a Medical man, but that he had again and again declined; whereas the plaintiff and his wife positively swore that they had proposed to do so, but that the defendant had dissuaded them from so doing, and said that he "would put him all right." On one of these occasions the witness stated that a customer named Seymour was present. According to this witness's evidence the man kept getting better, and they kept urging him to go to a Medical man. On the last occasion, witness said the man stated that he was much better, only he was very weak, and one bottle more medicine would set him right if it was "made a little more strengthening." Witness stated that his master said, "I wonder you were not dead before this;" to which the defendant said he added, "considering the lead you must have absorbed." On this occasion his master said he put a little bark in the medicine. With that exception there was no difference, and, to the knowledge and belief of the witness, no blue pill or mercury was given, and no blue pill, he said, was kept made up, except a few made up each with a bottle of black draught. With that exception, the blue pill was kept made up "in mass" in a jar.

In cross-examination, the witness stated that his master was in rather a large way of business, and might have 60 or 70 customers in his shop a-day. He generally heard the conversation with customers or patients, even although several were in the shop at a time, in which case, of course, he said he must "do the best he could." He could pretty well remember the number of pills given to each patient. The man said he was suffering from painters' colic, and knew that he was treated for it all along.

The customer referred to (Mr. Seymour) was called to confirm this evidence. On this occasion (May 29) he said he was in the shop, however, merely as a friend. The plaintiff came in, he said, and being asked how he was, said he was much better, that his bowels were open, he having, he said, taken some castor oil; that he had not a pain about him, but that he felt very weak, and wished for one more bottle of medicine "made strengthening." The defendant said he would give him something more strengthening, but that if he did not get better he should go to a Medical man.

Cross-examined, this witness admitted that he was a very intimate friend of the defendant, and had been "like brothers with him for twenty-five years." On this occasion, he went to dine with him—not by particular invitation; it was a common practice; he used generally to dine with defendant on a Monday, and this was on a Monday.

Dr. Forshaw, a Consulting-Surgeon, residing in the neighbourhood of the defendant, and to whom the defendant said he had recommended the plaintiff to resort for advice, stated that painters' colic was a very serious complaint and shortened life (whereas the Medical men previously examined stated, on the contrary, that it was easily treated, and they had not known any case fatal if properly treated). His practice, he stated, had been very considerable for forty years, and he had met with cases in his experience in which painters had got poisonous substances into their system from the paints they used. He instanced king's yellow and vermilion, which, he said, might get absorbed into the system—through the skin by absorption, through the stomach by contact of the fingers with food, etc., and through the lungs by inhalation. As a general rule, the age of 54 (the plaintiff's age) was an age at which painters were broken down, although he had known cases in which they had lived to 60 or 70. There was nothing improper in the treatment the defendant said he had adopted, though it was not the treatment he should himself have adopted.

Mr. Serjeant Ballantine: Oh, of course, we admit—indeed, we contend—that the treatment he said he adopted would have been proper.

Mr. Baron Pigott: But that the treatment with mercury would be improper.

The witness went on to state that, supposing no mercury had been taken at all down to May 30, salivation might have taken place within three or four days afterwards. He had known salivation produced within four-and-twenty hours.

Dr. Helsham stated that, having practised many years as a Physician, and having heard the evidence of the last witness (Dr. Forshaw), he agreed with him as to the treatment described as adopted. The substances alluded to are deadly poisons and may get into the pores, and if they did so to a great extent then they might produce bad effects, and the vermilion, if it got into the pores to a great extent, might produce salivation, though more slowly than other preparations.

Cross-examined: Blue pill is the proper substance to produce salivation, and it does so very rapidly. But it has a tendency to pass off rapidly, and it is the effects which remain rather than the substance itself; the latter passes off very quickly, unless taken for any length of time. Salivation is the effect, and it may remain, though the substance does not, and salivation may be caused very quickly. I have had salivation myself from a dose of calomel, which, however, is more powerful than the blue pill. The calomel is the bi-chloride of mercury. Blue pill is a milder preparation. Salivation would take place more rapidly in an enfeebled system.

This closed the evidence.

Mr. Baron Pigott asked if there was any evidence where the castor-oil was obtained which, it appeared, the plaintiff had taken.

It was answered that there was no evidence.

Mr. M. Chambers then addressed the jury upon the evidence on behalf of the defendant.

Mr. Baron Pigott said he should strike out the words "as a Surgeon and apothecary" in the declaration. They appeared quite immaterial, for the substance of the case, as it had been fought out on both sides, was whether the defendant had, in fact, treated and attended the defendant for his disorder. If the defendant's evidence was believed, it was admitted that his treatment was right; and really it came very much to this, whether the defendant's case or the plaintiff's was to be believed.

Mr. Serjeant Ballantine said that was so, and he acquiesced in the amendment. He then addressed the jury in reply on the part of the plaintiff.

The learned Baron summed up the case to the jury. Upon the whole case, he observed that the plaintiff, of course, could only recover damages for the injuries caused by defendant's conduct, and if those injuries had been aggravated by want of care and caution in catching a cold, to that extent he was disentitled to recover. It might be difficult for the jury to draw the distinction, but they must try to do so. They must only give damages for the injuries caused by the negligence or ignorance of the defendant. They must not punish the defendant by their damages for setting up a case in his defence which they might, perhaps, deem incredible. If in the result they arrived at the conclusion that the plaintiff was entitled to recover, and that the injuries of which he complained were caused by the negligence of the defendant, then they should give such damages, and such damages only, as arose out of injuries caused by that negligence.

The jury retired to consider their verdict, and, on their return, they gave a verdict for the plaintiff—damages £100.

MEDICAL NEWS.

UNIVERSITY OF ABERDEEN.—The following candidates, after the usual Examinations, have received Degrees in Medicine and Surgery during the present year:—

The Degree of M.D.

Edward Batt, M.R.C.S.E., and L.S.A., Oxfordshire; John Carless, Woolwich; John Tasker Evans, M.R.C.S., Hertford; James Farquharson, Edinburgh; George Findlay, A.M., Keith; James E. Fowler, A.M., Aberdeenshire; James Thos. Gage, Aberdeen; Alfred O. Jones, M.R.C.S., and L.M., London; William C. Lucey, M.R.C.S., L.S.A., and L.M., Surrey; Edwin B. Muskett, Norfolk; Thomas Seccombe, F.R.C.S.E., Plymouth; Joseph B. Siddall, M.R.C.S.E., and L.S.A., Derbyshire; Edward Sutcliff, M.R.C.S., and L.R.C.P.L., Surrey; James Taylor, Banffshire; Martindale C. Ward, M.R.C.S.E., M. and L.S.A., and L.M., London.

At the same time,

Robert Keith, M.B., C.M., Benjamin Knowles, M.B., C.M., Thomas Greville Thursfield, M.B., C.M., and Thomas Watt, M.B., C.M.,

were promoted to the Degree of M.D.

The Degree of M.B.

George Henry Anderson, M.A., Aberdeen; William S. Birnie, New Pitsligo; Alexander Campbell, L.R.C.S. Ed., L.R.C.P. Ed., Aberdeenshire; John Millar Campbell, Aberdeen; William Conter, A.M., Aberdeen; Anthony C. Colborne, L.R.C.P., L.S.A., London; John Dawson, M.R.C.S., L.S.A., Norfolk William Duncan, Aberdeen; John Smith Fowler, M.A.,

berdeen; William Walker Galloway, Aberdeen; George Garvin, Columbo, Ceylon; Alexander Gibb Grant, Aberdeen; Edward Gray, London; Alexander Riddoch Gray, Aberdeen; David A. Kerr, Aberdeen; George King, Aberdeen; John Macpherson, Huntly; Robert M. Milne, Dunnottar; Thomas Milne, Aberdeenshire; Alexander G. Mitchell, A.M., Rayne; John Murray, M.R.C.S. Eng., Aberdeen; Alexander Ogston, Aberdeen; Alexander Campbell Reid, Aberdeen; James Rodger, Aberdeen; Samuel Rowe, M.R.C.S.E., London; Charles E. Saunders, M.R.C.S., London; John Simpson, Kintore; Francis Snaith, M.R.C.S., L.S.A., Lincolnshire; William Heath Strange, M.R.C.S., L.S.A., L.M., Reading; William Leavens White, Shropshire; David Young, L.R.C.S. Ed., L.R.C.P. Ed., Perth.

The Degree of C.M.

George H. Anderson, Alex. Campbell, John M. Campbell, John Carless, John Carnegie, William Center, Anthony C. Colborne, John Dawson, William Duncan, John Tasker Evans, George Findlay, James E. Fowler, John Smith Fowler, James T. Gage, William W. Galloway, George Garvin, Alex. Gibb Grant, Edward Gray, Alex. Riddoch Gray, Alfred O. Jones, David A. Kerr, George King, William C. Lucey, John Macpherson, Robert M. Milne, Thomas Milne, Alex. G. Mitchell, John Murray, Edwin B. Muskett, Alexander Ogston, Alexander C. Reid, James Rodger, Samuel Rowe, Charles E. Saunders, Joseph B. Siddall, John Simpson, Francis Snaith, William H. Strange, Edward Sutcliff, Martindale C. Ward, William Leavens White, and David Young.

Of the above-mentioned candidates,

William Center, Anthony C. Colborne, John Tasker Evans, James Thomas Gage, Wm. Walker Galloway, George King, Alex. Ogston, James Rodger, Joseph B. Siddall, Edward Sutcliff, and Martindale C. Ward received their Degrees in Medicine and Surgery with highest Academical honours; George Henry Anderson, James Elsmie Fowler, John S. Fowler, Edwin B. Muskett, and Charles E. Saunders received their Degrees in Medicine with Academical honours; William Duncan received his Degree in Surgery with Academical honours; and Alfred Swaine Lethbridge, Frederick John Wadd, and John White were certified as having passed all the Examinations, and are entitled to receive Degrees on their attaining the necessary age.

And at the late Graduation term, the following were declared to have passed part of their Examinations:—

Edwin Atherstone, Alexander Cameron, James Cameron, James Trigue Crowden, Alexander Dyce Davidson, James Farquhar, John Murray Gibbes, Robert Grant, jun., Robert Grant, sen., John Roubel Gray, Sydney Johnson, Hugh Johnstone, Timothy Lewis, William Macdonald, Andrew Arthur Macrobin, Alexander Hunter Mair, Alexander Edward M'Rae, Douglas Moir, David Nicolson, James Mathias Phillips, Edwin Rawson, Alex. Reid, Robert Shiels, John Shives, Arthur Stephen, Hercules Scott Traill, Charles James Wills, James Williamson, James Yates.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, August 3, 1865:—

William LeGros Denziloe, Bridport, Dorset; John Lowe, Clarence-street, Greenwich; Eyton Owen Williams, Llanrhiadr, N. Wales; Henry Sainsbury, Hill Top, West Bromwich; Herbert Tibbits, 12, Charterhouse-square; Alfred John Cockerton, Islington; William Boughton Stirling, London Hospital; William Wiles, 12, Mount-place, S.; Edgar Athelstane Browne, Horbury-crescent, Notting-hill; George Waroup Malim, Grantham.

The following gentlemen, also on the same day, passed their first Examination:—

Thomas Harvey, St. Thomas's Hospital; John Jenkins, Charles George Gurdon, and Charles Sangster, Guy's Hospital; Thomas Bailey, University College; Edward Homfray Addenbrooke, Sydenham College, Birmingham; William Thomas, Queen's College, Birmingham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

GERVIS, FREDERICK R. H., M.R.C.S. Eng., has been appointed Medical officer to the Haverstock-hill and Malden-road Provident Dispensary.

GILES, S., M.D., has been appointed Honorary Medical Officer to the Royal Kent Dispensary.

HUGHES, EBENEZER, M.D. St. And., has been appointed Honorary Medical Officer to the Liverpool Dispensaries.

PADDON, JOHN, M.B. Lond., has been elected Physician to the Swansea Infirmary.

THOMAS, DAVID H., M.R.C.S. Eng., has been appointed Surgeon to the Police at Swansea.

STUART, W. A., M.R.C.S. Eng., has been appointed Physician's Assistant to University College Hospital.

DEATHS.

BIESLEY, THOMAS, M.R.C.S. Eng., at Alnwick, Northumberland, on July 22, aged 53.

CAMMACK, ROBERT, M.R.C.S. Eng., of Lincoln, at St. Bees, on July 28, aged 58.

DOYLE, JOSEPH, F.R.C.S.I., at Blessington-street, Dublin, on July 28, aged 84.

DUNCAN, JAMES, M.D. Edin., at Fettes-row, Edinburgh, on July 25.

FULTON, G., Surgeon, at Camperdown, Geelong, Australia, on May 13.

GOSS, WILLIAM FORBES, M.R.C.S. Eng., at Cuttack, India, on June 6, aged 33.

HOBSON, R. J., M.D., at Ballarat, Australia, on April 27.

STRANGE, JOHN, M.D. Glasg., Surgeon R.N., at Park-crescent, Brighton, on July 21, aged 86.

WOOLF, F. J. L., Surgeon, at Redruth, Cornwall, on July 19, aged 25.

YOUNG, JOHN A., B.A., L.R.C.S.I. on August 1.

DR. JENNER is the Physician in attendance on Her Majesty during her visit to the Continent.

MR. LAWRENCE has retired from the offices of Surgeon and Lecturer on Surgery at St. Bartholomew's Hospital.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The library will be closed from Monday, August 14, to Saturday, September 9, both days inclusive.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Dr. Isaac Hoysted, 1st Btt., 8th (The King's) Regt., has been admitted a Fellow of the College.

HORSHAM, SUSSEX.—An association of the Medical Practitioners of Horsham and its neighbourhood has been formed, under the designation of "The Weald of Sussex Medical Society," the objects sought being the circulation of Professional and scientific books, meetings for discussion of all matters incident to the Profession, and the promotion of good feeling and unanimity among the members of the Society.

THE ANNUAL CIRCULAR OF THE "MEDICAL DIRECTORY."—During the last few days the annual circular of the "Medical Directory," by the aid of which the editors of that work are enabled to maintain its accuracy of information, has reached the hands of every member of the Profession, and it is hoped that in each case it may be returned carefully corrected for the new edition to be published in January next. The Directory has become so valuable and so essential as a book of reference, and is so much consulted in and out of the Profession, that we hope the co-operation which is thus requested by the editors will be universally conceded, accompanied by such an amount of support as will encourage and repay the publishers for the risk and labour of so great an enterprise. But whilst urging our readers to make the necessary return of the circular, we would fain inculcate a little more modesty in some of the Professional addenda, both as to space and matter, and we would suggest to the editors the propriety of appointing a kind of assessor of the returns, for in some instances they provoke a smile, and the book would be improved by a little judicious erasion.

PROGRESS OF CHOLERA.—Cholera, which has for some time existed in Egypt, and has carried off a large number of victims in Alexandria, has now made its appearance at various places on the shores of the Mediterranean. It has been rife amongst the Jewish population at Smyrna, where 168 persons, 124 of whom were Jews, died of cholera between the 13th and 20th of July. On the island of Cyprus the disease has proved fatal in from 40 to 50 cases daily. The letter of the *Times'* correspondent, dated Constantinople, July 26th, states that in that city it has undoubtedly broken out, "notwithstanding the quarantine regulations imposed upon all ships from suspected ports, which regulations were broken by a Government steamer arriving from Alexandria having several cases of cholera on board, the captain and surgeon making a false declaration that the crew were healthy. The men afflicted were landed and put in the Hospital at the Arsenal, and thence the fatal disease has spread, and is gradually expanding itself over the capital and villages in the neighbourhood. The official report published yesterday states that 180 cases came under the cognisance of the Medical Board." One village on the Bosphorus, Yenikeni, is reported to have suffered severely. It has appeared in Italy. At Ancona, on August 4th, 34 deaths were reported. In Malta both the civil and military populations are suffering from the disease. The letter of the *Times'* correspondent dated Valetta, July 31st, gives the following summarised statement of the course of the malady within the eight or nine previous days:—On the 22nd inst., after an oppressively hot day and night, 17 attacks were reported throughout the island, in addition to the military, of whom seven are said to have been interred on the 23rd. On that and on the following day there were 14 new cases among the civil population, and seven deaths, and nearly as many among the troops. On the 25th and 26th some 26 fresh cases were reported, of which about half terminated fatally. On the 27th there were 22 attacks, seven of which occurred in Valetta. Among the military there was only one case. On the 28th the number of attacks reported was 28, and the deaths 12; on the 29th, 31 attacks and 18 deaths; and on the 30th, 23 attacks and 12 deaths. Several of the distant villages have returned a few cases each; and two cases are reported to have occurred in the neighbouring island of Gozo. On July 31st the number of attacks reported was 25 and the deaths 17. On August 1st the attacks were 33 and the deaths 18.

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THE annual meeting of the Buchan Medical Society was held at Strichen on August 1. A memorial to the Board of Supervision, praying that it should see that Parochial Medical Officers be appointed *ad vitem aut culpam*, was read and approved of. The further consideration of the subject of affiliation of the different local societies was referred to the general meeting, which was to take place in Aberdeen on the 3rd, most of the members intending to be there present. The President, Dr. Gavin, Strichen, gave an admirable address on Ileus, which was fully discussed by the meeting. The members present dined together, Dr. Gavin in the chair, and spent a highly agreeable evening. The next meeting is to be held at New Maund. The office-bearers for 1866 are—J. Anderson, Peterhead, President; J. Ruxton, Foveran, Vice-President; and Mr. Bruce, Crimond, Secretary.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Ishmael.—G. Jolly, chemist, Curzon-street.

T. D.—Beamrse and Sons, Derby.

Mr. R. O. C., Faraham.—Dr. Parkes's work "On the Urine." John Churchill and Sons.

Mr. B. W. Switzer.—We should be most happy to receive the M.SS. mentioned by our correspondent.

Messrs. Ellis and Son, of Ruthin, prepare an imitation of the seltzer water which is certainly more palatable than the natural water, owing probably to the freshness of the carbonic acid infused into it. The water employed, from a deep and splendid well upon the premises, might be said to be absolutely pure. The quantity of soda or potass in each bottle at Ruthin is twenty-five grains of the bicarbonate of either alkali; and the carbonic acid is equal to about two hundred and fifty or sixty cubic inches. The water from the well only holds two grains of solid matter in solution, and has not a trace of organic matter; hence it is not liable to alter or decompose, if kept for any length of time. To show the extent to which the manufacture of aërated waters has advanced, Messrs. Ellis and Son send out yearly many thousand gross of effervescing beverages.

THE RETIREMENT OF MR. LAWRENCE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As exception may possibly be taken to the retention of Mr. Lawrence's name in our notices for the Sessions 1865-66, I shall be obliged if you will allow me to state that our Prospectus and Handbook were printed and in great part distributed before Mr. Lawrence's resignation was known or anticipated. I am, &c., GEORGE W. CALLENDER.

St. Bartholomew's Hospital and College, August 8.

THE ALLEGED POISONING CASE AT THE MARYLEBONE POLICE COURT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Respecting the application made by myself on behalf of my man servant at the Marylebone Police court on the 1st instant, perhaps you will grant me the privilege of correcting the errors into which the reporter has fallen.

I beg to state—1st. That it was my man-servant, and not myself, whom the cook, Sarah Jarvis, suspected of administering poison to her. 2nd. That it was not "my medicine" that the Medical man recommended to be analysed, but some rum, which she had taken from a bottle belonging to him. 3rd. That the accusations made against him were always regarded by me as delusions of physical causation, and as the result of the climacteric which her symptoms had assumed — namely, hysterical mania. 4th. That the cook was suffering, not from the effects of mineral poison at all, but from the aggregate results of a large amount of digestive disturbance and uterine irregularity.

I am, &c., WATSON BRADSHAW.

Welbeck-street, Cavendish-square, August 7.

THE DANGER OF CHLOROFORM ADMINISTRATION IN CASES OF ENLARGED TONSILS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Dr. Kidd having referred to a paper of mine which appeared in your journal respecting the danger of administering chloroform in certain diseases of the nose and throat, including cases of enlarged tonsils, has in so doing entirely misrepresented my views, and I beg therefore to request the favour of being permitted to pointed out the errors in question.

Dr. Kidd appears to think that in operations on the tonsils during the administration of chloroform death may result from irritation of the cervical nerves in consequence of their connection with the cardiac plexus. Perhaps it may; but in my paper I did not once refer to operations of any kind, but to the inhalation of chloroform for any purpose whatsoever when there existed enlarged tonsils or other morbid condition blocking up the nasal passages. In each case, therefore, Dr. Kidd's theory respecting injury of the cervical nerves is quite untenable; and obviously, if both nose and mouth be closed, inspiration is impossible, and death under such conditions, which are precisely those the paper treats of, must be due to asphyxia. I am, &c., WILLIAM J. SMITH.

Finsbury-place South, August 8.

COMMUNICATIONS have been received from—

Mr. W. BRUCE; Mr. GEORGE CALLENDER; Dr. WATSON BRADSHAW; Mr. HENRY J. MATHEWS; Dr. D. H. MONCKTON; Mr. B. W. SWITZER; Mr. R. COOPER TODD; Mr. STOCKER; Dr. T. DOWNIE; Dr. J. NORTHCOTE VINEN; Dr. T. R. FRASER; CIVIL SERVICE COMMISSION; APOTHECARIES' HALL; ROYAL MEDICAL AND CHIRURGICAL SOCIETY; ISHMAEL; ARMY MEDICAL SCHOOL; Mr. JAMES S. BRAZIER; Dr. DALGAIRNS; Dr. R. O. CLARK; Dr. JOSEPH MULRENNY; Dr. N. MCCANN; Mr. F. H. GERVIS; Dr. J. HOYSTED; Dr. JOHN S. BRISTOWE.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 5, 1865.

BIRTHS.

Births of Boys, 885; Girls, 943; Total, 1828.
Average of 10 corresponding weeks, 1855-64, 1724·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	663	648	1311
Average of the ten years 1855-64	628·3	605·6	1233·9
Average corrected to increased population..	..	..	1357
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	2	5	2	1	4	2	37
North ..	618,210	..	7	6	1	3	11	50
Central ..	378,058	1	2	6	1	8	8	25
East ..	571,158	2	2	7	1	5	15	46
South ..	773,175	3	9	2	1	12	11	50
Total ..	2,803,989	8	25	23	5	32	47	207

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·695 in.
Mean temperature	55·9
Highest point of thermometer	75·3
Lowest point of thermometer	43·2
Mean dew-point temperature	48·8
General direction of wind	1·70 in.
Whole amount of rain in the week	N. & N.W.

METROPOLITAN WATER SUPPLY FOR JULY, 1865.

The following are the Returns by the Metropolitan Association of Medical Officers of Health of the Analyses of the Water supplied to the Metropolis in the month of July:—

	Total Solid Matter per Imperial Gallon.	Loss by Ignition.(a)	Oxydisable Organic Matter.(b)
Thames Water Companies.	Grains.	Grains.	Grains.
Grand Junction	17·5	1·75	0·64
West Middlesex	Not examined.		
Southwark and Vauxhall . .	17·2	1·37	0·48
Chelsea	18·5	1·25	0·64
Lambeth	17·7	1·41	0·64
Other Companies.			
Kent	26·7	2·14	0 32
New River.	16·3	0 98	0·86
East London	17·5	1·23	0·32

(a) This represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxydisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 to 8; and this result is controlled by the examination of the colour of the water when it is seen through a tube two feet in length.

APPOINTMENTS FOR THE WEEK.

August 12. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

14. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

15. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

16. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

17. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

18. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

AN INQUIRY INTO THE NATURE OF THE PHENOMENA WHICH CONSTITUTE "INFLAMMATION."

TWO LECTURES DELIVERED AT
The Royal College of Physicians.

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the College; Professor of Physiology and of General and Morbid Anatomy in King's College, London; Physician to King's College Hospital.

LECTURE II.

Inflammation in non-Vascular Tissues:—Cartilage and Epithelium—Of the Nature of the Inflammatory Process—Of the Increase and Multiplication of Cells in the Simplest and most highly Complex Organisms—Of the Formation of Pus from Germinal Matter—Of the Pus in Purulent Ophthalmia, Gonorrhœa, etc.—Vaccine Lymph—The Nature of the Poison of Fevers and Contagious Diseases.

Inflammation in Vascular Tissues:—A Punctured Wound—Of the Blush in a Flea Bite—Of the Vasomotor Nerves, and of the Nerves Distributed to Capillary Vessels—Of the Excitor and Motor Nerves Concerned in Nutrition—Of Exudation and the Formation of Coagulable Lymph.

Of Reducing the too Free Access of Pabulum to Germinal Matter, and of Reducing the Activity of the Inflammatory Process—Conclusion.

(Continued from page 136.)

OF THE INCREASE AND MULTIPLICATION OF CELLS IN THE SIMPLEST AND MOST HIGHLY COMPLEX ORGANISMS.

In the hope that we may learn more concerning the nature of the inflammatory process let us consider the phenomena in the simplest creatures which correspond to what we term *inflammation* in man and the higher animals.

In the lower vertebrata, such as the batrachia, inflammation seems to resemble, in its essential phenomena at least, the process as it occurs in man and the higher animals, but the changes proceed very much more slowly. Inflammation may occur, however, in creatures much lower in the scale than these cold-blooded vertebrata. Inflammatory action, or something exactly corresponding to it, may occur in annelids and polypes, and even in creatures of a still simpler organisation. In the higher vegetables the process of inflammation is also met with. When the ovipositor of the gall-fly penetrates the tissues and reaches the interior of a developing bud of a plant, it passes through growing leaves, and of course divides the vessels which are being developed in these leaves; the consequence is, that a quantity of nutrient material passes from the open orifices of the vessels, and the cells which would have been slowly developed into leaves grow much more rapidly, and are developed instead into a simpler cellular structure. As I showed in my last lecture, the change does not depend upon irritation.(a) The cells are not "*excited*" by the instrument to take up more nutrient matter, but the restrictions under which they live normally are to some extent removed. The idea of "irritation" cannot, I think, be sustained. Instead of exhibiting the characters of the cells of the ordinary foliage, they differ from them in many important particulars. Instead of being arranged regularly, as in the leaf, the cells are arranged most irregularly, and exhibit great differences in shape and size. These modifications seem to be due to the irregular growth, and to the too free access of nutrient material to the growing germinal matter. The activity of the process appears to have been incompatible with the production of structure of the regular form and normal arrangement.

Now let us inquire if, in the lowest and simplest forms of living beings, such as the infusoria and allied creatures, and the lower organisms, as mildew, there is any change that can be compared to inflammation? There is not, I think, in these any change that can correctly be called inflammation; but why is this? Let us consider what happens when mildew is supplied with an unusual quantity of pabulum? It will certainly increase considerably in extent, as every one knows well; but when we examine minutely the cells or elementary parts resulting from its growth we find that they exactly resemble some of the original cells; indeed, it is generally true that if these low organisms be placed under conditions favourable to their growth, low organisms like them are produced; while if the masses of germinal matter existing in the cells of man and the higher animals are exposed to conditions favourable to their growth, we get increased growth, truly; but the elementary parts resulting from this increased growth are not exactly like their progenitors, but differ from the normal cells in important particulars. Increased multiplication seems to be the phenomenon which in the simplest organisms corresponds to ordinary inflammation as it occurs in man and the higher animals, and this increased multiplication is invariably due to the increased access of nutrient material.

But it must not be supposed that modification in structure results from altered conditions in man and the higher animals only. In the lowest and simplest organisms there is evidence of modifications so striking as to have led zoologists to believe they were dealing with distinct species. More exact observation, however, has proved most conclusively that many of the forms supposed to be distinct were the descendants of a common parent; but in consequence of being exposed to the influence of different conditions differences in structure had resulted. In many instances it is impossible to say which of several allied forms is the real species and which the modified form.

It must, however, be distinctly observed that in these instances there is alteration in character without deterioration; while in the higher animals the alteration in character is associated with degradation. A pus corpuscle is degraded, as compared with an epithelial cell; but it would be impossible to say which of two such organisms as the penicillium glaucum and the vinegar plant (which may own a common parentage) should be regarded as the lowest in the scale,(b) or to assert which of a number of foraminifera springing from a common stock was the most exalted or the most degraded.

In man and the higher animals there is less dependence upon, and greater capacity for resisting the influence of varying external conditions than in the case of lower and simpler organisms. But when alterations in character are induced in the tissues of man and the higher animals, the results are much more serious and often terribly destructive. The cells of the simplest organisms may multiply very fast indeed, and yet retain their original endowments or acquire properties and powers as good, but if any of the cells of the tissues of man and the higher animals multiply too fast they no longer retain their normal properties and powers, but suffer hopeless deterioration. And we know that much that is true of the cell in this respect is true also of the entire organism.

What a wonderful and perfect arrangement for counteracting the effects of varying external conditions exists in man and the higher animals! Take the case of temperature. We may be exposed without danger or even inconvenience to degrees of heat or cold which would at once destroy creatures of much less complex organisation. We possess, as is well known, a very perfect mechanism by which the internal temperature of the body is not only equalised in all parts, but maintained at the same point in spite of the influence of external heat and cold; and therefore cell growth and other actions take place precisely in the same way under great modifications of external circumstances. Such a mechanism, I need scarcely say, does not exist in the lowest creatures, so that when the conditions are favourable they grow very rapidly, and under special conditions their structure may be modified; but when the conditions are actually unfavourable they grow very slowly or they die. If the mechanism so characteristic of the higher organisms become deranged, the effects are often disastrous, and frequently an abnormal condition of many different tissues in the body is the consequence. We see, therefore, why the higher and most complex organisms should be the subject of a greater variety of morbid conditions than the lower and simple forms of life.

In the tissues of the higher animals a limited degree of increased nutrition may cause increased growth alone, without any departure, or with only slight departure, from the normal structure. If, for example, in the case of such a tissue as cartilage there be merely redundant growth, a cartilaginous tumour may result. The supply of nutrient material being increased to a certain extent, an ordinary growth occurs, and the hardness of the cartilaginous tissue which is produced depends upon the rate of change. But if the quantity of nutrient matter transmitted to the cells be much above the normal standard, and the consequent growth of the cells rapid, then the material

(a) *Medical Times*, June 10, 1865, p. 593.

(b) "Notes on the Vinegar Plant," by H. J. Slack, *Trans.* of the Mic. Soc., April, 1865, p. 11.

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produced is exceedingly soft; if the proportion of nutrient matter be very great, then pus, which consists almost entirely of germinal or living matter, alone results.

So that if there be moderately increased access of nutrient material, an increased growth of tissue closely resembling normal tissue, but somewhat softer, results; if there be more free access of nutrient material, a tissue which accords more nearly with certain forms of malignant growth may appear, while if the access of nutrient material be very free, pus is produced. In the case of cuticle, if the redundant growth only occur to a certain limited extent, instead of pus being produced, and the phenomena of inflammation, we have a simple thickening, a sort of soft corn or warty growth; if the increased growth is much greater than that, we have an exceedingly soft spongy form of cuticular tissue; and if greater still, we have no cuticle at all, and "pus" is formed.

Of the Pus Corpuscle.—Pus does not result from the aggregation of particles in the disintegrated tissue, as some suppose, but it really consists, as I showed in the first course of lectures I gave to the College, of living matter. There is certainly no true cell wall in the case of ordinary pus, and this is proved by the fact, to which I have several times adverted, that protrusions of the matter of which pus corpuscle consists may occur upon every part of the surface, and not only so, but some of these protruded portions after moving a considerable distance away from the mass, become disconnected with it, and thus new pus corpuscles are produced. It is in this way that the very rapid multiplication of pus corpuscles is effected. In pus from the bladder these movements are very easily observed, and when fresh, in consequence of their occurrence, not a single spherical corpuscle can be found. Every corpuscle exhibits a great number of these protrusions, and every protrusion might be detached, and form a free pus corpuscle. I have known these movements continue in warm weather in urine containing little of the ordinary constituents for forty-eight hours or more after the pus had left the bladder.(c) The very phenomena which take place upon the surface of the mucous membrane of the bladder may be watched for hours under the microscope, and there are few things more beautiful or more instructive. When the corpuscles die, and their death occurs when they are placed in any fluid which is not adapted for their nutrition—they invariably assume the spherical form.

A mass of any soft, living, germinal matter when suspended in fluid in active movement invariably assumes the spherical form, and retains it for a short time after the movement has ceased, but if placed under favourable conditions it absorbs nutrient matter and soon exhibits *vital movements*, grows and multiplies. The amæba in water, the white blood corpuscle in the liquor sanguinis are both spherical, while the fluid surrounding them is in active movement, but after they have been at rest for a short time they exhibit their characteristic and very wonderful movements.

Other changes may also occur in the pus corpuscle. Supposing it to be subjected to influences unfavourable to this rapid growth, the material upon the surface may be precipitated, and thus a very thin layer of semi-transparent insoluble material may be formed, which is rightly termed cell wall. Changes may then take place in the mass of the pus corpuscle itself; it may be resolved into oil globules; and those alterations which are familiar to all observers may be readily noticed in pus corpuscles which are subjected to disintegrating processes or to the influence of fluids which are not adapted to their nutrition.

Now, supposing the pus did not possess these powers of rapidly absorbing nutrient material and giving rise to the formation of new corpuscles, what must happen? If this were not so, the decomposition of the fluids which the pus corpuscles should appropriate would soon occur, and the products set free would soon cause the death of the germinal matter of the neighbouring tissues, and these would also pass into decomposition, while the substances which result from the gradual death of the pus corpuscles themselves are capable of being taken up and perhaps even appropriated. If a mass of tissue is dead, it must at the temperature of the body soon pass into a state of putrefaction, and the products formed would destroy the life of the germinal matter near, and the process would extend. An entire organ or a considerable portion of the body would mortify, and the death of the whole would soon occur. The rapid multiplication of pus corpuscles prevents this result. The pus corpuscles appropriate the softened tissue before it passes into actual decay. The substances which result from the death and disintegration of the pus corpuscles are less deleterious (perhaps from there being much fatty matter) than those which immediately result from the decomposition of tissues.

In the frog and the other cold-blooded animals this formation of pus is not necessary, because at the comparatively low temperature of their bodies the decomposition of albuminous matter does not so rapidly take place. But in man and the higher animals, if these albuminous materials are not subjected to the continual influence of gases which prevent their change, or soon appropriated and converted into living matter, they must putrefy, and the poisonous sulphuretted hydrogen is among the products of decomposition.

Pus is Germinal Matter, and may come from any form of Germinal Matter in the Body.—Pus may be formed, then, from the germinal or living matter of any tissue, not, as has been stated by Virchow and others, merely from epithelium and connective tissue. Pus is not a special substance; many kinds have been described, according to the different localities in which it has been found and the different conditions under which it has been produced; but in all cases pus possesses certain general characters which show conclusively that it is germinal matter. You cannot distinguish many pus corpuscles from lymph corpuscles, white blood corpuscles, and many other masses of germinal matter; indeed, one may go so far as to say that if you examine the developing brain of an embryo at an early period you find that this important structure consists of nothing more than a number of spherical cells which could not by any means we are yet acquainted with be distinguished from many forms of pus corpuscles. If we carefully reflect upon many observed facts, we shall be compelled to admit that masses of germinal matter which resemble one another in every character we can discern, differ, nevertheless, remarkably in *power*, as is proved by the results of their living. Few writers seem to have fully recognised the remarkable truth that living things may agree in physical and chemical characters, but differ widely in power. Wide difference in vital power may be associated with similarity of composition. It is not physical and chemical properties that determine the form living matter is to assume, but the inherited vital power. The pus corpuscle, then, is simply a mass of living germinal matter which comes from the living matter of any special tissue of the body.

Properties and Powers of Normal Germinal Matter and of the Pus descended from it.—I will next venture to offer some remarks upon the properties or powers of germinal matter. Although much of what I shall say will necessarily be rather speculative, the interest of the matter is so great that I cannot pass it over entirely. The germinal matter of tissue, being supplied with an increased quantity of pabulum, may give rise to pus, as I have stated, but pus differs in power from the germinal matter from which it was derived. It cannot, as far as we know, acquire the properties which the original germinal matter possessed. My meaning will be rendered clearer if I adduce an example. The germinal matter of the epithelium may give rise to the hard material of which the so-called wall of the epithelial cell consists, and this germinal matter of epithelium, if supplied freely with pabulum, may give rise to pus. I do not believe, and all evidence is against the view, that under any circumstances the germinal matter of pus corpuscles can again acquire the power of producing epithelium such as might have been produced from the mass of germinal matter from which the pus is a direct descendant. It is, I think, certain that germinal matter may lose formative power, but cannot acquire it or regain it when lost. There is no return to a high position for living matter which has once suffered degradation, nor can degraded germinal matter produce descendants with exalted power.

It must not, however, be supposed that degradation in formative power implies diminished vitality, and it is a mistake to conclude, as some have done, that disease is necessarily associated with diminished vitality. If, in speaking of various degrees of vitality, we refer to the rate of increase of germinal matter, we do have in most diseases *increased vital activity*. In inflammation, as compared with health, there is greatly increased vital activity; that is, more lifeless matter becomes living within a corresponding period of time.

Rapid multiplication of the masses of germinal matter dependent upon a too abundant supply of pabulum is invariably associated, not only with loss of formative power,

(c) These movements have been called "*amæbiform*" from their resemblance to those long familiar to microscopists in the amæba, but I have shown that they are characteristic of every kind of *living matter*, and may be spoken of as *vital movements* peculiar to the living state of matter.

but with brief duration; although the tendency to increase, compared with that manifested by a normal cell, is exalted, the time which each individual mass lives is brief. In the lowest and simplest forms of being we find the duration of the individual is altogether sacrificed to the spread and perpetuation of the species, while in the higher the preservation and duration even of an individual cell are in many instances very remarkable.

In the comparatively simple processes of growth and multiplication of the germinal matter much pabulum is necessarily required; while, on the other hand, in the comparatively slow process of formation of new centres within centres (nucleus within cell, nucleolus within nucleus, nucleolulus within nucleolus, etc.), the quantity of pabulum required is reduced to a minimum, and although there is scarcely any observable change, there is a wonderful increase of formative power. This we know, because it is under these circumstances that the tissue-producing cells or elementary parts are produced. It is in the comparatively quiescent state that power seems to be acquired. The process of multiplication being in abeyance, the power of the individual is increased.

It would seem as if the formative or developmental endowments of germinal matter were diminished and lost completely by its rapid multiplication; so that a mass of germinal matter, which in the course of a considerable time, undergoing slow change, would give rise to descendants which might be concerned in the development of the highest and most complex tissues, if placed under conditions favourable to its too rapid growth, would absorb much more nutrient matter in a given time, and produce descendants much more quickly; but although this rapid multiplication might continue, not one of the resulting masses would give rise to the formation of higher tissues. Too rapid increase is associated with degradation in power, and in man, and the higher animals, and plants, if textures grow too quickly their power of endurance is of necessity reduced. An increased rate of growth in organisms may frequently be brought about by artificial circumstances, and increased multiplication of organisms promoted; but the duration of life is seriously curtailed, and the power of resisting adverse conditions greatly impaired; so that although there is gain in number, there is fatal falling off in individual well-being and preservation.

(To be continued.)

ORIGINAL COMMUNICATIONS.

RADICAL CURE OF INGUINAL HERNIA.

By J. FAYRER, M.D., F.R.S.E.,
Surgeon, Medical College Hospital, Calcutta.

The following method of operating for the cure of inguinal hernia I have found to be more simple and successful than that I had previously practised. It has, so far, been unattended with any dangerous consequences, and, though it has failed in some cases to give complete relief, it has improved the patient's condition by enabling him to control the hernia more thoroughly by aid of a truss. It appears to have the advantage of not confining the patient very long to his bed, the treatment seldom extending beyond five or six weeks, and the latter part of that not necessarily requiring confinement. The only disagreeable results that I have yet observed, and that only in one or two cases, was suppuration extending towards the thorax, between the abdominal muscles, giving rise to irritative fever and exhausting discharges; but this has not endangered life, and has quickly subsided on free counter incisions being made to give exit to the pus.

Sloughing of the integument at the seat of operation rarely occurs, beyond the death of a minute portion of it just where the needle emerged and the ligatures are tied; and in no case have I seen peritonitis to a dangerous extent take place; nor has hæmorrhage occurred, though it is difficult to understand how the epigastric artery always escapes.

The object of the operation is, as in the other methods, to invaginate a portion of the scrotum within the inguinal canal and secure it there. But I must state my impression that the success of the operation does not depend so much on retention of the invaginated scrotum within the canal as on the formation there of a quantity of exudation and cicatrix tissue. I have frequently remarked that the success of the case did not depend on the invagination remaining in the canal, for I have seen successful results when the invagination had completely descended, and I have also not unfrequently seen the converse of this.

My impression of the operation is, that it is very often successful, but frequently unsuccessful, and that we are not able to speak so positively as to the result as we are in other operations, so much depending on the accident of how the exudation may be poured out, and in what direction, and how the cicatrix will form.

The chief element of success appears to me to consist in the careful introduction of the plug into the canal, that the end of it may press well against the internal abdominal ring. Much, also, depends on the subsequent dressing, and care on the part of the patient, not by any premature effort or over-exertion to force down the protrusion whilst the process of cicatrisation is yet incomplete.

The instruments with which I operate are very simple,—two plugs of wood, silk ligatures, and a curved needle; one plug of wood about six inches long, rounded and compressed at the end and lengthways, and about the circumference of a man's thumb. This may be made of wood, ivory, or bone. Any wood will do, though, perhaps, ebony is the best. At one end it is pierced obliquely, and threaded with two strong ligatures made of the strongest ligature silk. These, before being used, should be waxed. A needle, made of strong steel, curved and inserted into a firm handle, with an eye at the point, through which the ligatures in the plug have to be passed. The curve of the needle amounts to about half a circle. In addition to these, a small blade or plug of hard wood or ivory, about an inch and a half long, three-quarters of an inch in diameter, and rounded, is required to tie the ligatures firmly over when the plug has been inserted into the inguinal canal.

The mode of operating is as follows:—The patient is prepared by having the bowels opened the night before. The pubes and scrotum are shaved and the bladder emptied just before the operation, which may be performed under chloroform if the patient dreads the pain. The forefinger of the left hand is then introduced within the external abdominal ring, pushing before it an invagination of the scrotum. Having introduced it as far into the canal as possible, the needle is threaded with one of the silk ligatures and being held in the operator's right hand is gradually insinuated along the palmar aspect of the left forefinger until it reaches the extremity of the invagination; it is then thrust boldly through the tissues lying over the finger, and emerges about one and a-half inches interiorly to the anterior superior spine of the ilium. The needle is then unthreaded and withdrawn. Again threaded with the second ligature, the process is repeated, taking care to pass the needle through the tissues, not quite at the same point in the canal as the first, but bringing the ligatures out at the same aperture in the integument. This is easily effected by drawing the yielding integument over the point of the needle until it merges at the original point of exit. The needle is again withdrawn, and now the plug is insinuated into the canal whence the finger has just been withdrawn, and is tied tightly in the canal by the two ligatures being firmly knotted over the small piece of wood provided for the purpose. The plug, it is to be observed, should be well oiled, and introduced as the finger is withdrawn. Until recently I was in the habit of using various sized plugs, fitted to the size of the abdominal ring in each particular case; but I now find that to be unnecessary, and use only one size of plug. Its object is to support the invagination at the upper extremity of the inguinal canal, and not to exert any lateral pressure. It is to be understood, however, that the canal is to be sufficiently occluded to prevent any descent of the hernia by the side of the plug.

The subsequent treatment is equally simple. When free suppuration makes its appearance either by the side of the plug or round the ligatures, the plug should be withdrawn. The invagination is then supported by a pad, after sponging away the discharge and dressing the wound with simple dressing, and a spine bandage. The patient should be kept carefully in the recumbent posture. The bowels seldom act for several days after the operation, but the patient should be warned against straining if they should do so. An opiate is desirable after the operation to tranquillise the patient, and also to prevent any tendency in the bowels to act. It frequently happens that there is retention of urine. This is relieved by fomentation, or, if necessary, by the catheter. Abdominal tenderness requires hot fomentations; and if any indication of peritonitis present itself, frequent and full doses of opium will be needed, but this in my experience is very rare.

In ordinary cases the wounds, scrotal and abdominal, heal rapidly, and all that is needed is careful dressing to prevent descent of the hernia. The patient should not walk until the wounds have healed, and then only with a well-fitting pad and bandage. When the wounds have thoroughly healed, the patient may take exercise with a well-fitting truss, which should not be left off for three or four months, when cicatrisation may be presumed to be completed.

Cases of Radical Cure of Inguinal Hernia by Dr. J. Fayrer's Method, Medical College Hospital, Calcutta.

No.	Name.	Disease.	Date of Admission.	Duration of Disease.	Date of Operation.	Date of Removal of Plug.	Date of Discharge.	Result of Operation.	Remarks.
1	J. L., aged 25, Maltese	Oblique inguinal hernia, right side.	April 23, 1862	1 month	April 25, 1862	April 30, 1862	May 23, 1862	Cure	Middle sized plug used.
2	M. T., aged 30, Mussulman	Ditto ditto ..	March 19, 1862	4 years	April 28, 1862	May 3, 1862	—	Failure	Small sized plug used.
3	M. T.	Ditto ditto ..	Ditto	Ditto	May 28, 1862	June 2, 1862	July 4, 1862	Cure	Same plug used as on first occasion; operation repeated.
4	G. C., aged 46, English	Direct inguinal hernia, right side	March 3, 1862	—	May 7, 1862	—	—	Relief	Middle sized plug used.
5	H., aged 25, Hindoo	Oblique inguinal hernia, left side	Aug. 15, 1862	2 months	Sept. 2, 1862	Sept. 5, 1862	Oct. 4, 1862	Cure	Small sized plug used.
6	J. G., aged 26, Austrian	Ditto, right side ..	Sept. 5, 1862	—	Sept. 9, 1862	—	Nov. 15, 1862	Ditto	
7	R. B., aged 21, Hindoo	Inguinal hernia, right side	Oct. 13, 1862	2 years	Oct. 14, 1862	Oct. 17, 1862	—	Failure	
8	R. B.	Ditto ditto ..	Ditto	Ditto	Nov. 17, 1862	Nov. 19, 1852	—	Ditto	
9	R. B.	Ditto ditto ..	Ditto	Ditto	Dec. 23, 1862	Dec. 25, 1862	Jan. 10, 1863	Cure	This man was operated on twice before.
10	D., aged 26, Hindoo	Oblique inguinal hernia, right side	Oct. 15, 1862	1 year	Nov. 5, 1862	Nov. 9, 1862	—	Failure	
11	D.	Ditto ditto ..	Ditto	Ditto	Nov. 22, 1862	Nov. 26, 1862	Dec. 7, 1862	Cure	Second operation—first, failure.
12	O. M., aged 25, Hindoo	Inguinal hernia, right side	Nov. 10, 1862	Congenital	Nov. 13, 1862	Nov. 16, 1862	—	Ditto	Was operated upon for the left side on Dec. 11.
13	O. M., aged 25, Hindoo	Ditto, left side ..	Ditto	Ditto	Dec. 11, 1862	Dec. 15, 1862	Jan. 21, 1863	Ditto	
14	N. W., aged 35, Mussulman	Ditto, right side ..	Nov. 7, 1862	4 years	Nov. 8, 1862	Nov. 12, 1862	—	Failure	
15	N. W.	Ditto ditto .	Ditto	Ditto	Dec. 14, 1862	Dec. 18, 1862	Dec. 28, 1862	Cure	First operation failed.
16	S. K., aged 22, Mussulman	Oblique inguinal hernia, left side	Dec. 3, 1862	1½ years	Dec. 4, 1862	Dec. 8, 1862	Jan. 1, 1863	Ditto	Small sized plug used.
17	N. C., aged 45, Hindoo	Inguinal hernia, right side	Jan. 5, 1863	—	Jan. 10, 1863	Jan. 14, 1863	Feb. 18, 1863	Relief	
18	J. M., aged 24, Irishman	Ditto, left side ..	Jan. 7, 1863	7 months	Jan. 19, 1863	Jan. 23, 1863	Feb. 26, 1863	Cure	
19	E. D., aged 25, Canadian	Ditto, right side ..	Feb. 25, 1863	—	April 11, 1863	April 15, 1863	May 13, 1863	Ditto	
20	D. K., aged 30, American	Ditto, left side ..	May 10, 1863	5 months	May 16, 1863	May 21, 1863	June 23, 1863	Ditto	
21	C. B., aged 35, Hindoo	Ditto, right side ..	Aug. 26, 1863	22 years	Sept. 28, 1863	Oct. 1, 1863	Oct. 16, 1863	Ditto	This man was operated upon for strangulated hernia previously.
22	C. P., aged 38, Swede	Oblique inguinal hernia, right side	Oct. 18, 1863	—	Oct. 22, 1862	Oct. 26, 1863	Nov. 20, 1863	Failure	
23	J. P. G., aged 21, English	Ditto ditto ..	Oct. 9, 1863	11 years	Dec. 5, 1862	Dec. 9, 1863	Feb. 7, 1864	Relief	
24	D. M., aged 40, Mussulman	Inguinal hernia, right side	Nov. 9, 1863	—	Jan. 12, 1864	Jan. 16, 1864	Feb. 19, 1864	Cure	
25	C. T., aged 30, Swede	Oblique inguinal hernia, right side	April 20, 1864	—	April 26, 1864	April 30, 1864	May 29, 1864	Ditto	
26	W. D., aged 27, Prussian	Inguinal hernia, right side	June 8, 1864	—	June 21, 1864	June 24, 1864	July 5, 1864	Apparently cured	He absconded from Hospital; he subsequently went to General Hospital; hernia came down again.
27	S. D. C., aged 55, Hindoo	Ditto, left side ..	June 5, 1864	—	July 20, 1864	July 23, 1864	Sept. 16, 1864	Cure	
28	W. A., aged 23, English	Oblique inguinal hernia, left side	Aug. 12, 1864	6 months	Aug. 26, 1864	Aug. 28, 1864	Oct. 22, 1864	Ditto	
29	S. C., aged 54, Hindoo	Inguinal hernia, right side	Oct. 24, 1864	2 years	Oct. 31, 1864	Nov. 3, 1864	Jan. 10, 1865	Relief	
30	J. M., aged 23, English	Ditto ditto ..	Oct. 12, 1864	3 years	Dec. 7, 1864	Dec. 9, 1864	Jan. 21, 1865	Ditto	
31	W. J. R., English	Oblique inguinal hernia, right side	Dec. 16, 1864	6 years	Dec. 19, 1864	Dec. 21, 1864	Jan. 13, 1865	Cure	
32	J. N. D., aged 44, Hindoo	Ditto ditto ..	Dec. 18, 1864	—	Jan. 9, 1865	Jan. 12, 1865	Feb. 8, 1865	Relief	This man was operated upon for strangulated hernia previously.
33	S. J. S., aged 35, Osmanlau	Ditto ditto ..	Jan. 23, 1865	8 months	Jan. 26, 1865	Jan. 29, 1865	March 18, 1865	Failure	This man was operated upon before in General Hospital.
34	R. M., aged 40, Scotch	Direct inguinal hernia, right side	Feb. 6, 1865	3 months	Feb. 8, 1865	Feb. 11, 1865	March 5, 1865	Cure	On April 17 he wrote a letter stating that the disease did not return.
35	S. L., aged 24, Swiss	Oblique inguinal hernia, right side	Feb. 24, 1865	8 years	Feb. 25, 1865	Feb. 27, 1865	March 30, 1865	Ditto	
36	B. F., aged 45, English	Direct inguinal hernia, right side	March 27, 1865	3 months	March 29, 1865	March 31, 1865	May 3, 1865	Failure	
37	M. M., aged 35, English	Oblique inguinal hernia, right side	April 12, 1865	3 weeks	April 17, 1865	April 19, 1865	Yet in Hospital; wound quite healed	Cure	
38	B. F., aged 45, English	Direct inguinal hernia, left side	March 27, 1865	3 months	May 10, 1865	May 12, 1865	Yet in Hospital	Apparently cured	Still in Hospital.

Abstract.

Cured.	Relieved.	Failed.	Total.	Remarks.
24	6	8	38	Of these, four were operated on a second time; one was operated on twice again; two were operated on after recovery from the operation for strangulated inguinal hernia.

The cases returned as "cured" were put to the severest tests of lifting and carrying weights, climbing up a pole, walking up and down stairs; they were in most cases examined by other Medical men. The cases marked "relieved" were those in which the hernia partially returned, what had been scrotal becoming simple inguinal hernia, and, where the protrusions had been large, rendered much more manageable by a truss. The cases marked "failed" were those in which no benefit was derived. The first operation after this method was performed on April 25, 1862, and is now always practised by myself and my colleague, Professor Partridge.

As to the subsequent history of these patients, I know

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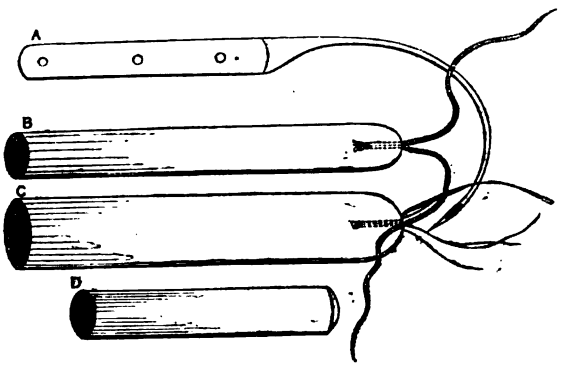
almost nothing, and, consequently, an ignorant as to the permanence of the good results of the operation.

These are the instruments with which I operate. The plugs are made either of ebony or teak wood. B is the plug in ordinary use; C is used in some of the larger cases of scrotal herniæ, where the abdominal ring is very large.



A.—Needle.
B.—Ordinary plug.
C.—Larger plug for large herniæ.
D.—Block to tie the ligatures over.

CASE OF

INTUSSUSCEPTION OF THE CŒCUM AND VERMIFORM APPENDIX.

By R. COOPER TODD, Esq., A.B., T.C.D.,
Surgeon 60th Rifles.

Private William R., aged 30, a man of intemperate habits, was admitted on July 14, complaining of diarrhœa. The disease was at the time prevalent in a mild form among the men, and he had received one or two doses of medicine, from which he thought he experienced relief.

On the morning of admission his countenance was altered, his face was pale, his lips were blanched, and his general aspect that of a man in the first stage of cholera. He had no pain, however, and complained of nausea and of diarrhœa.

A diaphoretic stimulating draught containing an anodyne was administered, from which great relief was experienced, and the patient was put to bed.

The next day he complained of tenesmus, and a feeling of fulness in the rectum; he had been two or three times during the night to the night-chair, but had passed only six ounces of florid blood; there were no clots; no feculent matter in the blood.

The examination of the abdomen by manipulation caused no pain nor revealed any abnormity, and I was quite unable to detect any signs of hæmorrhoids.

The following day some feculent matter was passed. It was, however, consistent in substance, but pale in colour, and with it came another discharge of blood.

On the 17th a large enema of warm water was injected into the rectum, and an enormous discharge of fæces followed. The matter passed was pale, somewhat of the consistence of thick oatmeal porridge, and more than half-filled the night-pan; it also was accompanied by a large flow of blood—I ought rather to say preceded, because the blood was all in the bottom of the vessel, and the fæces were above and not intermixed with the fluid.

During the three following days the symptoms were very mild. He still passed blood, and on two occasions scybala, but he had no pain, sickness of stomach, or other symptoms which led me to suspect the real nature of his disease. Astringents, such as pil. plumbi c opio, with enemata of warm water and mild purgatives, viz., pil. rhei. comp. with taraxiacum, were administered to check the bleeding and bring on a healthy motion from the intestines. The bowels got rid of small portions of hardened fæces, but every effort was accompanied by the usual flow of blood.

On the morning of the 23rd the symptoms were the same. A small piece of hardened matter had come away, and the blood as before. A dose of castor oil and turpentine was given, but was followed by no satisfactory result; the bleeding certainly did not return, but that afternoon vomiting set in, which before had been absent, and on the morning of the 25th July the patient died.

The vomits contained nothing that could be called stercoraceous. There was dark green bile, mixed with milk or beef-tea or wine, or whatever he had swallowed beforehand, but no feculent matter. It would be uninteresting to enter into a lengthened detail of the whole post-mortem appearances; suffice it to say that the stomach and small intestines were free from disease and quite empty. There was, however, a large intussusception of the cœcum. The vermiform appendix with about five or six inches of gut had been swallowed by the lower part of the tube. The appendix was highly congested and partly sphacelated, and its surface was studded with little black dots, which evidently had been the points of rupture whence the blood had flowed. The intestine was unusually pale, but no external signs of mortification existed. Immediately above the seat of strangulation the mucous membrane was raw-looking, and partially resembled that state which is often observed in typhoid fever.

Montreal.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

RESECTION OF ELBOW-JOINT COMPLICATED WITH LUNG DISEASE, AND GREAT PROSTRATION—RECOVERY WITH A USEFUL JOINT.

(Under the care of Mr. HENRY SMITH.)

The following case has great interest from the fact that, at the time the resection was performed, the patient was believed to be suffering from an advanced stage of tuberculous disease, accompanied with great discharge from the elbow-joint, and that, notwithstanding these drawbacks, he made an excellent recovery:—

Alfred M., aged 31, single, slightly strumous appearance, was admitted into King's College Hospital on May 31, 1864, with disease of the left elbow-joint (strumous). States that he always enjoyed good health. In the beginning of February last he first noticed that his elbow-joint became slightly contracted. He does not remember having struck it or hurt it in any way. The joint continued to contract, and commenced to swell and become painful, so that he was compelled to leave off work. He had had for some time previously some tubercular symptoms, for which he had been attending in the out-patient department at King's College Hospital.

He first saw Mr. Smith in April, and he ordered Scott's dressing and a rectangular splint to be applied. In May he again saw Mr. Smith; his elbow-joint was much swelled, and there was profuse suppuration. An incision was made into the joint, and a large quantity of pus let out. On May 27 another incision was made, but very little matter was evacuated. He was then admitted into the Hospital.

On admission, the elbow was examined by probing, and it was found that the lower extremity of the humerus was bare, and the articular surface of the ulna also; there was also a slight erysipelatous blush about the sinuses leading to the joint. There was a great deal of discharge from these sinuses. He had also crepitation in the apex of the right lung, and cavernous breathing in the apex of the left, and was much prostrated.

On July 9, having been placed under chloroform, Mr. Smith excised the elbow-joint, using the H incision, cutting off the bare surfaces of the humerus, the head of the radius, and the olecranon process of the ulna. The wound was then brought together by sutures.

The wound healed very rapidly; the ligatures applied to the vessels came away on the tenth day, and the lung symptoms improved from the day of the operation. He got up on August 1, and a rectangular gutta-percha splint was adapted to the elbow. He left the Hospital, much improved in health, on August 4, and was admitted into Margate Infirmary. There was some slight discharge from the wound at the time he left, but no dead bone could be detected.

He came to King's College Hospital on December 17 perfectly well in health, and with an arm likely to be of service to him, the joint permitting of a considerable amount of motion. He has got quite stout, and states that he has gained more than a stone in weight; there are no symptoms of tuberculisation, and there has not been any further hæmorrhage.

August 10.—He presented himself a few days ago at the Hospital, and was in perfect health, stout, and had considerable mobility in the joint.

CASE OF PERFORATION OF THE DUODENUM—AUTOPSY.

(Under the care of Dr. BEALE.)

[Reported by REVETT C. POWLES, House-Physician.]

S. W., aged 37, a law clerk, admitted into King's College Hospital on February 18. Has drunk freely of beer; has had no serious illness; health good up to three months ago, when he began to suffer from nausea and sickness after meals; also much troubled with flatulence, and about the same time had severe pain in the right hypochodrium. Two days ago he was suddenly seized with pain in the pit of the stomach of so great severity as to cause him to shriek out. He was a thin man, with a sallow complexion. He complained of dull pain in the right lumbar and iliac regions; suffered from nausea and vomiting immediately after taking solid food; skin dry; urine scanty, high coloured; bowels constipated; heart and lung sounds natural. While in the Hospital there was no change in the symptoms, and he appeared to be suffering from hypochondriasis and cirrhosis of the liver. He died very suddenly seven days after admission.

Post-mortem Examination.—Thorax: Left lung collapsed and very pale; much fluid in left pleural cavity. Right lung congested, dark red. Heart natural. Abdomen: Over right lobe of liver and the right half of peritoneum a firm, tough layer of lymph; this deposit of lymph was limited by the median line; the intestines on right side were in places adherent to one another; there were evidences of suppuration beneath the layer of lymph over the liver, and which seemed to have involved to some extent the hepatic tissue itself; the surface had an honeycomb appearance. In the posterior wall of the duodenum, close to the pylorus, was a perforation of the size of a fourpenny-piece with pale, thickened margins; the duodenum was not adherent.

MIDDLESEX HOSPITAL.

CASE OF LARYNGITIS, WITH ŒDEMA OF GLOTTIS—LARYNGOTOMY—RECOVERY.

(Under the care of Mr. HULKE.)

THE following case forcibly illustrates the efficiency of Sylvester's method of artificial respiration. The extreme exhaustion of the patient induced Mr. Hulke to prefer laryngotomy as being generally attended with less bleeding; here, however, the bleeding was very profuse. The patient cannot discontinue the tube. Mr. Hulke thinks this more frequent after laryngotomy than after tracheotomy, and attributes it in part to the disturbance of the mechanism of the larynx by the tube.

A woman, aged about 26, while under Mr. Moore's treatment, in Regent Ward, for disease of the uterus, was seized with acute laryngitis. At half-past 11 o'clock on the fourth night Dr. Thompson sent for Mr. Hulke, in Mr. Moore's absence, to consult respecting the necessity of bronchotomy. She lay speechless, semi-conscious, making shallow, feeble, hissing inspirations, at long intervals. Scarcely any air entered the lungs. Her pulse, about 120 per minute, could hardly be felt. Her features were pallid and dusky. Laryngotomy was rapidly performed with a scalpel. Black blood welled up very profusely for several seconds on dividing the crico-thyroid membrane, but it ceased to flow on putting in the tube. Much viscid mucus and a little blood were immediately coughed out from the trachea. She became pulseless, and ceased to breathe. A few of Sylvester's acts were followed by a few weak spontaneous inspirations. Natural respiration again ceased, and Sylvester's method was again successful. This happened thirty times between twelve and four o'clock a.m., when natural respiration was permanently reinstated. Directly after the insertion of the tube in the larynx, beef tea and brandy were thrown into the rectum; and this was repeated hourly. At 8 o'clock a.m., respiration easy; pulse stronger, 120. She had swallowed a few teaspoonfuls of brandy and water. The supervention of pneumonia made her recovery doubtful for several days, but she rallied under the free exhibition of stimulants. The tube was removed on several occasions, but each time, after a few hours, when the opening had become contracted, her dyspnœa was so great that it had to be resumed, and she is still obliged to wear it.

COLLOID ENCHONDROMA IN THE PAROTID REGION.

(Under the care of Mr. HULKE.)

In common with the other glands connected with the buccal mucous membrane, the parotid is often the seat of cartilaginous tumours. These probably arise in the interfollicular connective tissue, and not in the intrinsic tissues of the gland. The corpuscular and intercorpuscular elements of the cartilage vary remarkably in figure and consistence in different tumours, and even in different parts of the same tumour.

A thin, middle-aged woman was admitted into Bird Ward on March 22 with a prominent oval tumour in the right parotid region of the size of a hen's egg. Its surface was tuberous. In parts it felt solid, while in other parts it had all the elasticity of fluctuation. It reached from the angle of the jaw to the zygoma, and from the anterior border of the masseter to the ear. It could be slid up and down, but not be moved from before backwards. The skin was free, and the movements of the jaw were little hampered. An enchondromatous tumour, originating superficially in the parotid, was diagnosed.

The tumour was dissected out with very little hæmorrhage. Some large branches of the portio dura were turned aside and saved. For a few days she was troubled with spasms in the cheek. An attack of erysipelas retarded her recovery. She left the Hospital on April 3, convalescent.

The tumour exhibited in different parts every gradation from firm, translucent white to soft, transparent, colloid cartilage. The latter kind predominated. Histologically it consisted of an abundant structureless matrix intersected by stiff fibres, and numerous branched cells resembling connective tissue corpuscles. In the firmer portions round and roundly oval cells multiplying by fission of nucleus predominated.

MYXOMA IN CHEEK.

(Under the care of Mr. HULKE.)

The small glands beneath the buccal mucous membrane are not unfrequently the seat of new growths. These are sometimes fibrous, often cartilaginous, and less frequently consist, as in the present instance, of a soft web of connective tissue web, filled with mucine. In this respect the myxomata differ from other tumours of glandular origin in which mucine is lodged in follicles. The glands beneath the mucous membrane lining the lips are perhaps more often diseased than those at other parts of the buccal membrane, and the tumours originating in them, sometimes reaching the size of an almond, are often flattened by compression against the jaws, whilst those in the cheeks are frequently globular.

The patient, a girl aged 8 years, had a firm, globular, painless knot, of the size of a marble, in her left cheek, opposite the second lower molar tooth, immediately under the buccal mucous membrane; the skin was moveable on it. It was dissected out through the mouth. On the second day there was severe hæmorrhage, probably from the facial artery. It was stopped by ice and pressure, and did not recur. The wound suppurated and cicatrised in ten days.

The minute structure of the tumour showed a web of branched cells, the meshes of which were filled with a clear viscid mucus.

CASE OF FRACTURE OF THE FEMUR TREATED WITH SHORT SPLINTS AND A WEIGHT.

(Under the care of Mr. HULKE.)

Fractures of the femur are now so commonly treated in London Hospitals with the long, straight, outside splint, that the old plan of short splints and the limb placed on its outer side is seldom seen. In the following case the long splint was inapplicable:—

A tipsy tailor, whose right knee was contracted by former disease of the joint, fell in a scuffle and broke his femur about three inches above its lower end. The thigh was one and a-half inches short, which was due partly to overriding of the fragments, and partly to arrested growth. Owing to the angle which the leg formed with the thigh a Liston's splint could not be used. Extension was made by a 7 lbs. weight hanging from a cord attached by a broad loop of plaister to the knee and lower third of thigh, and carried out at the foot of the bed over a pulley. A perineal band, the ends of which were tied to the head of the bed, served for counter-extension, and the fracture was fixed with four short splints. Firm union in a good line, with very slight over-riding took place.

QUACK MEDICINES.—It appears, from a return just published that the Chancellor of the Exchequer has received the enormous sum of £55,333 0s. 4½d. for duty on quack medicines.

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Medical Times and Gazette.

SATURDAY, AUGUST 19.

INFANTICIDE.

The insight afforded by the trial of the woman Winsor into what it is to be feared constitutes an organised system of infanticide has rendered the repression of that crime the most prominent among the social problems of the day. During the next session of Parliament some proposal of more or less hopeful character will doubtless be made for the amendment of the law on the subject, in which there is certainly room for improvement. Mr. Justice Willes, who is one of the acutest thinkers on the judicial bench, in his recent charge to the grand jury at Wells, made some observations on this head which deserve attention. He considers the present law defective in more than one respect. By the statute which provides against the offence of concealing the birth of a child, the secret disposition of the dead body is made the gist of the crime, so that a woman may wilfully let the time for her delivery arrive without preparing clothes or making any other provision, and then escape all penal consequences. This Mr. Justice Willes declares to be a defective state of the law, and rightly, for the mere secret disposition of the body of a child which has come by its death by natural means is not in itself an offence fraught with serious consequences to society; whereas the omitting those preparations which, while they must lead to the discovery of the woman's pregnancy, are absolutely necessary for the continuance of the child's existence after birth, shows an intention not to rear the child, and constitutes the moral essence of the offence of concealment. The wilful omission by a pregnant woman to make proper provision for her future offspring amounts morally to a criminal neglect, and ought to be punished as such.

The working of the present law is well illustrated by the case of Regina *v.* Snell (2 Mos. and R., 44), where the prisoner was stopped going across a yard, in the direction of a privy, with a bundle, which, on examination, was found to be a cloth sewn up, containing the body of a child; it was held that the prisoner could not be convicted of concealing the birth, the offence not having been completed. The law of Scotland is somewhat better. Under that law, if a woman conceals her pregnancy and the birth of a child, and the concealment continues down to the death of the latter, she can be imprisoned for a period not exceeding two years, without proving any disposition of the body.

The instances in which women are found guilty of concealment are mostly those in which the child has been wilfully destroyed, but the jury, actuated either by extenuating circumstances in the case before them or by the unwillingness generally felt to convict on the capital charge where the victim is a new-born infant, avail themselves of the opportunity given them by the law, of finding the mother guilty of the lesser offence. Indeed, in cases of infanticide a conviction for murder rarely now takes place—an execution of the full sentence of the law never. Thus the only penalty which is practically attached to child murder is imprisonment for two years with hard labour, the punishment indicated for concealment of birth. This is a grossly inadequate expiation to society of a crime so foul as infanticide, and if no more radical change be made, the maximum punishment for concealment should be increased. By reason of another defect in the law, the jury have almost invariably the opportunity of acquitting the prisoner of the greater offence, without even stretching their consciences to the commission of an amiable perjury. The law requires from the Medical witnesses a proof which it is not in their power to give. They are required, in order to support a conviction, to state that the whole body of the child had come from that of the mother before death took place. The crime of infanticide is almost always committed so soon after birth that the witnesses can only say whether the child has lived by ascertaining whether it has breathed; but it is held that the fact of the child having breathed is not a decisive proof that it was born alive, as it might have breathed and yet died before complete birth. Hence, though the body of a child may bear the clearest marks of violence, it is impossible to ensure a conviction, either for murder or manslaughter, on account of this loophole through which the jury can always escape—if, indeed, they are not expressly directed by the judge to acquit the prisoner on the ground of there being no evidence of live birth.

With regard to the nature of the amendments which the law requires, we do not know that any suggestions can be offered of a more appropriate character than those given by Dr. Guy in his "Principles of Forensic Medicine:"—"Let the law be so framed as to exclude as much as possible all appeal to scientific authority. If the child-murderer is to be punished, all question as to the child being *born alive* must be done away with; and whenever there are found on the body of an infant marks of violence sufficient to account for its death, which marks of violence could not be produced in the natural progress of the labour, or by any accident occurring afterwards," or (a lawyer would have added) by any one else than the person accused, let that person be punished as guilty of murder. "On the other hand," continues Dr. Guy, as, in the absence of all external injury, it is impossible to prove that a child has been murdered, and yet it may be easy to show that the female has been guilty of criminal negligence, let that criminal negligence be punished according to its degree. . . . . Let the concealment of birth be punished as now, by imprisonment for such a time as the law sees fit. Another omission—that of providing proper clothing and shelter for the child—at present escapes punishment altogether, and certainly demands a separate enactment."

Mr. Justice Willes, at the conclusion of his charge, stated his opinion that an administrative remedy might be more effectual than punishment, because it might remove the inducement to commit offences of this description. What the nature of the proposed administrative remedy is, the learned judge does not say; but we cannot suppose that he alludes to the promiscuous and secret admission of new-born infants into Foundling Hospitals,—a remedy long since proved to be worse than the disease, and accordingly abandoned, but now loudly demanded by a few enthusiastic people who have forgotten the teachings of history. Mr. Justice Willes states the law to be defective in not annexing a penalty to the offence of concealing the birth of a living child, and this concealment is exactly what every female practises who consigns her infant to the turning-box of a Foundling Hospital. Apart from the objections to such institutions on the ground of their encouragement of immorality and improvidence, when it is considered that the mortality in them varies from 70 to 90 per cent., the act of taking a child to the Foundling Hospital will not appear in a very different light from the simple exposition of

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it; and it must be seen that those who are now clamouring for the erection of large Foundling Hospitals in London are, to say the least, mistaken.

ROUGH NOTES ON SYPHILIS.—No. V.

SUPPURATING BUBO.

Acknowledging the intimate connexion of this with the morbid process induced by the soft sore ("chancre mou" of Ricord), and fully believing that a suppurating bubo forms no *necessary part at all in the history of true syphilis*, we are, nevertheless, certain that there are exceptions to the rule.

The causes of such suppuration may be referred to one of three heads:—1st, Conditions of constitution—*e.g*, strumous and lymphatic subjects; 2nd, accidental causes of irritation; and in the case of sailors and soldiers we have not far to go to seek these; 3rd, exposure to multiple sources of infection, by which sores of different sores may co-exist upon the same subject, or a gonorrhœa be present at the same time.

Dr. Marston's impression is, that if the infecting sore be made to inflame and suppurate, by causes of irritation and uncleanness, a pus inoculation may occasionally affect the lymphatics in addition to the syphilitic one, just as inflammation and abscess of the lymphatics may ensue from a suppurating or an irritated sore on an extremity. A certain amount of suppuration may also appear in a syphilitic bubo at a later date, and be coincident with the accession of secondary symptoms.

When suppuration ensues over one of a chain of inguinal glands, it generally presents some well-defined differences from the bubo of the soft, non-infecting sore. It is preceded by an indolent and chronic inflammation; the pus is not laudable, but sero-purulent in appearance, and *the fluid is often absorbed after fluctation has been determined*. The gland at the bottom of the abscess is a hard kernel, not much enlarged nor ulcerating as a rule, and the wound is generally easily healed. In the bubo which accompanies the soft sore, or gonorrhœa, one gland is commonly only affected, the inflammation is more and more acute, and the abscess is larger—more pus, and this more creamy; the gland is enlarged and suppurating, and the ulcer is much more difficult to heal. We may compare this bubo with a billiard ball (gland) loose in a pocket (the surrounding integuments).

Buboes connected with infecting sores.

1. By far the most common,—glands enlarged in a chain, separately and symmetricallly, without any suppuration.

This enlargement first appears at the nearest gland, spreading onwards through the chain. This adenitis may commence at the date of induration in the chancre, follow it, or, in some few cases, it may not appear until after healing of the chancre; or this state of the glands may not be *observed* until the date of the secondary stage.(a)

When chancres are seated on the skin of the dorsum of penis, there may be an indurated state of lymphatics of that organ, and the inguinal glands may not enlarge at all, or not until subsequently.

2. *Uncommon Cases.*—The presence of suppuration over one gland with enlargement of the remainder; if early, from struma, exercise, &c.; if late, then the suppuration is very slight in amount as a rule.

3. One gland in one, or, generally, one in each groin enlarged out of all proportion to the remainder; or one or two glands on each side only enlarged.

When the patient has another affection immediately antecedent to, or co-existing with the infecting chancre, then, we may have a specific suppurating bubo in the groin, or a sympathetic bubo; and the ulcers may long remain unhealthy and open, either from some defect in the constitution, or (as we strongly believe) the ulceration may be rendered chronic and very difficult of cure from the specific action of the syphilitic virus in the system itself. We have seen more than once a chancre transformed into a mucous patch or tubercle, and the same with ulcers elsewhere.

It is most important to exclude cases of this kind:—A patient gets an indurated sore, it heals by treatment, and he is discharged. He shortly after contracts another venereal affection (gonorrhœa or soft sore say): A suppurating bubo ensues, and manifestions of secondary syphilis appear directly, or soon afterwards. Now, the constitutional symptoms here belong to the first affection, and not to the venereal disease which they immediately followed.

SOURCES OF ERROR ABOUT ENLARGED INGUINAL GLANDS AS A SYMPTOM OF INFECTING SYPHILIS SORE.

1. Glands enlarged in a chain from a prior infection. Examine and question the patient.

2. The presence of a skin disease on scrotum, thighs, etc. (lichen, prurigo, eczema, or scabies). The glands may enlarge from irritation, etc, particularly where there is much pruritus present.

3. Strumous or lymphatic subjects.—In these cases, however, the glands are not generally enlarged in a chain and symmetrically; but one or more glands are swollen, and slow inflammation with suppuration may or may not ensue. If the enlargement has been rapid and recent, it can often be traced to some unwonted exertion, etc.

(a) Induration of the lymphatic glands generally appears within the first five or six days after induration of the chancre, and almost invariably within one month of it, according to our experience.

IS ETHNOLOGY A SCIENCE?

The foundation-stone of the science of ethnology has yet to be laid. A large quantity of rough material lies ready at hand, but it is still in a state of chaotic confusion. Here and there some prominent facts arrange themselves into the semblance of an organised structure, but on nearer inspection they prove to be misplaced and to require thorough readjustment before they can form part of the permanent edifice.

The most elementary ethnological questions are still unsettled. One party insists upon the unity of the human race; another asserts the universality of its origin. One party looks upon man as an ape possessing intellect far exceeding in degree, but not in kind, that of his brother apes; another believes him to be something apart, having, it is true, a corporeal resemblance to some of the lower animals, but separated from them by possessing another nature of which no analogue is found in the brute creation. Some propose to classify the different races of man according to their anatomy, some according to their language, some according to their intellectual capacities. We are told, on the one hand, that race is being constantly modified by external influences, by climate, by the progress of civilisation, by intermarriage. It is no less confidently asserted, on the other hand, that there is a constant tendency to the recurrence of types of races, the hybrids rapidly becoming extinct.

It is not surprising that ethnology should be so little advanced. It can only make progress by gathering together the results arrived at in other sciences. It must wait upon anatomy, physiology, philology, geology, and moral philosophy. It must laboriously collect information from the untutored savages of Central Australia, from the jealous inhabitants of China and Japan, from the treacherous Malay, and from the wild Indian of the far West. It must revise and correct this information by the light of more authentic history, and then, giving to each fact its due importance, it must weave a theory whose stability will be enduring because it is true.

The Ethnological Society of London has just published the third volume of the new series of its *Transactions*.(b) It contains twenty-seven papers, most of them written by men whose

(b) Transactions of the Ethnological Society of London. New Series. Vol. III. London: Murray. Pp. 417.

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reputation is already established as courageous explorers, deep thinkers, or scientific pioneers. Many of the papers are the history of personal experience in savage lands. We are familiarised with the habits and customs of the Central Africans by Captains Grant and Burton; and under the guidance of Mr. Oldfield, we sympathise with the hopes and fears of the aborigines of Australia. Mr. Oldfield's descriptions are most vivid. In a long and exhaustive paper, he never allows the attention to flag for a moment. One illustration follows another. He permits us to look upon the Australian in all his different relations. We see him at war and at peace; we trace him on the hunting field, where he is too often unsuccessful, and in the bosom of his family, where he too often regales himself upon one of his own olive branches. Mr. Wallace describes the varieties of man found in the Malay Archipelago; while the Père Bourien depicts the wild tribes found in the interior of the Malay Peninsula. Mr. Hutchinson and Mr. Markham make us acquainted with many of the Indians of South America, and interesting scraps of information are sent from China and Ceylon.

Another class of papers contains, not so much the record of personal experience as deductions from facts previously ascertained. One of the most interesting of these papers is by Mr. Crawford, whose versatility and industry are well exemplified in the volume before us. Mr. Crawford's paper is entitled "On the Supposed Infecundity of Human Hybrids or Crosses," and in it he shows conclusively that this infecundity is entirely supposititous. A convincing proof of the fertility of human hybrids is furnished by the history of the colonisation of Pitcairn's Island. The crew of the ship *Bounty* mutinied: they took on board some Tahitian women, and they settled in Pitcairn's Island. In 1793 the colony consisted of nine Englishmen and thirteen Tahitian women, besides six Tahitian men, who were soon killed off. In 1862 the colony had grown from twenty-two individuals to 268—that is to say, in sixty-nine years the colony had more than multiplied itself by twelve, although no new blood had been introduced into it.

In spite of the disrepute into which Phrenology has fallen from the abuses of its professors, the anatomical arrangement of the skull and encephalon still remains the most promising basis of ethnological classification.

We may now take it for granted that there is no distinguishing structural peculiarity between the brain of man and that of the anthropoid ape. The posterior lobe, the posterior cornu, and the hippocampus minor, are found in each; and yet there is an immense difference between the intellectual power of a human brain, even of the lowest capacity, and of the most highly developed brain of the monkey. There is a very considerable difference between the size and weight of human and simian brains. The cranial capacity of the gorilla varies from twenty-eight to thirty-four cubic inches; the lowest human cranium which has been measured was sixty-three cubic inches, while the Caucasian race ranges from 92 to 114 cubic inches. But this difference, enormous as it is, by no means expresses the real intellectual superiority of man. We may agree with Mr. Beale, that in the anterior lobes of the brain "are seated the intellectual faculties, that the middle and posterior lobes of the brain give us the intuitive feelings, sentiments, and affections, and that at the base of the brain, with the cerebellum, are developed those animal appetites, propensities, and powers which ally us to the brute creation." In the ape tribes the brain is wanting in the reasoning and sentimental regions; it is deficient in those "frontal, towering, and backwardly-extending convolutions the seat of the moral and religious intuitions," and its bulk is composed of that part of the encephalon which is the seat of the mere animal passions and propensities.

The cranium is essentially a mould of its contents, and thus it is that an accurate appreciation of intellectual capacity is, within certain limits, to be arrived at by mere inspection of the skull. It would be a thankless task to collect and chatter over all the different classifications of skulls which the ingenuity of man has contrived. Skulls of all types may be met with in every nation, but it is an undoubted fact that in one nation one form of skull is the rule, while every other is an exception; while in another that which was the exception becomes the rule and the rule the exception. The Caucasian, the Mongolian, and the Negro skulls are perhaps those which are most widely accepted as types. The former is marked by the breadth and height of the anterior part, the breadth as well as height of the vertex. The Mongolian is distinguished by breadth between ear and ear, and a vertex tapering to a point. The negro type is a long, narrow head, and low forehead, with prominent face.

It is an undoubted fact that there is a wide difference in the intellectual power of nations who present typical specimens of these three varieties of crania. If we compare the Chinese with ourselves we have a good example of the differences between a Mongolian and a Caucasian race. The Chinese outstrip us in mechanical ingenuity; they are far ahead of us in many branches of art; they invented the compass and they discovered gunpowder. They are, however, entirely destitute of the higher attributes of intellect. They never raise an art into a science. It is even doubtful whether they are capable of comprehending an abstract idea. As Mr. Beale puts it; they know as well as we do what a *white* substance is, but they are unable to grasp the abstract idea of *whiteness*.

The negro race is still lower. The negro is capable of a certain amount of education. He is docile and affectionate, but in order to give him intellectual activity, it is absolutely necessary to destroy the purity of the breed. It is physically impossible that there should be a negro Shakespere. We are justified in saying that in a typical negro brain there is not room for the intellect of Shakespere.

We do not deny that a man with a very great intellect may be born of a race which is not Caucasian. Confucius was a Mongolian, but it is very doubtful whether he was a typical Mongolian. We assert, however, that a man has, *cæteris paribus*, a far better chance of being a genius if his head be formed after the purest Caucasian model, than if it be cast in any other mould.

We trust that ethnologists will bestir themselves and seek to arrive at definite conclusions, instead of leading the inquirer astray and allowing him to lose himself in the shifting sands of individual opinions.

THE WEEK.

JOTTINGS OF NEWS—MR. SPRAGUE AGAIN—PROPOSED FOUNDLING HOSPITAL—THE FIVEFOLD MURDER—RAILWAY TEMPTATIONS TO SURGEONS.

Our columns are so filled with the Report of the British Medical Association that we are obliged to condense other matters into the smallest possible compass. Amongst items of news, we notice that Mr. Sprague, the Surgeon who has just been acquitted of the attempt to poison a whole family by means of a rabbit pie, now finds himself charged with a rape. He became assistant to a Surgeon in the City of London, and in his absence is accused of having stupefied a sick maid-servant with brandy, and (as is suggested) with chloroform, and then of having committed an indecent assault. His conduct seems to have been singular, to say the least, but we should be sorry to think that a man could be convicted of rape on no better evidence than has been brought forward in this case.

The insane attempt to set up a Foundling Hospital still finds advocates, as is shown by the subjoined advertisement from the *Times*:—

"Infanticide.—Earnest persons convinced that this is a national sin, demanding a remedy at all hazards, and desirous

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to aid in establishing a Foundling Hospital on Continental principles for English foundlings, and so to stay the crime of murder, are invited to call upon or write to the undersigned, to whom also cheques, post-office orders, and stamps may be sent for preliminary expenses. A public meeting will be held shortly. Friends are requested to state if they will kindly serve on committee.—Wm. Henry Clarke, LL.D., Hon. Sec. *pro tem.* Temporary offices, 90, Chancery-lane, W.C."

We will not repeat what we said last week about such a lunatic scheme, but may call attention to one that is much better—viz., a "Magdalene Convalescent Home" for the reception of mothers and infants till the former are restored to health and capability of occupation. If there be penitent mothers, willing to undergo a course of religious discipline, and to suckle their babes and save their lives, by all means let them have the opportunity. But it is very clear that the more respectable and well-conducted a girl has been before her "misfortune" the less likely will she be to enter such a refuge. The moral offence, if committed with a lover under promise of marriage, is unluckily hardly regarded as any offence at all by English-women beneath a certain rank in life. There is no influence of "public opinion" against it; it is taken by mothers, aunts, and companions, as an indiscretion, or a weakness, but an amiable one; and really as quite a venial offence. As for the so-called *στόργη*, or "natural affection" for a babe, it is a mere figment of the imagination. Some women, under some circumstances—*i.e.*, married women, pretty well off—without doubt feel great affection for their infants. But the very fact of infanticide, of the customs of desertion and exposure, the monstrous proposition for erecting foundling Hospitals, shows that it does not exist as a rule. There lives hardly a woman who, if her babe were illegitimate and her own reputation at stake, would not, like Lady Macbeth,—

> "Pluck out her nipple from his boneless gums
> And dash his brains out,"

rather than lose her character. In the case of a governess, respectable milliner, or domestic servant, the pregnancy must be hidden, and the babe disposed of somehow. That which is the cause of child murder amongst the respectable portion of unmarried mothers is *shame* and fear of degradation, and no institution can remedy this.

Our readers need not be told of Forward, *alias* Southey, an adventurer who has wound up a career of gambling and adultery with the murder of his own wife and of four innocent children. It will be curious to observe whether any of the alienists who desired to prove the murderer Townley mad, and therefore irresponsible, will do the same for Forward, who on the same kind of evidence may be found much madder.

The case of Scholefield *v.* the North-Western Railway Company, tried at Leeds on the 12th and 14th before Mr. Justice Blackburn, ought not to pass without notice. It fully illustrates what we have over and over again asserted, that it is the duty of members of the Medical Profession to treat the sick, and not to be agents for the protection of the interests of railway companies, or for the assessment of damages. In every case of railway accident, as in every other case, the patient ought to be able to look up to his Medical attendant as his kindest and best friend, and not as an *employé* of a railway company ready to strike a keen bargain. Every Surgeon should be on his guard against fraud, and not connive at any attempt to exaggerate the consequences of injury or to extort too heavy damages. But it is a slur on the character of the whole Profession that railway companies should think it necessary to employ Surgeons of their own to see fair play, or that these Surgeons should act as if retained to protect the interests of the companies against the legitimate claims of those maimed by accidents.

It is interesting to notice that Jones, the plaintiff in the cause of Jones *v.* Fay, has died; and so has borne testimony to the truth of his case.

A MEMORIAL TO JENNER.

No name can be mentioned of which our Profession ought to so proud as that of Jenner. His great discovery reduced the deaths from small-pox in Great Britain from 30,000 yearly, in a population of only ten millions, to less than 10,000 in a population three times as large. He has been the means, through his successors, of saving in every European generation more lives than were sacrificed by the sword of Napoleon; and we, his successors, reap the reward of his labours in some share of the respect and honour which are given—scantily enough, it is true,—to all who are really useful to their fellow men. It becomes, then, a duty, as it must be a pleasure, for all of us to assist in perpetuating the memory of a man to whom we all owe so much; and we are sure that the advertisement which appears in our columns this day, making known that a memorial window is to be raised to Jenner in the church of his native place, will call forth general support. The names of the committee are sufficient guarantee that the money collected will be well expended, and we therefore recommend the matter most cordially to the attention of our readers.

FROM ABROAD.—MM. GUINIER AND KRISHABER ON THE MECHANISM OF DEGLUTITION—PHYSIOLOGICAL ACTION OF CARBONIC ACID.

Some time since we noticed some new views brought forward by M. Guinier, of Montpellier, on the subject of the mechanism of deglutition. From the experiments performed upon himself he concluded that the alimentary bolus passes directly on to the floor formed by the contraction of the glottis, and that liquids in the form of gargarisms come in contact beneath the epiglottis with the intra-laryngeal mucous folds and the cordæ vocales. The simple contraction of these latter suffice for the prevention of the passage of a foreign body into the trachea. This contraction, moreover, is automatic, and connected by reflex action with the sensation produced by the contact of the foreign body with the mucous membrane of the supra-glottal regions, and especially the epiglottis, which in this way would play the part of a special sensitive organ.

M. Krishaber, on the contrary, has been demonstrating on his own person, before a Committee of the Academy of Sciences, that the alimentary bolus may be tolerated not only within the larynx but within the trachea itself. Placing himself before the laryngeal mirror, strongly illuminated by a lamp, he exhibits his larynx very distinctly as far as the cordæ vocales. Having chewed a piece of bread, he passes this with his finger along the posterior surface of the epiglottis to the cordæ vocales, and while he is making a deep aspiration the bolus falls into the trachea. Without removing the mirror, and without the slightest attempt at coughing, he makes a sudden expiratory effort, and the bolus is expelled from the trachea into the larynx, and thence into the mouth. M. Krishaber has convinced himself of the harmlessness of all foreign bodies in the trachea, providing they be of a certain temperature, soft, and adherent to the mucous membrane of the air passages. It is entirely different with respect to hard bodies, which, on the contrary, excite the extremest irritation in this mucous membrane. Scarcely had M. Krishaber introduced a catheter into the larynx, hardly touching the arytenoid cartilages, when a violent spasmodic cough was brought on. When the cordæ vocales were touched a second time the cough became convulsive. He is of opinion that the presence of a foreign body in the trachea, a bean for example, becomes especially dangerous by its exciting cough every time it, raised by the expiratory column of air, strikes against the lower surface of the cordæ vocales. A pea, cherry-stone, or body of a similar character does not induce direct asphyxia by obstruction of the air-tube, for an alimentary bolus of far greater calibre will remain there with impunity. These hard

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foreign bodies induce, by the irritation they cause, most alarming nervous accidents, and a violent congestion of the irritated parts, and, especially, they render respiration impossible during the cough, which persists until the foreign body is removed. The Practitioner, then, need not be alarmed at the presence in the trachea of a soft body capable of adhering to the mucous membrane, but he must remove a hard body, however small it may be, with the utmost possible promptitude. In answer to the question why a small portion of soft, warm, adherent food falling into the larynx excites violent coughing, M. Krishaber replies that we do not cough every time that we "swallow the wrong way," but only in the absence of some of the above-mentioned conditions in the morsel. When these are present, the portion of food gaining admission is as easily supported as is the sputum, which, in fact, traverses the whole length of the air-passages to the mouth with impunity.

M. Demarquay, believing that, amidst the contradictory statements which have been published concerning the physiological action of carbonic acid, further inquiry was desirable, instituted numerous experiments upon animals and upon himself, as well as upon several of his pupils, his object being more especially to ascertain the amount of the gas which may be contained in an artificial atmosphere without this becoming irrespirable and poisonous, and to examine the degree of anæsthesia which may be obtained by its agency. The following are the conclusions of the memoir which he has just presented to the Académie des Sciences :—1. Carbonic acid exerts a stimulant action upon the surface of the body, which is marked in proportion as the skin is more delicate and endowed with greater sensibility. The regions of the penis and perineum are more especially sensitive. 2. Analgesia, "when it can be obtained," is only produced by means of a continuous jet of the gas playing upon a very limited portion of the body. 3. Its action on the senses is of the same character as that exerted upon the external integument, inducing, consequently, vivid excitement, sensorial exaltation, or nervous perturbation,—phenomena which are generally only fugacious. 4. It exerts a stimulant action on the alimentary canal, which is accompanied by a slight nervo-vascular irritation. 5. When injected into the veins it is absorbed in large quantities, and eliminated with rapidity, when the operation is conducted with proper precautions; or it may act mechanically by producing considerable distension of the cavities of the heart, and consequent death. 6. Introduced into the economy by the respiratory passages, carbonic acid does not give rise to those toxical accidents which have been so often attributed to it. In fact, in the dose of $\frac{1}{3}$, or even $\frac{1}{4}$ to $\frac{2}{3}$ or $\frac{3}{4}$ of atmospheric air or oxygen, mammalia can breathe it for a long period without seeming to be seriously incommoded. In man, some disturbance, and that of a slight character, is produced only at the end of a period, which varies according to the amount of individual susceptibility, but which is generally sufficiently prolonged to admit of the production of a therapeutical agency, if the employment of the gas were indicated. The lesions found after death, whether in man or animals, do not resemble those which are caused by a toxical agent with which carbonic acid has been often confounded, viz., oxide of carbon. 7. Most of the accidents produced by the vapour of carbon, confined air, the fumes of fermentation vats, wrongly attributed to carbonic acid, should in great part be imputed to carbonic oxide, sulphuretted hydrogen, alcoholic vapours, or other little known gases which originate under such circumstances. 8. Carbonic acid is simply irrespirable, and although it is not so in the same manner as azote or hydrogen, it is not for that reason more hurtful than these gases. Respiration essentially consisting in an interchange of gas between the blood and the air, and such interchange not being possible, as proved by the laws of physics, except between gases of different natures, it is obvious that carbonic acid when respired in the pure state presents a material obstacle to the pulmonary function, and consequently induces asphyxia. Azote and hydrogen, although unsuitable for playing the part of a vital agent in hæmatosis, and, in fact, irrespirable, are so in a less degree than carbonic acid, because different in their nature from the gas to be eliminated, the interchange can be effected during some instants. 9. The very positive phenomena of anæsthesia obtainable by the agency of this gas in many animals do not seem to be producible in man without danger of asphyxia. Moreover, supposing that anæsthesia thus produced was sufficiently complete, it would still be too fugacious to be of utility for Surgical operations.

THE

THIRTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(*From our Special Correspondent.*)

I HAVE to go back somewhat from the date of my last letter, which closed with Professor Syme's address, in order to give a correct record of all the events that transpired at the meeting. For this purpose, I must move the hand of the clock to three of the afternoon of Wednesday, August 2nd, when Dr. Stokes having concluded his address, and a vote of thanks to him, moved by Dr. Sibson, of London, and seconded by Dr. Slack, of Leamington, having been carried by acclamation, formal business relating to affairs of the Association was resumed.

THE PLACE OF MEETING FOR 1866.

SIR CHARLES HASTINGS said that many urgent invitations had been received from Chester for the Society to hold its next annual meeting there. He had therefore great pleasure in proposing that the meeting for 1866 be held in Chester, and that Dr. Edward Waters, of that city, be elected President for the year.

Dr. FLEMING, of Birmingham, seconded the motion, which was carried amidst warm applause.

Dr. WATERS, who was present, returned thanks for the distinguished honour they had been pleased to confer upon him. He could assure them they would be heartily welcomed at Chester by himself and his Professional brethren, as well as by the gentry of the town. Everything would be done to make them comfortable and to render the meeting most agreeable. At the same time, he feared they would not obtain there such a commodious building for the meetings and such facilities as they enjoyed in Leamington. In conclusion, he promised he would spare no efforts to make the meeting successful. (Cheers.)

THE JOURNAL.

"1. That the continued publication of the *British Medical Journal* is unnecessary and inexpedient; and that it may with advantage be replaced by a journal that shall not absorb so large a proportion of the income of the Association, and that shall be directed with a view to increase knowledge, and to promote better legislation, on questions of public hygiene and of State Medicine.

"2. That a Committee of five members of the Association be appointed to consider the best way of giving practical effect to the foregoing resolution, and to report to the present meeting."

The above resolution, notice of which had been given in due form, was moved by Mr. CARTER, of Stroud. As a severe contest was expected on this motion, the meeting was crowded, and the excitement was rather more than warm. On the motion thus introduced Mr. Carter spoke for full forty minutes, undismayed alike by the opposing front that stared him in the face and by the hostile sounds and interruptions with which he was assailed. As a speaker Mr. Carter is remarkable and, in a sense, powerful. He has no impulse, and fails altogether—if, indeed, he ever tries—to awaken a breath of enthusiasm; but his voice is good, his words ready, and his delivery without a trip or grammatical fault. At first I thought he had learned his part by heart; but the skilful manner with which he blended current events with past events was so accurate that, whatever preparation he had gone through, it was evidently not essential to the effort. His style of oratory is nearly identical with that of Huxley: he neither rises nor falls, and is wanting in all demonstration. Hamlet's advice to suit the action to the word were lost on him; for he

ignores action, even to the raising of a finger or the stir of a facial muscle. His words are cold as ice; yet by the friction they excite they generate warmth. As a listener, I tried their effect by all modes of trial: with eyes shut and eyes open; with forced attention, and with an effort to think of something else; but the effect was the same; the piercing through and through was as steady as clockwork, tick, tick, tick, the subject changing constantly, but the motion not at all; still tick, tick, and tick.

I shall not attempt to report his speech, for nothing but *verbatim* accuracy would give a correct idea of it; and even then a carter, or at least a *wag*goner, who was pat at imitation, would be required to read it aloud; but the leading points were as follow. He began by disclaiming any and all connection with the *Lancet*, and by asserting that he had no feelings of personal hostility against the editor of the journal, Dr. Markham. As regards the *British Medical Journal*, as the organ of that numerous and influential Association, it ought to stand in a very different position from any publication started by private enterprise. If the *Lancet* were to fall below the high standard it set up, the subscribers and readers would have no personal responsibility in the matter; the evil would eventually cure itself. But if the *British Medical Journal*, as the property of the Association, fell in any respect below its proper standard, and the proprietors failed to condemn its decadence, they condoned the offence. The journal of the Association ought to be the mouthpiece of the Profession; it ought to be maintained with the very highest literary ability and the very highest Professional learning; it should be a publication on which the members could look with just pride and say, "This publication shows you the character of the British Medical Association." There was one thing, and one thing only, which stood in the way of the attainment and maintenance of that high standard. Such a publication as the *British Medical Journal*, to be well conducted, must be a most expensive one; because men who could write well would not write well, except spasmodically, unless well paid for their labour. A large space must consist of editorial comments; and that department must be well supported by a large staff of writers, otherwise the productions would be tame and stale; and they must be well paid, otherwise the highest talent would not be available. The same remarks applied to original contributions. There could be no doubt that the higher the tone of the editorial department the better would be the contributions sent by Medical writers. If the *Journal* were such a publication that no one outside the Association cared to look at it, and even many of the members did not cut the leaves, Physicians and Surgeons of the highest eminence would not contribute to its pages; but would say, "We will send our contributions where they will be read, and not commit them to the *British Medical Journal*, where scarcely any one will read them." As an instance of the remarkable things that had appeared in the *Journal*, he might say that an editor of the *Journal* once came to him, and said he wanted a leading article, and did not know where to go for it. They discussed a great many things, and at last the editor said, "Could you not write me something on the Crystal Palace?" and an article on that subject was written and published. That was the way the *British Medical Journal* was supported as a literary enterprise. How much better it might be now he did not know, but he believed there was only £300 at the command of the editor to secure literary contributions, and, therefore, it could not be much better. This *Journal*, which he took the liberty of considering a very inefficient and feeble organ, sat on the shoulders of the Association like the old man on the head of Sinbad—the moment the Association attempted to move, the *Journal* strangled it. When an attempt was made to influence the Profession out of the Association by its agency, the attempt invariably and utterly failed. This being so, it might naturally be inquired, Why had the *Journal* been suffered to remain so long? What were its supposed benefits? Why did they continue to publish it? It was said that it was a bond of connection between the members of the Association, and afforded a valuable medium for the publication of papers which otherwise would remain unpublished. The first statement was easily made, and could not be refuted, but he took the liberty of disbelieving it entirely. The Association had existed thirty-three years, and had only collected one-sixth of the whole Profession into its ranks. The Editor had recently put forward a statement that since his appointment the number of members had increased from 1800 to nearly 2400, and believed that the *Journal* had influenced the increase of members. What evidence was there of that, or that other causes—viz., facilities of locomotion, Branch meetings, and the private influence of members—had not been at work? At the Bristol meeting a Physician, whom they all esteemed, told him that he had belonged to the Association, but that he considered it too much governed by a clique, and had retired from it. That objection was now, in a great measure, removed, the present representative government having greatly tended to the increase of members. He was convinced that the possession of a *Journal* cut both ways with respect to the Association. If those connected with the Profession could see that the Association was influencing those outside it by guiding public opinion and legislation, instead of consisting only of one-sixth, it would embrace two-thirds of the Profession. With respect to the *Journal* being a medium for the publication of papers, if they were the productions of eminent men, they would be gladly received by any Medical publication. He could not hear an admirable paper like that delivered by Professor Stokes without a mournful feeling that it should be buried in the pages of the *Journal*. One or two of the Branches of the Association had passed resolutions in favour of the *Journal*, but he came to the conclusion that it was the practice with members of the Association never to look into it. He had intended resting his argument for the discontinuance of the *Journal* on the fact that the Association did not possess funds to maintain a good Medical journal, and that it was derogatory to its influence and position to support an inferior one which swallowed up the greater portion of the income; but circumstances had occurred which induced him to go further; he felt that a motion of which Dr. Bell, of Goole, had given notice was a distinct challenge to himself, as he had, on more than one occasion, expressed an opinion of what the *Journal* really was. Not long since he expressed an opinion in the *Lancet* that the *British Medical Journal* was an organ for the expression of unworthy sentiments in illiterate language. That statement, which he would admit was a very strong one, he was perfectly ready to maintain. Up to 1863 he had not been very much in the habit of reading the *Journal*. But from an article he then saw in it, he came to the conclusion that the Editor's ideal of a Physician was a man who despised literature and science, and concentrated his soul on pence; that the Editor was of opinion that a man should learn as little as he could, and, when he had passed his examination, should forget that little as quickly as he could; and that a man should treat his patients without any care whether they lived or died, except in so far as it was likely to affect his pocket.

[At this point the feeling of the meeting rose to a pitch of great excitement, and the President was obliged to interpose and request Mr. Carter to avoid personalities. When order had been restored Mr. Carter resumed.]

He said, in continuation, that however much he differed from Dr. Markham, he gave him at one time the credit of being moved by a desire to act with justice. He (Mr. Carter) had, however, now to recall that opinion, and he cited an instance in which the Editor had refused, in one of those terse sentances which had gained for him so unenviable a notoriety, to allow him (Mr. Carter) to make a correction of an important error. This refusal was not based on a question of space, because the Editor had used as much space in refusing to comply as was required for a full compliance. He (Mr. Carter) could not under these circumstances help saying to himself,—"Here is a man who does not believe in his own false Gods." Mr. Carter next proceeded to criticise the conduct of the Editor in reference to some criticisms on the *Ophthalmic Review*, and in regard to some personal matter relating to the Medical Provident Society, and he ridiculed the Editor for comparing himself to Apollo. Again called to order, he passed on to describe his project of a new journal for the Association. His view on this point was that the Association should conduct a review which should occupy ground not at this moment held by any Medical periodical, a review which should stand between the enlightened members of the community and the Profession, and which should carry with it into the public mind all the force of the Association. He thought the public would thus be influenced towards Medicine on all great questions by virtue of a power which no single individual could possibly put forth or carry on, and if the members would look around them they could see vast principles and subjects on which the Medical mind might be brought into contact with the public mind, with great benefit to both—on questions of education, hygiene, Medical remuneration, Parliamentary representation, and other kindred subjects. In the *British Medical Journal*, Dr. Markham had opposed to the scheme now suggested the

objection—that the cost of such a publication would be too great for the Association to bear. He (Mr. Carter) had originally based his argument on the estimate of a publisher; but he now found that a *quarterly* journal such as he proposed could be produced and supplied to members for less than £400 a year. Eight shillings out of every annual subscription would thus pay for a quarterly journal of the very highest class. The members would be able to pay ten guineas an article to eminent writers; and they would be able to exercise a real influence on the Legislature and on those who form and guide public opinion.

In reply to a question by Dr. RADCLIFFE HALL, as to the manner in which he would deal with Midwifery, Mr. CARTER urged that if the Association would address itself to the public it was necessary that its members should cease to address the Profession on subjects of special interest to themselves. They could never influence the public generally through a journal that admitted Medical papers. There were Medical papers in abundance; and the journal which the Association ought to publish should be one which would deal with those points of friction between the Profession and the public, such as Medical attendance at Hospitals, on clubs, and the poor generally. He thought the exclusiveness of the Profession was to be blamed for many of the difficulties that now surrounded it. He had not come there with the expectation that he should carry his motion; indeed, he had been told by a distinguished authority that five years were required to effect any change in the Association, but he hoped he had that day sown seeds which would ultimately bear fruit.

Mr. GABB (Bewdley) seconded the proposition.

No discussion followed Mr. Carter's motion; but so soon as he had sat down,

Dr. DAVEY, of Northwoods, moved as an amendment—"That, with the view of dividing the present responsibilities of the Editor of the *Journal*, and with the view of improving the general tone and management of the said *Journal*, it is hereby proposed that there be chosen annually from the Council, two gentlemen, who shall constitute an Editorial Committee, to which Committee the 'paid Editor' shall refer for counsel and assistance in especial cases of doubt or difficulty, and more particularly in all cases involving questions of a personal or social character." Dr. Davey, who spoke with much courtesy and good feeling, did not oppose the *Journal*, and he was ready to confess that the *Journal* had greatly improved under the management of Dr. Markham, but something further was still required. It wanted a little courtesy infused into its pages. Many members complained of the uncourteous character of the Editor; and it was the experience of that want which led him to bring the subject before the Association. Dr. Davey having explained in a temperate and genial tone a personal grievance, left the matter with the Association.

Mr. ZACHARIAH LAURENCE seconded the proposition.

The amendment of Dr. Davey was received without discussion, to enable the Rev. Dr. BELL, of Goole, to move a third resolution, of which he had given due notice—viz., "That it is inexpedient to disturb the existing arrangements with regard to the *Journal*—(*a*) because Dr. Markham has proved himself quite equal to the responsibilities devolving upon him; (*b*) because the tone and management have gone on improving; and that general support and sympathy from the members of the Association, especially of those connected with the public Medical and Surgical institutions of the kingdom, are alone wanted to make the *Journal* an organ suited to carry out the principles upon which the Association is founded." Dr. Bell, who, like Linacre, has cast off the Æsculapian mantle for the white robe of the temple, but who remains a warm, generous, and steady friend of the Association, is the very opposite of Mr. Carter as a speaker;—Mark Antony to Brutus. Bell is all heart! He loves his friends, and if it is possible that he has a single enemy, I am sure he does not hate even that sad and solitary soul. A gentle, calm, almost melancholy face, Bell's, when at rest, but with an eye full of meaning, which lights up under fire, flashes a little pride, and not a little courage. When he speaks there is no help for it but to listen, and not to listen only, but to observe, and hear I had almost said with the eyes not less than the ears; for there is a quick energy of action about him which would have been convincingly graceful, if in youth it had been trained, which is now easy, though rather irregular and at times over done, and which shows that every grain of the man is speaking, and that he feels even more than he expresses. Well, as I have told, Dr. Bell rose and moved the third resolution on the subject of that irrepressible negro of the Association—Sambo Journalisticus Major. He had the advantage of being with the majority, and of speaking when the majority were warm on his side. With professional skill he seized the occasion to improve it, and as cheer rose on cheer everybody saw that the day was his own. He neither argued, nor reasoned, nor explained, for there was no occasion for any of these parts in his speech; the time for such parts had long passed away. He congratulated the Association on its present "exalted condition," and the Association cheered; he spoke unaffectedly of his own old and deep-rooted affection for it, and again the Association cheered; he trembled lest the Association should by any change topple from its exalted position, and straightway the Association trembled, the arch "machinators" themselves—such is the effect of contagion—quaking like Ivan the Terrible in a sharp quotidian. He said that, for his own part, he read every word of the *Journal*, and again the cheering was resumed. He challenged the members to appoint either Mr. Carter or Dr. Davey as editor of the *Journal*, and the learned assembly shook its learned head in a style that none but an assembly of Doctors could possibly either initiate or imitate. He held up Dr. Markham as a model editor, and hoped the meeting would not trammel nor fetter "a mind so bold, so independent, so intrepid." He contrasted the *Journal* favourably with all other journals, and energetically refused to enter into any of the details of the Carter and Davey speeches; he offered himself as a fulcrum to upset such "machinations," and finally calling upon a conclusive majority to support his resolution, he sat down a decided victor, waiting only a few minutes for formal declaration of victory.

Dr. SIBSON seconded Dr. Bell's resolution. He reminded the Association that many experiments proved fatal to the being experimented on; and as the members were now determined not to experiment, they took the reminder as a stinging joke, and laughed accordingly. The Association was now numerically and financially stronger than ever, the *Journal* was improving, and everybody was improving, therefore let improvement go on, and the *Journal* lead the way. Dr. Sibson's speech was also warmly received, and well it might, for the great Ly-Kouo Ngan himself was not a more able pacificator of kingdoms than he. I have heard ever since I can remember of men who were adroit at pouring oil on troubled waters, and, of course, have believed in such men heart and soul, though, I confess me, the *rationale* of their process was always obscure. But our pacificator goes beyond these, for he has the happy facility of calming the waters without the oil or any other such base mechanical aid.

The seconder having resumed his seat with due applause, Dr. COWAN, of Reading, rose, and every one who has ever heard his towering, rapid, marvellous eloquence will not wonder that the meeting, quite ignorant of the views he would support, waited anxiously to hear him speak. Unfortunately there was disappointment; a few short sentences in support of the *Journal* was all that fell from one of the first of Medical orators of this or any age; so the members had merely to vote, which they did with a forest of hands, for Dr. Bell and his cause.

It would be difficult to produce for the reader who was not present a fair outline of this scene on the *Journal* question. There was a determined dock on a back seat who, with a face as red as the rising sun, and with flashing eyes, was a picture alone worth seeing. His enjoyment was unbounded, and his constant cry of "Go on, Mr. Carter," whenever Mr. Carter was too slow or too mild for him, or whenever an interruption ensued, beggars description. There were others who looked grave, and a well-known figure, the kindest heart in the whole body of Physic, nearly killed me by trying to look the very villain of sternness. Oh! Leech, Leech! could'st thou but have sketched that assembly of learned leeches as thou alone could'st! Suffice it for the information of those who were not present that, according to Francis Moore, Physician, if an unpublished prophecy of his may be trusted, this scene will become, in time, an annual exhibition, so that, in the course of the ages, every one who is interested in it may witness it to his infinite benefit.

A word more justly belongs to one most interested in what occurred. It is due to Dr. Markham to say that he bore up against the onslaught made on him with excellent temper and forbearance. Like a prudent man, he held to silence, and left his defence in the hands of his foes and his friends, both of whom did their best for him in their respective ways to the height of their ability. Perhaps, if anything, his adversaries did him the best turn; for, by placing the issue on him, who,

in fact, merely represents the current desire of the Association, they transformed a general and vital question into a personal controversy, brought the majority to his side on the personal question, and left the general question—the actual value of the *Journal*,—in precisely the same position as that in which they found it.

For this year, therefore, the irrepressible *Journal* remains in *statu quo*. It will be a satisfaction to its friends and enemies alike to feel that, in company with the *Medical Times and Gazette*, week by week, it cannot wander far away from the paths of innocence and virtue.

Thursday Morning, August 3.

The Medical Provident Society.

Notice from the Board of Directors respecting Discussion on their Annual Report.—On the President of the Association (Dr. Jeaffreson) taking his seat in the chair this morning, he announced to the meeting, as the first business on the programme, that he had received a communication from the Chairman of the Medical Provident Society, stating that the Directors of that Society, having considered the question relating to the discussion of their Annual Report, had unanimously passed the following resolution, and had requested him (Dr. Jeaffreson) to submit it to the present meeting:—"That the Board of Directors of the Medical Provident Society, seeing no objection to the discussion of their Annual Report at future annual meetings of the Association, have instructed their Executive sub-Committee to take steps to remove any technical difficulties that may lie in the way of such discussion." ("Hear, hear," and cheers.)

The decision of the directors of the Provident Society was received with warm approval, and will, we doubt not, remove the possibility of all future differences. Technically, the General Secretary was correct in his ruling as to the reception of the first report; but it was a mistake to insist on the point so forcibly; the more so as all the members of the directorate who spoke, including the Chairman, were in reality willing for discussion. For the benefit of both societies the same conciliatory spirit as has now been presented will, it is to be hoped, be continued.

Medical Benevolent Fund.

The Report of the Medical Benevolent Fund was read.

On the motion of Dr. Thomson, seconded by Sir Charles Hastings, both of whom bore testimony to the great value of the fund, the Report was adopted.

Registration of Disease.

Dr. A. Ransome (Manchester) moved—"That a Committee be appointed to encourage the registration of disease, and to devise the best means of obtaining the evidence of members upon Medical questions having a practical bearing." He said that the returns of the Registrar-General were comparatively useless to the Profession, because they neither fixed the time when nor the place where any epidemic made its appearance, and thus did not afford any clue to its origin. It might be urged that it would be impossible to obtain complete returns; but even something very short of national returns would be satisfactory. It would be sufficient if they could be obtained for large areas of population, steadily and regularly, so as to show the rise and fall of disease, and to endeavour to connect the causes with certain surrounding circumstances and conditions. Such a system of registration would enable Medical men to follow the track of epidemics, and would assist in the efforts to reduce them to certain laws. A system of registration of the kind contemplated by him already existed in Manchester, London, Preston, Birmingham, and other places; and in Manchester, where it had been in operation four years, although the district included eighty-four Medical men, only one report was missing.

Dr. Philipson (Newcastle-on-Tyne) seconded the proposition. He explained that in Northumberland and Durham the local branch of the Association had been endeavouring to collect such statistics. There would be no difficulty in obtaining the returns, although the scheme could only be successfully carried out by combination. By registering the number of deaths and of recovery from any disease, the Profession would possess valuable vital statistics, instead of the mere records of death supplied by the Registrar-General.

Mr. Turner (Manchester) supported the motion, which was unanimously adopted. A Committee was appointed.

The remainder of the morning sitting of Thursday was devoted to discussions on two subjects on Scientific Medicine selected by the Committee Council. For convenience of reference, I shall place these discussions with two others that followed under one general head.

At the afternoon sitting of Thursday, the business was opened by Mr. Southam, of Manchester, who moved the adoption of the following memorial:—

Memorial to the Royal College of Surgeons.

"To the President, Vice-Presidents, and Members of Council of the Royal College of Surgeons of England.

"The Memorial of the President and Members of the British Medical Association showeth—

"That the Association consists of more than 2400 members, the greater number of whom are either Members or Fellows of your College.

"That your memorialists are desirous of again bringing under your notice the general dissatisfaction of the Fellows and Members of your College at the mode of electing your Council.

"That the privilege of electing members of the Council is vested by the Charter in the Fellows generally without any personal distinction whatever, and that this is the chief or sole function of the Fellows in relation to the College.

"That nevertheless the personal attendance required at the election virtually deprives of their privileges a large proportion of the Fellows who reside at a distance from London, and makes the Council of the Royal College of Surgeons of England the representative body not of the Fellows generally throughout England, but of the more limited number who reside in London and its neighbourhood.

"That your memorialists therefore earnestly request that you will be pleased to obtain a new or supplementary Charter, in order to render it lawful for the election of Councillors to be conducted by means of voting-papers, which may be filled up by non-resident electors, after some such plan as that prescribed for the Universities of Oxford and Cambridge in their election of members of Parliament.

"Samuel J. Jeaffreson, M.D. Cantab., President of the British Medical Association.

"T. Watkin Williams, General Secretary.

"August, 1865."

Mr. Clement (M.P. for Shrewsbury) seconded the motion, which was adopted.

Address in Surgery.

Mr. Syme then delivered the Address in Surgery, published in the last number of the *Medical Times and Gazette*.

Mr. Clement (M.P. for Shrewsbury) proposed a vote of thanks to Professor Syme for his valuable address.

Mr. R. Jones (Leamington) seconded the motion, which was carried by acclamation.

Professor Syme, in acknowledging the compliment, said he considered it a great honour to have been requested to deliver an address. He had thought a statement of the views he had been led to form, from public and private practice, during the last forty years, might be acceptable to the members of the Association.

Friday Morning, August 4.

The sixth general meeting took place at ten a.m., Dr. Jeaffreson presiding at the commencement, and Sir Charles Hastings during the latter portion of the proceedings.

Register of Attendance at Hospitals.

The President moved to take the sense of the meeting on the following question:—"Whether it be consistent for Physicians and Surgeons of Hospitals to sign, by the order of the managing committee, a return of the time when they enter upon their duties on each day of attendance, the time of leaving, and the amount of Professional labour performed." It was unanimously decided:—"That, in the opinion of the meeting such registration is inconsistent with the position and dignity of the members of the Medical Profession."

Biographies of Living Medical Men.

Dr. Stewart (London) moved:—"That this meeting sees no reason to dissent from the strong and very general verdict of condemnation which was pronounced in 1864 on the practice of publishing the biographies of living members of the Medical Profession." He said that eleven years ago the subject excited a great deal of attention, and it was thought to have been definitely settled that the practice of publishing biographies of living members of the Profession was a practice deserving of the strongest condemnation. Had the practice been revived under the same circumstances as before, he should not have troubled the Association by referring to the

matter; but when it had been recommenced by a gentleman of such high character and standing as Dr. Barker, of Bedford, he thought it was calculated to be prejudicial to the Profession. He did not think it possible to form a correct estimate of any man until after death, because some who were thought moderately of in life had subsequently been discovered to have been great men, whilst others who had held prominent positions during life were lost sight of altogether after death. There could be no doubt that the three distinguished members of the Profession already noticed were fully worthy of the distinction; but who was to decide where the series should end, and what degree of eminence should be the line of demarcation? Some might to-day be considered worthy of the honour who in a few years' time might forfeit all claim and title to be included amongst the eminent of the Profession. In the former series he knew that several of the Medical men noticed spread their biographies over the length and breadth of the land, until it became positively sickening; and so strong was the indignation of the Profession generally that it would not tolerate it. The fact of the name of Dr. Barker being associated with the present series might induce those who would scorn to defile their fingers with the biographies previously published to regard them as something totally different; but the principle was essentially the same, whatever difference there might be in the mode of carrying it into practice. One evil would be that men would be anxious to get their biographies published, in the hope that it would assist them in their Profession, and thus a fulsome system of puffing would be introduced.

Dr. BURNETT (Alton) seconded the motion. The practice had been generally condemned some years ago, and he did not see that it was now any the less objectionable.

Dr. BARKER (Bedford) said that, so far from the principle itself being objected to, some of the most distinguished members of the Association had consented to the series of biographies he had had the honour to commence. With respect to the individuals to be selected, he did not apprehend there would be any more objection to those hereafter published than to those whose biographies had already appeared. In preparing biographies, his object would be to faithfully record all that the subjects of them had accomplished for the Profession or for science, and to avoid all kind of personal details. He hoped to make these works useful, and to render them perfectly unobjectionable. He did not believe that any gentleman whose biography would be included in the series would make any improper use of the distinction.

Mr. ZACHARIAH LAURENCE (London) thought that if the motion were put, it would be placing the members of the Association in a very invidious and disagreeable position, and he suggested that no vote should be taken on the subject.

The PRESIDENT then put Dr. Stewart's motion to the meeting, when it was carried by a small majority.

The remainder of the meetings of Friday were taken up with discussions on subjects connected with State Medicine and public health, and with papers and cases, including an essay on the cattle plague by Dr. William Budd, of Clifton, marked by all the graphic power for which that able Physician is so distinguished. We shall place the papers read under one head, and afterwards the open discussions.

About 4.30 p.m. on Friday, the PRESIDENT (Dr. Jeaffreson), whose attention to his onerous duties had never for a moment flagged, declared the business of the Association ended.

The following votes of thanks were then unanimously passed:—"To the gentlemen who had read the papers," proposed by the CHAIRMAN and seconded by Dr. BARKER.

"To the Trustees of the Leamington College, the Committee and management of the Jephson Gardens, the Leamington Board of Health, and the Directors of the Pump Rooms, for the accommodation rendered and the hospitality shown," proposed by the CHAIRMAN, seconded by Dr. SHAW.

"To Mr. Ebbage, the Local Secretary," proposed by the CHAIRMAN, seconded by the Rev. Dr. BELL.

"To the Chairman," proposed by Dr. MERRIMAN, seconded by Dr. RICHARDSON.

The CHAIRMAN returned thanks, and the meeting broke up.

MEDICAL AND SURGICAL ABSTRACTS OF PAPERS READ AT THE MEETINGS OF THE ASSOCIATION.

ON THE CATTLE PLAGUE.

By William Budd, M.D. (Clifton).

After opening with a brief historical sketch of cattle plague, and some remarks on its past and present geographical distribution, the writer gives a minute account of the symptoms of the disease, and of the morbid appearances it leaves in the carcase. The one and only anatomical characteristic of the malady may be described in general terms as a specific affection of the mucous glands, which beginning with new cell growth and issuing for the most part in ulceration, culminates in the follicles, isolated and aggregated, of the small intestine.

On grounds which are given at length in the paper the writer considers this affection to be the exact pathological equivalent of the affection of Brunner's and Peyer's glands in the typhoid fever of man.

The two affections not being identical in any sense, but the precise counterparts the one of the other.

The paper continues with a description of the various modes in which this eminently contagious disorder is propagated, including its communication by incubation with virus directly obtained from the glandular affection just referred to. This point the writer considers to be of cardinal interest. Some years ago, in a series of papers in the *Lancet*, Dr. Budd entered into considerations to show that the intestinal affection of typhoid fever in man is neither more nor less than the specific eruption of a contagious fever. In this strictly correlative affection of the ox, this doctrine receives the stamp of experimental proof.

The evidence adduced in the paper appears to Dr. Budd to place the following important propositions on unassailable ground:—

1st. Cattle plague is a contagious and eruptive fever in which the specific eruption, instead of occurring on the skin, as in small-pox, occurs on the internal surfaces of the alimentary canal and air passages, nostrils included.

2nd. The poisonous germs thrown off by the eruption are cast out of the body in the discharges from these surfaces, which thus become the chief means of propagating the disorder.

In Russia the disease is often actually inoculated by virus from this source.

3rd. The specific poison which causes cattle plague is, like the poison of small-pox, the product of the disease itself, and the living body of the animal affected with it is the only known medium in which this poison is bred.

And 4th. (A proposition which is merely a corollary of the last.) Cattle plague, like human small-pox and sheep's small-pox, and, it may be added, like the living organisms which people the earth, having first come into being under circumstances of which we know nothing, is never known to spring up spontaneously now, but is self-propagated only.

To be successful, all attempts at prevention must, the writer believes, be founded on these principles. It is in part from want of clear apprehension of some among them that certain foreign Governments, in spite of an otherwise very stringent preventive code, have often failed to stay the pest. It will be from want of applying these principles sufficiently early, or with sufficient vigilance to meet every incident of the case, that we shall fail in England now, if fail we do. To succeed three things only are necessary, but they are all three essential.

1st. To prevent the further manufacture of the poison, by the instant slaughter of infected cattle.

2nd. To get rid of all poison cast off by them.

And 3rd. To prevent the reimportation of the pest.

All these, but the second especially, are things which require great knowledge, and still greater vigilance, qualities which are only too likely to be often in default in the present emergency. The first needs, in addition, a loyalty to high principle in the execution of measures seemingly adverse to the money interest of the hour, which it would, perhaps, be too much to expect to be very general in the farming class. Could all this be accomplished, cattle plague in England would be no more.

As the discharges which chiefly convey the poison are liquid, their first effect is to infect the ground on which the patient stands. In the same way they taint the ship, the wharf, the cattle truck, the public road, the fair and market. Flooded with these discharges, and charged with exhalations from them as the places are in which the sick cattle are kept, it is easy to see how persons visiting them may carry away in their shoes, or in other ways, sufficient of infection to taint the public road, or even the soil of distant places. In this way, shepherds, farriers, sanitary inspectors, and, lastly, farmers, curious about the new pest which has stricken their neighbours' cattle, may become, as on the Continent they are so often known to become, the unconscious bearers of it.

It is probably in virtue of germs, derived, in great part, from the same pathological source, that oxen,—themselves

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uninfected—the hides and hoofs of dead cattle, horses, sheep, dogs, poultry, and other animals, domestic and wild, often play the same part. Unless we have an eye to it in time, the writer thinks that many of the modes of transmission here indicated are likely to have no little hand in spreading the pest among us.

Practically, the greater part of the poison cast off by the infected animal takes the form of manure. This being so, it is a matter of no little anxiety to know what has become of all the cattle-plague manure created in London within the last two months.

To give point to this inquiry, Dr. Budd relates that it has come to his knowledge that, no longer ago than Saturday, August 5, a large load of such manure was taken from an infected dairy to one of the London canals for transmission into the country.

Dr. Budd's paper concludes with an application of the views developed in it to the contagious fevers of man generally, and to typhoid fever in particular.

ON THE NON-TRANSMISSION OF SYPHILIS BY VACCINATION.

By W. Boeck, M.D. (Christiania).

A translation of Professor Boeck's paper was read by Dr. Henry. In it the Author stated that he had most carefully examined the question whether syphilis could be transmitted by vaccination, and had been unable to find any evidence in favour of such transmission either in published records or from experiments performed by himself. He related instances in which he had vaccinated syphilitic children, and had endeavoured, but without producing any result, to inoculate with the matter obtained from them two patients suffering from elephantiasis. He considered that no doubt should be thrown on vaccination unless on the most convincing evidence; and, while he did not deny that syphilis might be transmitted by vaccine matter, he must withhold his belief that such an event could occur until he saw it. The facilities for observation were great in Norway; but the transmission of syphilis by vaccination had never there been observed.

LIFE ASSURANCE AND SUICIDE.

By J. G. Davy, M.D. (Northwoods).

The author's aim is to show that the "plain rules" published by "the Postmaster-General, acting on behalf of the Commissioners for the Reduction of the National Debt, and under the authority of Parliament," are incomplete, and not in harmony with the facts and principles of medical science. He took as the starting point in his argument these words:—"If any person whose life the Postmaster-General has insured shall die by his own hands, he will by so doing cancel the contract made with him, all the payments made by him will be forfeited, and no payment will be made to his family or representatives." The above, it was affirmed, was without doubt composed and accepted in the sure belief that suicides choose to die by their own hands, and prefer to be their own executioners. This, it was said, could not be the case, because simply the act of self-destruction in any man, woman, or child is the effect or accompaniment of a positive brain-disorder. If suicide was voluntary, and in itself normal, then and then only could no objection be taken to the rule quoted; but inasmuch as suicide must be regarded as one of the many indications of mental unsoundness, then must it follow, first, that the act is at all times involuntary, and therefore abnormal; and secondly, that the rule, as above given, is altogether out of place, and foreign to the very humane and commendable objects of the Government, in so far as the insurance of lives is concerned. The author's experience went to show that an investigation of the antecedents of any given case of suicide will demonstrate the position he had taken, and prove, beyond any question, that the act is in itself nothing more nor less than a symptom of insanity. Interesting examples of suicidal mania were given in detail; and great stress was laid on the fact that in very many cases of the kind the propensity to self-destruction—though beyond any very material control on the part of the patient—was kept a secret by him or her, and hence not unfrequently the sudden and unexpected stroke of sorrow to the family circle. It was added, that those so afflicted were every now and then the first to seek the aid and protection of Medical men, finding as they did that their power of self-control was inadequate to the abnormal and mental pressure bearing on them, and urging them to that deed which of all others they feared and desired to avoid. Dr. Davey treated of the suicidal tendency as of two kinds: the primary and monomaniacal form of the disorder he believed to be the more serious and the more difficult to detect and treat successfully. More frequently, he said, the same tendency exists as an accompaniment of ordinary mania, acute or chronic, and constitutes but one of the many signs or symptoms of a general perversion of the mental feelings and faculties. In the latter case the especial feature of the malady was more easily recognised; it came plainly enough to the surface, was not kept in so much abeyance, and being then recognised and appreciated as it deserved, the necessary care and supervision were secured to the patient.

The verdict of "Felo-de-se" was condemned *in toto*: the occasional finding of such in our coroners' courts, it was argued, was evidence of the existence among us of at least one barbarous remnant of early and ignorant times. Dr. Davey concluded his paper with the hope that ere long the "plain rules" adopted by the Postmaster-General would be amended, and brought into harmony with the facts and principles of Medical science. Then, said he, death from suicide, like death from a compound fracture, or from pneumonia, or erysipelas, or typhoid fever, etc., will be recognised as altogether involuntary, and as a consequence only of diseased action in a part or parts of the corporeal structure.

THE TREATMENT OF STOPPAGE OF THE BOWELS; WITH SPECIAL REFERENCE TO THE USE OF ATROPIA AND GALVANISM.

By Alexander Fleming, M.D. (Birmingham).

In this paper, the Author referred to his success in the treatment of constipation and of obstruction of the bowels by the use of atropia and of galvanism, illustrating the action of the drug on the bowels by comparison of its effects on other parts of the body, such as the throat and bladder. The advantages of atropia over irritant purges were also explained. The Author's method of exhibiting the drug in constipation was as follows:—Ten minims, containing one-sixtieth of a grain, of a solution were added to a gentle saline draught and given every evening. The dose was increased nightly by two minims, till a slight degree of the physiological effects of the atropia was induced. It was then somewhat diminished, and continued as long as might be necessary at the reduced quantity, being finally replaced by strychnia. In obstruction of the bowels the atropia was directed to be given in conjunction with a saline draught every four hours; and the patient should be seen frequently, in order that the action of the medicine might be carefully regulated. In conjunction with this medication, enemata, introduced by means of a long rectum tube, were enjoined. Dr. Fleming used a tube marked off in inches to indicate the length of insertion, and to prevent its doubling upon itself during introduction. It was fitted with a stiletto. Between the enemata Dr. Fleming recommended galvanism to be applied to the bowels, and so conducted into the rectum by means of a copper wire passed through the tube as to traverse, as nearly as might be possible, the paralysed intestine. Much care was enjoined in applying this agent, so as, on the one hand, to secure its full value, and, on the other, to avoid undue suffering and exhaustion. Dr. Fleming had employed galvanism in this way at the Queen's Hospital, Birmingham, since 1857. In conclusion, the Author narrated several cases of much interest, which exhibited in a striking manner the success of the modes of treatment recommended. We give one case in way of illustration:—A young lady, aged 18, had been suffering for three years from obstinate constipation (brought on by gross neglect of the bowels at school), the stomach gradually becoming more and more irritable, the least imprudence in diet causing severe spasmodic attacks of pain and vomiting, until, at the time she came under Dr. Fleming's care, the spasms had so increased in violence and frequency at every attempt to take food, accompanied by such excessive flatulence, twisting of the bowels, and severe suffering, that the case bore an aspect of much anxiety. After a careful examination, it was concluded that the peristaltic action of the bowels was perverted, the smaller intestines being abnormally active, while the colon was unduly distended, and more or less completely paralysed: acting on this diagnosis, the treatment of constipation described above was adopted with remarkable success, the bowels were gradually unloaded, and in the course of a fortnight the spasms and vomiting had completely subsided, the stomach became tolerant of food, the normal appetite returned, and the patient rapidly regained health and strength. The cure has been permanent.

THE FIRST ATTEMPT IN ENGLAND TO REMOVE A GROWTH FROM THE LARYNX THROUGH DIVISION OF THE POMUM ADAMI.

By George D. Gibb, M.D., LL.D. (London).

In his preliminary remarks the author dwelt upon the

views entertained by various writers upon obtaining access to the larynx through section of the thyroid cartilage, a proceeding first introduced by Desault. Before the use of the laryngoscope, Ehrman had removed growths from the larynx in this manner, and when the author attempted it in April, 1864, he was not aware it had been done by any other person since the revival of the laryngoscope. He subsequently learnt that he had been preceded by Bœckel, of Strasbourg, some weeks prior to date of his doing it. Both observers had, however, conceived the idea of its performance independently of one another. Dr. Gibb's patient was a single lady of 29, whose voice had been affected two years, with obstructed breathing for two months. This depended upon a rather large growth springing from the root of the epiglottis, extending to the right side of the larynx, involving the false cord and concealing the true. A portion of this he succeeded in removing with a loop of wire through the mouth; the remainder he contemplated getting rid of through division of the pomum Adami. Tracheotomy became necessary from urgent dyspnœa through increase of the growth, and some days later the thyroid cartilage was opened by Mr. Holthouse, and the remains of the growth removed by Dr. Gibb. Good results followed, speech returned, and the patient became convalescent. Unfortunately, the disease proved malignant, and recurred some months later, and ultimately destroyed life a year after the operation. The objections to the operation and arguments in its favour were considered in detail, and the author concluded by a chronological summary of cases in which this mode of operation had been practised.

NOTES ON INJURIES NEAR JOINTS IN CHILDREN.

By Jonathan Hutchinson, Esq. (London).

Mr. Hutchinson's paper was illustrated by diagrams, photographs, and specimens. The author commenced by stating that injuries near to joints in children and young persons differed from similar ones in adults in that very frequently separation occurred at the line of junction of the epiphyses. These lesions were, he felt certain, very much more frequent than they are generally thought to be. The immense casualty practice of the London Hospital had afforded him unusual opportunities for their clinical investigation. After adverting to the special peculiarities of a detachment of an epiphysis, as distinct on the one hand from a true dislocation, and on the other from a fracture, the author described the symptoms which usually attend these accidents when occurring near to any one of the several principal joints. He devoted attention particularly to the shoulder, elbow, knee, and ankle. After asserting that these injuries were much more difficult, both in diagnosis and in treatment, than simple dislocations or fractures, the author concluded by urging the great importance of the use of chloroform in the first instance as an invaluable aid to both. Attention was also called to the need for great caution in prognosis, and to the impropriety of keeping the injured joint motionless for any long period.

ABSCESSES OF THE ABDOMEN.

By Furneaux Jordan, Esq. (Birmingham).

After pointing out the numerous localities in which an abdominal abscess may arise, and suggesting that all localities may be classed under two heads, visceral and parietal—the latter including the iliac and lumbar glands, in connection with which the author contended, syphilitic and gonorrhœal abscess might arise, Mr. Furneaux Jordan proceeded to treat more in detail two varieties of abdominal abscess. There was, he said, one form of abdominal abscess which had been very imperfectly studied—that which contains extraneous bodies. It was commonly held that these abscesses contain fæces; that they are almost exclusively confined to the iliac region; that they are accompanied by symptoms of obstruction; and are almost invariably fatal. The author's cases, and those which had come under his notice, led to conclusions precisely the reverse. Such abscesses pointed as frequently at or near the umbilicus as at the groin; frequently they contained no fæces, and were accompanied by no symptoms of intestinal obstruction. The author was not acquainted with a single case of abscess of the abdomen, containing an extraneous body, which had terminated fatally. The subject of syphilitic and gonorrhœal abscesses of the abdomen, Mr. Furneaux Jordan treated at some length. Nearly ten years ago, he published a case in the *Edinburgh Medical Journal*, entitled "Bubo within the Abdomen." After ten years of further experience and reflection, he still believed his diagnosis to have been correct. Cases of bubo within the abdomen were undoubtedly rare; but either he was mistaken in his view of the affection, or it was sufficiently common to deserve attention. Why this condition had not been discovered before was not more singular or inexplicable than the delayed discovery of many now recognised lesions. Probably, when no *post mortem* examination was made, peritonitis was regarded as the cause of death; very probably the Medical attendant was called in simply to treat the peritonitis, the syphilis or gonorrhœa being concealed or overlooked. If a *post mortem* examination were made, doubtful or inexplicable conditions were classed under the vague and elastic term "iliac abscess;" although abscess arising primarily (independently of local injury or disease or constitutional disease) in the connective tissue of the iliac fossa, the author believed to be impossible. Unfortunately, too, for the progress of science, it was always considered a mark of higher ability to refer an uncertain condition to a certain categoric head of classification, than to make a confession of ignorance. After referring to other causes of error, the reader of the paper said: "In bubo within the abdomen one of two conditions is present; either a noxious agent passes through the inguinal glands without causing irritation in them, or, more probably, the lymphatic tube which transmits the virus passes directly to the iliac glands. Bearing in mind the known variations of arteries and veins from the normal type, it would be truly marvellous if the lymphatic vessels never deviated into the abnormal."

OPHTHALMIC INSTRUMENTS.

By J. Z. Laurence, Esq. (London).

Mr. J. Z. Laurence exhibited a series of ophthalmic instruments, which he had invented during the last four or five years. He said that, as he had already described these instruments at length in various periodicals, it would be unnecessary to do more than briefly enumerate their leading properties.

1. *The Eyelid Tourniquet.*—This instrument was intended to facilitate operations on the eyelids; it so completely checked the afflux of blood, as to permit the Surgeon to perform his operation as leisurely and easily as if he were operating on the dead subject.

2. *A Groove-Speculum.*—The author had found that the utility of the ordinary wire speculum was seriously impaired by the patient in many cases spasmodically attempting to resist the action of the speculum by forcing the skin and conjunctiva of the lids over and under the wires; thus, the field of operation of the Surgeon became sometimes practically annihilated. Mr. Laurence remedied this defect by replacing the wires by grooves which received the free borders of the lids. He stated that, with the aid of his head-rest and this speculum, he had over and over again operated on the eyes of the most unruly subjects with perfect ease and without employing chloroform.

3. *The Strabismometer.*—This was a simple instrument for accurately measuring the deviation of a squinting eye. Mr. Laurence urged the importance of always measuring the amount of squint before operating on a case, as on the results of that measurement depended the extent of the operation to be performed. If, in a squint of (*e.g.*) one line, the tendon of the muscle and the subconjunctival fascia were separated as freely as in a squint of four lines, the result would probably be to substitute a divergent squint for a convergent one—a greater deformity for a less one.

4. *A Pupilometer.*—This was an instrument for accurately measuring and registering the size of the pupil.

5. *An Astigmometer.*—For determining the proper direction the axis of a cylindrical glass should be inclined to accurately correct a case of astigmatism.

Mr. Laurence likewise exhibited his binocular ophthalmoscope, for a description of which he referred to the printed directions for its use published by Murray and Heath.

Finally, Mr. Laurence handed round a specimen of Pagenstecher's yellow amorphous oxide of mercury ointment, which, he stated, was peculiarly applicable to cases of phlyctenular inflammation of the conjunctiva and cornea. He said that the ointment should be applied under proper indications and precautions every night before the patient retired to rest. He referred for further particulars to Dr. Pagenstecher's own paper in the sixth number of the *Ophthalmic Review*.

THE INHALATION OF ATOMISED LIQUIDS; WITH A DESCRIPTION OF A NEW, CHEAP, AND PORTABLE ATOMISER.

By Morell Mackenzie, M.D. (London).

After giving a short sketch of the history of the subject, the author observed that, in order to reduce a liquid to such a fine state of subdivision that it could be inhaled, two prin-

ciples are employed. In the one, a fine column of liquid is driven out a projecting body, and thus becomes dispersed; and in the other, the liquid is reduced to a state of subdivision by the velocity with which it is driven through a very very minute aperture. The former might be called the *concussion principle;* the latter, the *velocity principle.* In the latter kind of instrument, the atomised liquid is accompanied by a strong current of air; but in the former, there was no draught. Siegle's apparatus acted on the velocity principle; but steam was used instead of air, and this was a great advantage. Unfortunately, however, Siegle's apparatus is constantly getting out of order, and is very expensive. The author next described and exhibited his atomiser. It consists of a little bottle, to the mouth of which, through the interposition of a piece of vulcanite tubing, a small india-rubber ball fits. Between the mouth of the glass bottle and the india-rubber ball there is a minute opening; and by pressing the ball, the liquid is driven through the opening on to a disc, on which it breaks into a very fine spray. The instrument is very cheap when compared with those hitherto in use: it costs only ten shillings. It is not liable to get out of order. It can be made to act either by gently pressing the ball with two fingers, or by allowing a piston to descend upon it. There is no metal in the instrument, hard and soft india-rubber being the only materials employed. The system had been most advantageously used in phthisis, bronchitis, and asthma.

NEW FORM OF ANÆSTHETICS.

By Thomas Nunneley, Esq. (Leeds).

Mr. Nunneley showed to the members two substances, the bromide of ethyl and the chloride of olefiant gas, which for some time past he had used as anæsthetics. He stated, that he had not lately performed any serious operation, either in private practice or at the Leeds General Infirmary, without the patient being rendered insensible by one or other of these agents; each of which he believed to possess important advantages over chloroform. They were amongst the many analogous bodies experimented upon by him; and were favourably mentioned in his essay upon Anæsthesia which was published in the *Transactions* of the Association for 1849. At that time, the difficulty and cost of their manufacture were too great to allow of their being commonly used. This difficulty had, however, been overcome; and, should their use become general, they can be made at a cost not exceeding that of chloroform, if not at less. They both act speedily, pleasantly, and well. The patient might be kept insensible for any length of time, while the most painful and prolonged operations were being performed. No disagreeable symptoms had, in any case, resulted from their use. They were prepared for Mr. Nunneley by Mr. Squire, of Oxford-street, London, from whom they might be obtained.

A FEW WORDS AGAINST THE HABITUAL USE OF PURGATIVES.

By C. B. Radcliffe, M.D., F.R.C.P. (London).

Dr. Radcliffe considers the habitual use of purgatives to be needless in all cases, and harmful in very many. He states that the bowels will act well enough if the diet be properly regulated; and he argues that the natural way of preventing constipation is to take care that the food be not deficient in oily and fatty matters, and (in suitable cases) in green meat. He states, also, that the cases in which purgatives are habitually resorted to are very generally cases of old age and of debility in various other forms—cases in which the constipation which it is intended to correct is a salutary condition rather than otherwise. He argues that the kind of diet most suited to the wants of the system in all these cases is one which (by the exclusion of the more indigestible and innutritious kinds of food) does not dispose to frequent stools, and, in addition to this, that the same result is brought about in some measure by the digestion being much slower than it is in vigorous health. In these cases, in fact, he argues that constipation, within certain limits, is a state to be encouraged rather than a state to be corrected; and he protests against the common notion that the bowels ought to act every day, as a practice which is nearly as bad as that of Sancho Panza's mock doctor at Barataria, which was to take away the dish from the table before there had been time to make use of it.

OXYGENATED SALINE WATERS.

By B. W. Richardson, M.A., M.D., London.

Dr. Richardson laid before the Association specimens of oxygenated saline waters. In these solutions he had succeeded in combining peroxide of hydrogen (containing ten volumes of active oxygen) with various saline substances, and especially with salts of iron. The waters, when properly diluted, were almost tasteless, the taste being so unobjectionable that children could take them, and adults could drink them at meals in place of common water or other fluid. The solutions presented were a diuretic water carrying nitrate of potassa and spirit of nitric ether; a simple aperient water, conveying sulphate of potassa; and two chalybeate saline waters, one containing phosphate, the other persulphate, of iron, with a little free oxide of iron. The waters were all mildly aperient. They were used for adults in proportions of two ounces for a dose, ordinary water being added so as to fill a tumbler. Specimens were diluted in this way and handed to the members. Dr. Richardson said that the water containing the persulphate of iron was the best chalybeate aperient he had ever used. It remained fresh for weeks, and in appearance resembled to perfection a natural mineral chalybeate water. It differed, however, from such water in that it contained a little sugar and was rich in oxygen. Each dose contained a grain of the iron salt. The formula for this water was as follows:—

Peroxide of hydrogen (Ten volumes of oxygen.)	℥i.
Sulphate of potassa	ʒij.
Chloride of sodium	ʒiss.
Sulphate of iron	grs. xij.
Simple syrup	℥i.
Water to	℥xxiv.

Dose: Two fluid ounces to be taken with as much water as will fill a tumbler.

In obstinate cases of constipation with anæmia, and in cases of asthenic gout, this solution was most useful. The advantages derived from the peroxide of hydrogen in these waters were most important, the peroxide quickening the eliminative action, and producing free secretion and excretion.

In reply to a question as to the manufacture of these waters, Dr. Richardson said that any Practitioner who had the peroxide of hydrogen could make the waters for themselves, but they were very efficiently made by Messrs. Garden and Robbins, of Oxford-street, London.

ON DIFFUSION OF FLUIDS BY THE ATOMISER FOR THE PURPOSES OF DEODORISATION AND DISINFECTION.

By the same Author.

Dr. Richardson also explained a process he had adopted for applying the atomiser for the purpose of deodorisation. He made a mixture by adding iodine to solution of peroxide of hydrogen until saturation occurred, and afterwards concentrated sea-salt in proportion of 2½ per cent. In this combination a water was produced like sea-water, and which was rendered active by being charged with free iodine and ozone. The solution placed in one of Krohne's hand atomisers could be diffused in the finest state of distribution at the rate of two fluid ounces in a quarter of an hour; but in an ordinary bedroom or sitting-room one ounce was sufficient to render the air so active that ozone test-papers were discoloured by it to the highest degree of Moffatt's scale in from five to ten minutes. For charging the sick room rapidly and effectually with active air—in a word, with sea-air—Dr. Richardson said this plan was by far the most effective of any he had known. A nurse could put the apparatus into action at once, and could deodorise, hour by hour, according to the directions of the Medical Practitioner.

ON THE INFLUENCE OF UTERINE DISPLACEMENTS UPON THE STERILE CONDITION.

By J. Marion Sims, M.D. (London).

Dr. Marion Sims said that we were all interested in the subject of sterility, when we remembered the fact that every eighth marriage was sterile. He did not propose then to give us a complete paper on the subject, but only to present it in one of its relations—viz., that of its dependence upon misplacements of the uterus. He divided his sterile patients into two classes: 1st. Those who were married a sufficient length of time and did not conceive; 2nd. Those who had borne children, but for some reason ceased to do so long before the termination of the child-bearing period. The first he called "natural sterility;" the second, "acquired sterility."

To show the frequency of uterine displacements in this relation, he said that of 250 cases of "natural sterility" that had fallen under his observation, 103 had anteversion, and 68 retroversion; and of 255 cases of "acquired sterility," 61 had anteversion, and 111 retroversion, the anteversions predomi-

nating in the first class, the retroversions in the second, the two opposite displacements being almost in inverse proportion in the two classes, and forming about two-thirds of the whole number, being 343 out of 505 cases; which proved beyond question the bearing and importance of these displacements in connexion with the sterile condition. He then illustrated by diagrams the normal position and relations of the uterus, explained the various causes and complications of anteversion, whether dependent upon fibroid tumours, elongation of the infra- or supra-vaginal cervix, shortening of the utero-sacral ligaments, or hypertrophy of the fundus. In all these cases, he said, we could not do much for the relief of the sterile condition by merely mechanical means; that our efforts should be directed to seeing that the os tincæ was properly open, that the canal of the cervix was free from engorgement, and that the secretions, both vaginal and cervical, were not poisonous to the spermatozoa. He said that there was one form of anteversion that was easily cured by a simple and novel operation, which he originated some eight or nine years ago. He illustrated this by cases and diagrams. It was as follows:—The uterus lies down on the anterior wall of the vagina, and parallel with it. The fundus is most usually the seat of a fibroid growing anteriorly. The anterior wall of the vagina is greatly elongated, the os tincæ pointing directly backwards. Under these circumstances, he has shortened the anterior wall of the vagina an inch and a-half, by denuding a surface a half inch wide and two inches long across the axis of the vagina in juxtaposition with the cervix uteri, and making a similar transverse scarification parallel with the first, about an inch and a-half, more or less, anteriorly to it, and then uniting these two transverse cut surfaces by silver sutures, just as we would unite the edges of a transverse vesico-vaginal fistula by them. This necessarily shortens the elongated anterior wall of the vagina, draws the cervix forwards into its normal relations, and as a consequence elevates the fundus. He related several successful cases of this operation, and had seen it followed by conception and child-bearing. He then passed to the consideration of retroversion as influencing the sterile condition, pointed out its varieties and anomalies, and showed how it was to be diagnosed and how replaced. By diagrams, he illustrated various modes of reduction, showed how conception was difficult, and sometimes impossible, in some forms of retroversion, advocated mechanical treatment, pointed out the dangers of pessaries, but advocated their use when judiciously applied under proper circumstances. He prefers a malleable ring, either of block tin or a ring of copper wire covered with gutta percha, and then bent or curved to the proper diameters of the vagina of each patient. He said this was a modification of Hodge's pessary. Under some circumstances he also uses Meigs's ring pessary, made of watch-spring covered with gutta percha. He pointed out the peculiar advantages of each of these, and paid a just tribute to his countrymen, Drs. Hodge and Meigs, who were the earliest advocates of the mechanical treatment of uterine displacements. He said that the great secret of treating the sterile condition when dependent upon retroversion was to adjust a malleable ring which would hold the uterus in its normal position, and which was to be worn always during the act of coition. He explained its philosophy, its efficiency, its safety, and its harmlessness, and related a great many cases in which its use had been followed by conception: one after a sterile marriage of six years, another of ten years, another of fifteen years, and others at various periods of time after sterile marriages. He also showed how miscarriages, often dependent upon this displacement, are prevented by the use of a properly fitted malleable pessary. He then pointed out the course to be adopted when it was impossible for the patient to wear a pessary, showing why it was so, and what was to be done.

ON A NEW FORM OF LAMP, DESIGNED FOR THE READY APPLICATION OF THE LARYNGOSCOPE.

By Offley Shore, M.D. (Stamford).

The lamp which Dr. Shore presented to the notice of the members is one which will be found extremely useful in cases of emergency. It is contained in a small case, gives a brilliant light, and is very convenient to handle. It will be found very efficient for all ordinary purposes in connexion with laryngoscopy; but when both hands are required, an assistant must hold the lamp.

In addition to laryngoscopical purposes, it will be found useful for illuminating the throat in the numerous instances in which a clear view is required. It is not meant to supersede the larger lenses, globes, etc., which are most valuable for consultations at the Medical man's house; but as many Practitioners do not care to purchase the larger apparatus, from want of a sufficient number of cases, this little lamp will supply a want which cannot fail to be felt by many.

The maker is Mr. Meyer, 51, Great Portland-street, Oxford-street, W., and the lense was made after those used by Dr. Morel Mackenzie. Paraffine oil has been burned up to the present time, but it is very probable that the oil recommended by Dr. Cruise, in his pamphlet upon the Endoscope—viz., (ten grains of camphor to the ounce of petroleum oil), will be found superior.

THE RELIEF OF NEAR SIGHT (MYOPIA) WITHOUT SPECTACLES.

By J. Vose Solomon, F.R.C.S. (Birmingham).

The author commenced his paper by stating that five years had elapsed since he discovered that an intraocular myotomy of the ciliary muscle increased the range of vision of near-sighted persons, and conferred other remarkable advantages. After explaining the optical condition of the perfect (enunctropic), the myopic, and the hypermetropic eye, he remarked that these opposite (a too high and too low) refractive conditions presented certain points of resemblance.

1. The apparent size, especially in the transverse directions, of the myopic and hypermetropic eye may not differ.
2. In each optical defect the patient may acquire the habit of contracting the brow and lids.
3. In both, the farthest points of distinct vision for natural landscape is not nearly so great as when the eye is perfect.
4. In each instance, concave glasses may render remote objects more distinct.
5. In either, the fundus of the eye, when examined by the ophthalmoscope, may present a whitish or grey crescentic patch at the outer side of the optic nerve entrance.
6. The hypermetropic eye is much assisted in reading by a convex glass of suitable power. So likewise are some myopics which are far sighted in respect to their nearest point of distinct vision, while they require concave spectacles to obtain a clear outline of distant objects.
7. The myopic and the hypermetropic are again alike, in that one is commonly of far inferior optical value to its companion, amblyopia being frequently present.
8. These opposite refracting conditions are often hereditary.

The reader of the paper then proceeded to point out the points of contrast; of these we have space only for the following:—(*a*). In numerous examples of hypermetropic impaired vision of grave degree, of one eye, receives no explanation by careful exploration of the eye with the ophthalmoscope; and, moreover, there is a tendency rather to improvement by exercise of the worst eye than to further deterioration. In myopia the ophthalmoscope reveals morbid changes of tissue which fully account for the impaired vision, which has a tendency to terminate in amaurosis. (*b*). Hypermetropic and cataract bear no relationship as cause and effect. In myopia such connexion has appeared to the reader of the paper as not uncommon. In some he had found it to be congenital. Where the cataract was granular, more or less of the nucleus of the lens surrounded by a transparent belt, the patient appears to get on tolerably up to about the middle period of life, when the zone losing its perfect transparency, vision became so much impaired as to oblige the patient to seek advice from an oculist.

In speaking of the congenital malposition of transparent lenses which he had noticed in patients affected with myopia, Mr. Solomon related an instance where those bodies occupied the upper and outer quarter of the vitreous humour, and in which full dilatation of the pupils and glasses afforded relief to the vision. Before operating for the relief of near sight, the condition of the lens and vitreous humour, and the absence of a syphilite must be carefully ascertained. The reader of the paper advised that, subject to the exceptions indicated, all children and young persons should be disallowed spectacles, and submitted to intraocular myotomy.

The paper was concluded by the narration of three cases, two of them were treated in the present year, and one five years ago.

A girl of 13, with extreme myopia, was enabled by the operation to perform with efficiency the duties of housemaid, for which she had been before quite incompetent. She also reads Snellen's largest type at a distance three times greater than previous to treatment.

A woman, aged 44, of languid mental power, in four months after operation gained four and a-half inches in the distance, at which she read brilliant type, and seven feet for eight-line

Roman. A concave glass of six inches less power than the one she was tried with before the treatment now affords greater advantage to her vision—a conclusive proof that intraocular myotomy lessens the refractive power of the near-sighted eye.

A boy, aged 16 on May 16, 1865, read brilliant type at fourteen inches, and small pica at thirty-four. Snellen's L at sixty feet, and the first two letters of XL at the same distance. The two last observations were made in the open air, with the sun shining on the printed characters. On May 29, 1860, this patient could read small pica at six inches, and distinguish features at twelve yards only. The near sight was in this case cured.

A CASE OF PROGRESSIVE MUSCULAR PARALYSIS OF THE TONGUE.

ON THE TREATMENT OF ULCERS OF THE LEGS.

By J. K. Spender, Esq. (Bath.)

Papers on the above-named subjects were submitted by Mr. Spender, but abstracts have not been supplied.

ON ANIMAL PARASITE DISEASES OF THE SKIN.

By Balmanno Squire, M.B., F.L.S. (London.)

A very considerable share of the attention of dermatologists both at home and abroad has recently been attracted by those diseases of the skin that depend on the growth of a vegetable parasite in the substance of the epidermis, and of its appendages; and it is in the pathology, diagnosis, and treatment of these affections that our knowledge of the diseases of the skin has of late years made most progress. But, while the study of this division of parasitic cutaneous diseases has been thus advanced, our information regarding the part played by animal parasites in producing disease of the skin has remained almost at a standstill.

The diseases that are produced by epizoa in this country are not only of extremely common occurrence, but are some of them of a most obstinate character. That they are so prevalent is, doubtless, owing to their contagiousness, and their character for obstinacy is due solely to their cause, in the majority of cases, being misapprehended.

Many cases of urticaria (more especially of chronic urticaria), of eczema, of prurigo, of lichen, and of impetigo—or, rather, of diseases that pass by these names—are as distinct in their etiology and pathology, as well as the treatment that they require, from cases of these affections properly so called as they well can be, since in place of being of constitutional origin, they depend essentially on the presence of an animal parasite on the skin.

Often an acute eruption, having apparently all the characters of urticaria, after being treated steadily and perseveringly as if it were dependent on gastro-intestinal disturbance, is found to remain unchanged, or to have got worse rather than better. No disease is looked on as more hopeless than chronic urticaria, and prurigo senilis has ever been an *opprobrium medicinæ*. These two last diseases, indeed, are well deserving of the attention of all who are engaged in the practice of Medicine. They are, certainly, common enough to render it most desirable that their origin and nature should be generally understood, and they are, at least, severe enough, both as regards the degree of distress they occasion and the space of time over which their course usually extends, to make it advisable that some more efficient means should be employed for their relief than what are generally thought to be the appropriate remedies for them.

Many of the most intractable cases of eczema and of impetigo of the scalp—intractable only so long as they are treated on the assumption of their being of constitutional origin—may readily and speedily be got rid of; and many ingenious theories that have been broached on the subject of contagious impetigo may be dispensed with if the influence exercised by animal parasites in the causation of these diseases be properly appreciated. Many obstinate cases of lichen, too, if separated in like manner from the category of constitutional affections, would be found more amenable to treatment than they are generally thought to be.

Mr. Squire has observed that cases of acute urticaria are sometimes occasioned solely by the presence of the acarus scabiei in the epidermis, and he is not aware that this fact has as yet attracted the attention of any other observer. When he says that they are sometimes caused solely by the acarus, he is referring to cases where the skin of the person affected, instead of presenting the ordinary appearances of scabies, was covered with a copious eruption of urticaria, which at first sight appeared to be the only phenomenon present, and was unaccompanied by any signs of gastro-intestinal disturbance; where there was no history of any previous attack, or of any of the ordinary causes of urticaria having been present; where, on searching for some other cause, the acarus has been discovered; and where the condition of the acarian furrows has corresponded to the duration of the eruption.

He has also seen cases of urticaria where the cause of the eruption had been ascribed to gastro-intestinal disturbance, but which were clearly produced by the pulex penetrans.

In many cases of scabies, too, he has known a copious eruption of eczema to have formed so prominent a symptom that the cause of it has been mistaken, and the patient treated without success for a chronic eczema, when, if its origin had been rightly apprehended, the course of the affection need never have been prolonged sufficiently to entitle it to the name of chronic at all.

A large proportion of the cases of eczema and of impetigo of the scalp that occur in private, as well as in public, practice are, he has had occasion to notice, due to the pediculus capitis. At least, this parasite is often present; and, where this has been the case, he has found that directly it has been destroyed the disease has ceased without the employment of any further means having been required.

Many cases of lichen are due to the same cause. He refers more particularly to lichen affecting the temples and the upper part of the back of the neck.

The great majority of cases of chronic urticaria that he has met with, and all cases that he has yet investigated (amounting to a considerable number) of prurigo senilis have been due to the pediculus corporis.

In adopting the term prurigo senilis, since he refers to a disease which most commonly goes by this name, he does not mean to imply that the affection is restricted to old persons (though it is certainly far more common with them than with the middle-aged or young), for he has seen it in a child of four years old. Nor, on the other hand, does he include under the title the various forms of circumscribed prurigo which, nevertheless, occur in old persons, and are regarded generally as equally hopeless with prurigo senilis usually so called.

Prurigo podicis, P. scroti, and P. pudendi muliebris, the author has reason to judge, totally different in their pathology, and in the treatment they require, from the so-called P. senilis. The local varieties of prurigo, though in many cases a lichenous or eczematous affection happening in these localities, are, in the majority of cases, merely sympathetic with, and symptomic of, visceral derangement. Thus, if a careful inquiry be instituted, P. podicis will be found to depend on hæmorrhoids, prolapsus ani, fistula or fissure of the rectum, an accumulation of fæces in the sigmoid flexure, dysentery, intestinal worms, or the presence of some other irritating cause in the intestine. P. scroti is in most cases an eczema or psoriasis of the scrotum, while P. pudendi muliebris is generally symptomatic of some abnormal condition of the vagina or uterus.

ON THE EXTRACTION OF CATARACT BY SUCTION.

By T. R. Teale, jun., Esq. (Leeds.)

After quoting the description of the suction operation which he published in the *Lancet* of September 24, 1864, he exhibited the two best forms of suction instruments at present in use. The first, a modification of his own instrument, consisted of a light glass cylinder with a small curette at one end, and an india-rubber tube with a mouthpiece at the other. The second (Mr. Bowman's) differed from the first in having the suction power applied by a piston in the handle of the instrument, instead of the india-rubber tube and mouthpiece. Both instruments are made by Weiss. In speaking of the difficulties that might be encountered, he stated that the more tenacious forms of cataract often required a considerable amount of suction power to draw them through the curette; and secondly, that in cases where rupture of the posterior capsule had occurred the advance of the vitreous humour would render the removal of the lens more difficult, but not impossible. He claimed the following advantages for his operation:—1. That it is a less difficult operation to perform successfully than others. 2. That it is more speedy in its results. To confirm this cases were quoted: in one the patient read by the aid of cataract-glasses, No. 1 Jäger, on the fifth day after operation; in a second, the patient read small words of No. 1 Jäger on the third day. 3. That most soft cataracts, complete or partial, can be removed at a single operation. 4. That it is rarely followed by the formation of opaque capsule. 5. That it enables the Hospital Surgeon to treat

most cases of soft cataract as out-patients without endangering the result. Mr. Teale also stated that he had successfully removed by suction cataracts in two patients of the age of 42, and that he believed the operation might be employed in patients at a more advanced age.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

August 1, 1865.

At this, Professionally, dull period of the year one of the few things that I can find that are likely to interest your readers is the recently issued report by Dr. Trench, on the health of Liverpool for the past six months. Those portions of it especially which relate to the prevalence of typhus and small-pox have not only a local but a general interest in reference to the history of these diseases.

During the first three months of this year the deaths from all causes in the Borough amounted to 4717, an increase of 615 over the average for corresponding periods of the past ten years. In the second quarter the deaths were 3708, being 170 above the average. The table which gives the mortality of the different wards of the town affords some useful information bearing upon the causation of disease. In order to compare the proportional mortality of different localities, we must subtract the deaths which occurred in the workhouses and Hospitals; these in the first quarter were 1006, in the second 686, and we then find that the mortality in the northern half of the town exceeded that of the southern half, by 459 in the first quarter, and by 398 in the second. To this excess a large number would be added were it possible to assign the general deaths in the Liverpool workhouse to the municipal divisions from whence the patients come, for it is certain that far more are received there from the northern than from the southern half of the town. The balance of mortality inclines here, as I suppose it does everywhere, to the side where "poverty, hunger, and dirt" predominate.

Among the causes of death small-pox has been one of the most conspicuous. It is remarkable how the deaths from this cause have increased during the last three years, as will be seen from the following figures:—

	1863.	1864.	1865.
First quarter . . .	6	59	248
Second do. . . .	28	111	140

The Northern division of the town contributed, as might be expected, the larger contingent of victims to this disease; since, out of the number above mentioned, in the first quarter 172 of the deaths occurred in the North, and in the second quarter 99.

Our old enemy, typhus, occasioned 738 deaths in the past quarter, being an increase of 553 over the average. In the second quarter "typhus and infantile fever" are credited with 519 deaths. During the earlier part of the year the labourers supplied 345 of the deaths, and those just above them in social position, classed as tradesmen, 271. In fact, during the March quarter, nearly half the deaths from fever took place in the Workhouses and Hospitals. In the next quarter the mortality from this cause diminished, but "tradesmen" suffered more than "labourers," there being 227 deaths among the former, against 211 of the latter. Three Medical men and one Relieving Officer have fallen victims to typhus during the past six months; but happily no deaths have occurred, from this cause, among those ministers of religion who have been in constant commudication with the sick. I wish especially to call attention to the fact that, during this period of great mortality, there have been no deaths among the Roman Catholic priests attending the Workhouse. A considerable time before this epidemic, the attention of the ecclesiastical authorities having been drawn to the number of priests who died of fever caught during the performance of their duties in the Workhouse, it was decided to divide the duties among six gentlemen, each taking the duty in rotation. The experience of the last six months seems thus to indicate that the division of the duty diminishes the risk of infection. I should mention that the Protestant clergyman of the Workhouse had an attack of fever, from which he happily recovered. The gatekeeper, the storekeeper, and the baker of the Workhouse all died of fever, and other officials have been attacked during this epidemic, but have got well.

The report points out that during both quarters the deaths from measles, scarlatina, and hooping-cough were very much fewer than during the corresponding periods of last year. The same is true of diarrhœa during the March quarter; but for the succeeding three months, the number is far ahead of that of last year. The diarrhœa of infants has begun this year more early and more severely than usual, and during the last week of the quarter, accounted for thirty-seven deaths, or twenty-five above the average. This is probably due partly to the intense summer heat, and partly to the singular dryness of the season, which has prevented the usual flushing of the sewers by rain.

The Hospital for Infectious Diseases at Everton is now, I hope, in a fair way to be replaced by a more suitable building than the house which is at present occupied. A considerable portion of the necessary funds is already promised. It is estimated that for the purchase of land and the erection of the building about £10,000 will be required. Nearly £3000 has been already promised by individuals, and the corporation has voted a sum of £5000, to be given as soon as the full amount is secured. This institution supplies a want not met by any other, since none of the general Hospitals admit infectious diseases, and the workhouse Hospital provides only for the reception of paupers.

In another direction we are threatened with a plethora of Medical aid, for I notice two advertisements in our daily papers, one just after the other. First, the "Dispensary for Diseases of the Skin" asks for funds to erect a suite of baths; and second, the committee of the "Hospital for Cancer and Skin Diseases" acknowledge "the extensive patronage and kind support" they have received, and announce the proposed removal of the institution to "more central and commodious premises, which they have recently purchased regardless of expense," this institution being "one so much needed and warmly appreciated by that numerous and important class of sufferers from these formidable, frequent, and hitherto intractable maladies." It would certainly add to the interest of the above if the committee would inform us how long cancer and skin diseases, specially the former, have ceased to be "intractable." I am sure that any evidence of so delightful and unlooked-for a change in the character of these "hitherto intractable maladies" will be most thankfully received by your readers. Another curious advertisement I met with the other day, headed, in large letters, "Accouchement." It informed ladies who might be in need of quiet accommodation for the aforesaid purpose that at so-and-so in Chester they could be provided with what they needed, including Doctor, baby-linen, and every requisite. The odd connection of the Doctor and the baby-linen reminds me of an old shipping advertisement, in which I was told that it was announced, among other advantages, that the ship carried "a milch cow and an experienced Surgeon." In connection with the present high price of meat, I saw a proposal a short time since for the revival of the late Dr. Carson's mode of killing animals by blowing air into their veins. This plan was put into practice by some Liverpool butchers a long time (thirty or forty years) since, and I have been told that the meat certainly was very brilliantly red and superabundantly juicy, but that it gave so little satisfaction to consumers that the butchers soon relapsed into their old habits of slaughtering.

The apparatus employed by Dr. Carson was a sort of bellows. I have never seen it, but have heard it spoken of by an assistant of the late Mr. Reay, instrument maker, who made it for Dr. Carson.

Attempt to Drown a Doctor.—On Monday evening a diabolical act was perpetrated at West Hartlepool. As Dr. Oldham, a Medical man, was walking from that place to Old Hartlepool, the dock gates being open, he had occasion to go by the dock ferry which crosses the Jackson dock. He was standing at the edge of the dock waiting for the boat when he was seized by two Irish ruffians, named Bartholomew Roney and Owen Curran, who threw him bodily into the water. The quay was seven feet high, and the depth of water 19 feet. The unfortunate gentleman, being quite unable to swim, sank twice; and on rising for the third time he clutched some timber, and was then dragged out. The miscreants escaped at the time, but were soon after followed and taken into custody. Dr. Oldham was carried home, where he remains in a very feeble state. The fellows were brought before the magistrates, S. Robinson, Esq., and T. Richardson, Esq., and, in consequence of the Doctor being too ill to attend, they were remanded till Saturday.

GENERAL CORRESPONDENCE.

FEVER AND WORKHOUSES.

LETTER FROM DR. J. S. BRISTOWE.

[To the Editor of the Medical Times and Gazette.]

SIR,—I need scarcely remind you that the Workhouse Infirmaries of the metropolis are collectively of greater importance to the metropolitan poor than all the other London Hospitals put together. The Workhouse Infirmaries contain 14,000 or 15,000 beds,(a) the Hospitals about 3700 only; the Workhouse Infirmaries are for the poorest classes,—the final refuge of the bed-ridden and imbecile; they afford an asylum for those whom long illnesses have reduced to poverty; thither are draughted a large proportion of the patients who are discharged unbenefited or incurable from other Hospitals, and to them (or, at least, to boards of guardians) belongs the duty of providing succour for the great majority of those poor persons who are prostrated with typhus, small-pox, cholera, and other epidemic diseases; they represent, indeed, not only the Hospices of the French capital, but I should think fully one-half of the total accommodation provided by the general and other Hospitals of Paris; they are, in fact, the Hospitals for paupers and those whom sickness pauperises—Hospitals, therefore, for the whole of the labouring and poverty-stricken population of the metropolis. Yet these important institutions, having the wide range of duties to discharge, and in some sort discharging these duties, have been permitted to remain a discredit, and in many cases to become a disgrace, to their managers, to our country, and to our age.

Whilst Hospitals abroad, dependent on Government support, —whilst certain Hospitals here, maintained for the most part by private munificence,—have all been undergoing a kind of sanitary revolution, Workhouse Infirmaries have, in great measure, remained stationary, and been permitted to perpetuate in their construction and in their management many of the worst errors of a bygone age. The buildings have been, for the most part, constructed and arranged with the least possible regard to sanitary requirements; the wards are constantly overcrowded with beds and with sick; the nursing duties are wholly, or almost wholly, entrusted to the incompetent hands of effete paupers; the Medical duties—the Medical care, it may be, of several hundred patients—are devolved often upon a solitary Medical officer, and he non-resident and engaged, besides, in the arduous duties of general practice; the general management resides in the hands of a body of men who, to say the least, have not, and probably never had, a conception of the real nature and importance of the duties towards the sick poor which they have undertaken; and, lastly, these institutions, except when they have been dragged before the public in consequence of some scandal, have hitherto, unlike other Hospitals, been kept, as it were, in the background and beyond the healthy influence of publicity. Surely it is not to be wondered at that the functions of these institutions are inadequately discharged, that patients are habitually neglected in them, and that, not perhaps very infrequently, patients die therein as the result simply of such neglect.

To whom this unfortunate state of things is mainly attributable it is not very important for my purpose to inquire. It seems to me, however, that it is due in a very high degree to a thorough misconception on the part, not only of boards of guardians (who have received in this matter more than their due share of blame), but also of the public and of the Profession, in regard to the real position and duties of these Workhouse Hospitals—a misconception which has, I suspect, in some measure promoted, and in some measure been perpetuated, by the erection of subscription Hospitals.

Assuming, then (what every one who gives consideration to the subject must admit), that Workhouse Hospitals are really the important institutions which I have maintained that they are; assuming, too (what I think every one must also admit), that their chief defects are those which I have enumerated, the remedial measures to be adopted—at least the more important of them—become self-evident. They are simply that these Hospitals should be conducted in the same way in which it has been found necessary to conduct all other Hospitals; that they should be erected in situations and arranged on plans suitable for all the purposes they may be called upon to fulfil; that good ventilation and all other necessary hygienic conditions should be secured for them; that the nursing should be done by skilled nurses, of whom a sufficient number should be maintained; that a staff of Medical officers should be appointed to share between them the Medical duties and to consult together in cases of doubt or difficulty, and that these should be assisted, according to circumstances, by one or more resident officers; and, lastly, that the Infirmaries themselves should be made, like general Hospitals, accessible to the public, and subject thus, at the same time, to the criticism and to the benevolent interest of the public.

The results of adopting such measures would be, that the poor in their sicknesses would be thoroughly well provided for, and that admirable provision would be made for dealing with epidemic diseases; that the so-called "general Hospitals" would be relieved of much of that duty which is now needlessly and improperly thrust upon them; and that the charitable few who now chiefly support these latter institutions would be enabled to bestow their charity, not in providing that kind of relief which the parishes are bound to provide, but in aiding in their sicknesses the poorest of the "well-dressed" classes—those (such as clerks, domestic servants, and others) who on small salaries or on small wages have to keep up a respectable appearance; in supporting Hospitals or asylums into which sick persons of small means might be admitted by payment; in providing convalescent institutions; and in maintaining (if need be) special Hospitals.

I cannot, in conclusion, forbear to remark on the unsatisfactory, the false position which the Medical officers of workhouses for the most part occupy. In other Hospitals the responsibility of the Medical care of the patients is divided among a staff of superior officers (regulated in some degree as to numbers by the size of the Hospital), a staff of resident officers, and not infrequently a staff of Medical pupils also. There is no reason to suppose that, unless in exceptional cases, these institutions are over-officered, or that they would be equally efficient if any material diminution in their staff of officers were to be made. But if this be true, how can it be possible for any one man to perform efficiently the Medical duties connected with the numerous inmates of a large Workhouse infirmary? How especially can it be possible for him to do so when his nursing subordinates, on whom he must necessarily rely to report the condition of patients and to carry out instructions, are wholly incompetent and untrustworthy? How can it otherwise happen under such circumstances than that patients shall be frequently neglected, and that the Medical man himself—however able a Practitioner he may be, however anxious to perform his duty—shall be constantly liable to be called to account for disasters which it is beyond his power to prevent, but for which the public will naturally hold him responsible?

I am, &c.,
J. S. BRISTOWE.

2, Queen-square, Westminster, August 9.

(a) See Report of *Lancet* Commission on Workhouse Infirmaries, *Lancet*, July 1, 1865.

MEDICAL NEWS.

UNIVERSITY OF LONDON, 1865.—The following are lists of successful Candidates at the recent First M.B. Examination:—

Entire.

First Division.—William James Garrett, St. Bartholomew's Hospital; Frederick Harry Haynes, St. Bartholomew's Hospital; George Arthur Kenyon, St. George's Hospital; John Wreford Langmore, University College; Jeremiah McCarthy, M.A. Dub., Trinity College, Dublin; Henry Franklin Parsons, St. Mary's Hospital; William Alsept Richards, King's College; Robert Shingleton Smith, King's College.

Second Division.—Herbert Ray Archer, Charing-cross Hospital; Thomas Alphous Buck, Guy's Hospital; Wm. Turberville Buckle, King's College; John Cavafy, St. George's Hospital; Joseph Groves, B.A., King's College; John James, University College; Dun. McLachlan Maclure, student before 1839, Westminster Hospital; Henry Morris, B.A., Guy's Hospital; George Vivian Poore, University College; James Sawyer, Queen's College, Birmingham; William Thomas, Queen's College, Birmingham.

Excluding Physiology.

First Division.—George Rolph Raine, Guy's Hospital.

Second Division.—Chas. Taylor Aveling, St. Thomas's Hospital; Edward Wm. Berridge, St. Bartholomew's Hospital; Joseph Priestnall Cheetham, Guy's Hospital; John Reuben Bathurst Dove, London Hospital; Reginald Eager, Guy's Hospital.

Physiology Only.

First Division.—Julian Augustus Michael Evans, University College; John Spencer Ferris, King's College; Ralph Gooding, B.A., King's College; George Wallington Grabham, St. Thomas's Hospital; John Grimes, King's College; John Pearson Hughes, University College.

Second Division.—Clement Smith Barter, St. Bartholomew's Hospital; Henry Hargreaves Birtwell, St. Thomas's Hospital; John Wickham Legg, University College; George Hunt Orton, St. Bartholomew's Hospital; Paul Henry Stokoe, Guy's Hospital.

UNIVERSITY OF EDINBURGH.—List of candidates who received the Degree of Doctor of Medicine, the Degree of Bachelor of Medicine, and the Degree of Master of Surgery, on Tuesday, August 1, with the titles of their theses:—

*** Those who have obtained Prizes for their Dissertations.
** Those deemed worthy of competing for the Dissertation Prizes.
* Those commended for their Dissertations.

Candidates who received the Degree of Doctor of Medicine.—*Anderson, James Keith, Scotland, "On the Typhoid Symptoms of Typhus Fever, and their Probable Cause." *Barnes, George Robinson, England, "On Pyæmia and Ichorsæmia." Besnard, Joseph James Alfred, Mauritius, "On the Origin of Typhoid Fever." *Blunt, Thomas, England, "On Acute Rheumatism." *Breda, Peter Johannes Albertus Van, Cape of Good Hope, "On the Pathology, Etiology, and Therapeutics of Hæmorrhage." Bush, Richard Hake, India, "On the Different Varieties of Bright's Disease." Campbell, Duncan, Scotland, "On the Origin and Progress of Medical Science." Chiappini, Antonio Lorenzo, Cape of Good Hope, "On Natural Labour." Chisholm, William, Scotland, "On Hæmoptysis." *Chiene, John, Scotland, "On the Diseases of the Breast." Compigné, Horatio David Steel, England, "On Diabetes Mellitus." Compson, John Charles, England, "On the Nature and Treatment of Tetanus." *Cook, John, London, "On Rheumatic Fever." Corna, James, Scotland, "On Pneumonia." Davson, Smith Houston, British Guiana, "A Few Remarks on Embolism, bearing chiefly on its Origin from Detachment of Fibrinous Deposits from the Interior of the Heart." Denton, Thomas John, England, "On Diphtheria." Duncan, Andrew James, India, "On Ulcer of the Stomach." **Evans, Thomas, Wales, "On the Clinical History and Pathology of Typhus Fever." Fentem, Philip Sheldon, England, "On Inversion of the Uterus." *Forbes, Walter, Scotland, "On Antimony." Fothergill, John Milner, England, "On Fever, and the Fevers of Growth and Decay." Gentle, David, Scotland, "On Exophthalmic Goitre." Glendinning, Douglas, Scotland, "On Auscultation and Percussion." Gregory, William Henry, England, "On Hydrophobia." Hoggan, Edward, India, "On Dysentery." Inman, Robert, England, "On Tedious Labour." *Johnston, William, M.A., Aberdeen, Scotland, "On Deaths attributed to the Inhalation of Chloroform." Kennedy, John George, Scotland, "On Cancer." Knight, Alexander Angus Halley, Scotland, "On the Position of the Fœtus in Utero." ***Lightbody, William Henry, Wales, "Observations on the Comparative Microscopic Anatomy of the Cornea of the Vertebrates." *M'Donald, William, Scotland, "On the Epidemic Fever at Ayr in 1661-62-63." **M'Dougall, John Aymers, Scotland, "Observations on Acute Phosphorus Poisoning." *Mackelvie, Robert, Scotland, "On Enteric Fever: its Etiology and Prophylaxis." M'Laren, Roderick, Scotland, "On Heart Disease." Macpherson, Peter, Scotland, "On Natural Labour, with some Remarks on Certain Complications." Morison, John, Scotland, "On Diabetes Mellitus: its Symptoms, Pathology, and Treatment." Renton, George, England, "On Variola." *Richmond, Sylvester, England, "On Acute Orchitis." Rockett, Joseph Hildreth, England, "On Epilepsy." Sabben, James Thompson, England, "On Parturition: its Exciting Causes, and the Gorged and Clotted Placenta." Sueur, Ryk Tulbagh le, Cape of Good Hope, "On Cholera Morbus." Thin, Robert, Scotland, "On the Mechanism of the Human Thorax in Respiration." Thorburn, Robert, England, "On Uræmic Poisoning." *Werry, Augustus, Smyrna, "On Hysteria." Wright, David, Scotland, "On some Diseases of Joints." ***Wyllie, John, Scotland, "Observations on the Physiology of the Larynx."

Candidates who received the Degree of Bachelor of Medicine.—**Fenn, Edward Liveing, England, "An Inquiry into Certain Points connected with the Physiology and Pathology of the Cerebellum." *Fothergill, Thomas Prince, England, "On Abscess of the Liver." Greenfield, Charles Bailey, England, "On Obstacles to the Progress of Therapeutics." Wolston, Walter Thomas Prideaux, England, "On Erysipelas: its Symptoms, Causes, Nature, and Treatment, with Cases in Point."

Candidates who received the Degrees of Bachelor of Medicine and Master of Surgery.—*Aitkin, Lauchlan, Scotland, "On the Hepatine of the Liver, and its relation to the Pathology of Diabetes Mellitus." **Armistead, William, England, "Researches on the Histology of the Blood Corpuscles." **Clark, John Barclay, Scotland, "On the Reproduction of Limbs of the Crustacea." Hamilton, Thomas, Scotland, "Remarks on the Operation of the Excision of Diseased Joints." *Jamieson, William Allan, Scotland, "On Acute Rheumatism." Kirk, Robert, Scotland, "On the Pathology and Treatment of Ovarian Dropsy." Kirkpatrick, William Hutton, Scotland, "On Diseases of the Mammæ." *Mitchell, Samuel, England, "On the Early Stages of Inflammation." *Moore, John Murray, England, "On Certain Diseases of the Pharynx, Larynx, and Trachea, with an Appendix on Tracheotomy." Oman, Nathaniel Daniel Isaac, Scotland, "On Vesico-Vaginal Fistula." Ridpath, David, Scotland, "On Symptoms." Russel, James Cunningham, Scotland, "On the Connexion between Cardiac and Pulmonary and Renal Diseases." Torrop, James Spens, Scotland, "Notes on Inflammation." Warburton, William Pleace, Prince Edward Island, "On Pleurisy." Wight, George, Scotland, "On Melanosis and Spurious Melanosis." Wood, Julius John, Scotland, "On the Etiology of Climate." Young, Walter Wilson, Scotland, "On Diseases of Joints."

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH.—DOUBLE QUALIFICATION.—The following gentlemen passed the Preliminary Examination in General Education and received Certificates during the recent sittings of the Examiners:—

William M. Allan, Newfoundland; Handel Ashworth, Bury, Lancashire; C. C. Bonthron, Fifeshire; Edward Carse, Musselburgh; Archibald Chalmers, Musselburgh; John N. Fleming, Cockermouth; James Gibson, Edinburgh; Alfred Gill, Cumberland; David James Hamilton, Falkirk; W. A. Henderson, Edinburgh; Alexander Innes, Edinburgh; H. S. Kinder, Sale, Manchester; John Macdonald, Edinburgh; R. T. Manson, Heingington, Darlington; J. Matthews, Kirkdale, Liverpool; Douglas Menzies, Edinburgh; Robert Pairman, Edinburgh; Wm. Richardson, Northumberland; George Robinson, Lincolnshire; T. C. Wright, Dormont, Lockerbie.

The following gentlemen passed their First Professional Examinations:—

Samuel Woodcock, Glossop; Charles Jones, Herefordshire; Colin Wm. MacRury, Inverness-shire; James Barton Gass, Dumfriesshire; William Oliver, Coleraine; James C. Kerr, Edinburgh; William Benjamin Griffith, Edinburgh; James Mitchell, Kirdcudbright; Bourke Long; Wm. Dyson Wood, Wakefield.

And the following gentlemen passed their Final Examinations, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh:—

David Young, Perth; John Tait Budge, Caithness; Albert William Coppinger, Cork; Donald Campbell, Perthshire; William Thomson Crabbe, Kirriemuir; George Ritchie Gilruth, Leith; William Young Veitch, Durham; Philip Le Feuvre Kilroy, Plymouth; Thomas Gray Archdall, County Fermanagh; Hubert Henry Wilkinson, Rotherham; Thos. Currie, Fifeshire; Wm. Fletcher M'Nutt, Nova Scotia; James Mulcahy, Blarney; Emerson James Reynolds, County Dublin; Richard Francis Wilson, Carlow; Albert Buscarlet, Pau; Robert Vicars-Fletcher, Dublin; Arthur Strickland Tarbolton, Leeds; Richard Walter Waring, Cavendish; James Hy. Wardle, Duckinfield; Wolfred Nelson Cote, United States; Matthew Hill, Dublin; Thomas James Kane, Galway; Thomas Fielding Martin, County Louth; William Duguid, Elgin; John Moir, Edinburgh.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 16th inst.:—

John March, L.S.A., New Wandsworth, Surrey, diploma of membership dated November 15, 1860; William Bathurst Woodman, M.D. St. Andrews, and L.S.A., London Hospital, April 12, 1861; Charles Antonini, L.S.A., King's College Hospital, May 20, 1862; William Ray, West-square, Southwark, November 18, 1864; Alexander McIvor Tindall, St. Bartholomew's Hospital, April 25, 1865; Jonas Richard Leake, L.R.C.P. Edin., Wingfield, Upper Norwood, April 26, 1865; Harry Davenport Dod, Great Coram-street, April 28, 1865; William Hoffmeister, L.S.A., Cowes, Isle of Wight, July 25, 1865; and Herbert Tibbits, L.R.C.P. Lond., and L.S.A., St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—Mr. William Mackeown, County Derry, passed his First Professional Examination during the recent sittings of the Examiners; and the following gentlemen passed their Final Examinations and obtained the Diploma of the College:—

Richard Gilbert Williams, Kinsale; James Byers Thomas, India; Thos. Hamilton, Edinburgh; John Sinclair Holden, Belfast; William Alexander Rathfriland; James Christison, Forfarshire; David Gentle, Kinross-shire; John Currie, Dunfermline; Henry Cunningham Manley, Lisburn; Alex. Young, Portglennie, Ireland; Andrew Allison Boyle, Glasgow; John Macfee, Buteshire; John Barbour, England; Charles Hazen Lering Johnstone, New Brunswick; Arthur Strange, Ashton-under-Lyne; Duncan Turner, Argyllshire; Edward M'Crystal, County Derry; William Johnrton, Aberdeen; David Stewart Hepburn Smith, Louisiana; Thomas O'Hare, County Down; William Chisholm, Roxburghshire; Horatio David Steele Compigné, Hampshire.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, August 10, 1865:—

John Comyns Leach, Crediton, Devon; Frederick Walter Lowndes, Southport, Lancashire.

The following gentlemen, also on the same day, passed their first Examination:—

Thomas Baron, St. Thomas's Hospital; Charles Hedley, Guy's Hospital; Robert Wood, London Hospital; Charles Edward Howard, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BARRATT, JOSEPH G., M.D. St. And., has been appointed Physician to the London Surgical Home, Stanley-terrace, Notting-hill.

COOPER, GEORGE H. C., M.R.C.S. Eng., has been appointed Surgeon to the Holloway and North Islington Dispensary.

FENWICK, SAMUEL, M.D. St. And., has been appointed Assistant-Physician to the City of London Hospital for Diseases of the Chest.

GITTAND, R. B., M.D., has been appointed Assistant Medical Officer at the Essex County Lunatic Asylum, Brentwood.

HARRISON, ARTHUR R., M.D. St. And., has been appointed Medical Superintendent of the Lunatic Asylum at Adelaide.

HECKFORD, NATHANIEL, M.R.C.S. Eng., has been elected Surgeon to the Islington Dispensary.

HEWITT, GRAILY, M.D. Lond., has been appointed Professor of Midwifery in University College, and Obstetric Physician to the Hospital.

IRELAND, Mr. L., has been appointed Assistant House-Surgeon to the South Dispensary, Liverpool.

KELLAND, C. S., M.R.C.S. Eng., has been appointed Surgeon Superintendent in the Government Emigration Service.

O'FOOTE, HARRY D, M.D., has been appointed Medical officer to the Rotherham District of the Rotherham Union.

O'HANLON, DAVID, M.D. Glasg., has been appointed a Justice of the Peace for the County of Limerick.

PAINE, HENRY JAMES, M.D. St. And., has been appointed Physician to Glamorganshire and Monmouthshire Infirmary, Cardiff.

TAYLOR, WILLIAM, M.D. Edin., has been appointed Admiralty Surgeon and Agent for the Port of Cardiff.

WELCH, T. D., M.B., has been elected Physician to the Islington Dispensary.

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DEATHS.

BELL, HENRY, L.R.C.P. Lond., at Aberystwith, Cardigan, on July 28, aged 55.

BLAND, Dr. JAMES, on board the ship *Grand Bonny*, on the passage from the West Coast of Africa, on June 15.

CREAN, ROBERT C., L.R.C.S.I., Assistant-Surgeon Royal Artillery, at Wexford, Ireland, on August 3.

WEST, JOHN W., M.R.C.S. Eng., at Poole, Dorset, on June 1, aged 55.

WHITESIDE, JAMES H., M.D. Edin., at Stockton-on-Tees, on August 13, aged 46.

POOR-LAW MEDICAL SERVICE.

RESIGNATIONS.

*** The area of each district is stated in acres. The population is computed according to the last census.

Axbridge Union.—The Eleventh District is vacant; area, 7100; population, 1719; salary, £43 10s. per annum.

Bury Union.—Mr. Joel Brown has resigned the Heap District; area, 8996; population, 22,537; salary, £60 per annum.

Cranbrook Union.—Mr. D. Mackeith has resigned the Sandhurst District; area, 4200; population, 1231; salary, £30 per annum.

Cuckfield Union.—The Second District is vacant; area, 9564; population, 2398; salary, £52 per annum.

Devizes Union.—Dr. Evens has resigned the Fourth and Fifth Districts; area, 11,790; population, 2761; salary, £63 per annum.

East Retford Union.—Mr. Russell has resigned the Scrooby District; area, 2572; population, 373; salary, £2 per annum.

Erpingham Union.—Mr. H. J. Buck has resigned the Cromer District; area, 7706; population, 4015; salary, £56 per annum. And also the Northrepps District; area, 4362; population, 1195; salary, £20 per annum.

Liverpool Parish.—Mr. F. D. Fletcher has resigned the Workhouse; salary, £100 per annum.

Pocklington Union.—The Sutton-upon-Derwent District is vacant; area, 14,718; population, 2399; salary, £24 per annum. The Bishop Wilton District is also vacant; area, 21,580; population, 2589; salary, £28 per annum.

Romney Marsh Union.—The Brookland District is vacant; area, 7688; population, 966; salary, £50 per annum.

Stow Union.—Mr. Richard Luffingham has resigned the Hinderclay District; area, 1458; population, 388; salary, £7 10s. per annum.

Thetford Union.—The Thetford District is vacant; area, 32,291; population, 4261; salary, £63 18s. 8d. per annum. Also the workhouse; salary, £15 per annum.

West Ward Union.—Mr. George Fothergill has resigned the Morland District; area, 22,170; population, 2575; salary, £25 per annum.

Wilton Union.—The Wilton District is vacant; population, 3662; salary, £100 per annum.

Woburn Union.—The Toddington District is vacant; area, 11,791; population, 4687; salary, £85 per annum.

APPOINTMENTS.

Ashby-de-la-Zouch Union.—Henry Toone, M.R.C.S.L., to the Fourth District, until June 24, 1866.

Blything Union.—Henry J. Horton, M.R.C.S.E., L.R.C.P., to the Eighth District, until June 24, 1866.

Doncaster Union.—Rowland Hills, M.R.C.S.E., L.S.A., L.M., to the Conisbrough District, until March 25, 1866.

East Ward Union.—Fergus Armstrong, M.D. Edin., M.R.C.S. Edin., L.S.A., to the Appleby District.

Godstone Union.—Edmund E. Hooper, M.R.C.S.E., L.S.A., to the Caterham District. Robert G. Watts, M.D. St. And., M.R.C.S.E., L.S.A., to the Western District and the Workhouse.

Hatfield Union.—Ernest Ringrose, M.R.C.S.E., L.S.A., to the First District until 29th September next.

Mere Union.—William N. Marshall, M.R.C.S.E., L.S.A., to the Second District.

Penistone Union.—Charles O. Rowley, L.R.C.S.E., L.S.A., to the Silkstone District.

Stockport Union.—William Bale, M.R.C.S.E., L.S.A., to the Heaton Norris District.

Wycombe Union.—James Cheese, M.R.C.S.E., to the Eleventh District until March 25, 1866.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council, held on the 10th inst., Mr. James Remington Stedman, of Guildford, was admitted a Fellow of this College. His diploma of membership is dated June 24, 1839.

GUY'S HOSPITAL MEDICAL AND SURGICAL SCHOOL.—MEDALLISTS AND PRIZEMEN, 1864-65.—The examination of students in Medicine and its allied sciences took place on August 3. *Third Year's Students.*—The Treasurer's Gold Medals: Henry Denne, Sandwich, for Medicine; John Gill, Weston, Hawkestone, Shrewsbury, for Surgery. Prizes: Henry Denne, Sandwich, First Prize, £40; John Gill, Weston, Hawkestone, Shrewsbury, Second Prize, £35; Henry S. Taylor, Alton, Hants, Honorary Certificate. *Second Year's Students.*—Benjamin Neale Dalton, South Lambeth, First Prize, £35; William Johns, Haverfordwest, Second Prize, £30; William Spratt, Honorary Certificate; James Rawlings, St. Pinnock's Rectory, Liskeard, Honorary Certificate; Arthur Bowes Elliott, Richmond, Yorkshire, Honorary Certificate; Samuel John Truman, Nottingham, Honorary Certificate. *First Year's Students.*—William Bevan Lewis, Cardigan, First Prize, £30; John F. Codrington, Newcastle, Australia, Second Prize, £25; Frederick William Salzman, Brighton, Third Prize, £10 10s. (presented by one of the Governors); James William Barry, Ramsgate, Honorary Certificate; Charles John Sells, Guildford, Honorary Certificate.

ROYAL COLLEGE OF SURGEONS.—It may save some of our readers a little trouble to remind them that the Museum and Library of the above institution will be closed as usual during the month of September for the purpose of cleaning and re-arranging the collections.

THE LATE PREMIER OF CANADA.—The funeral of Colonel Sir Etienne Pascal Taché took place on the 2nd inst., at the village of St. Thomas, which was his home. He held the honorary rank of Colonel in the British Army and Aide-de-Camp to the Queen, and the honour of knighthood was conferred upon him by her Majesty in person some seven years ago in recognition of the steady and long services which he had rendered to the Queen in Canada. He was ever a staunch Loyalist. As an officer of the Canadian Chasseurs he fought in 1812 to preserve the connexion of Canada with the British Crown. The war over, he laid aside his sword, studied Medicine, took the degree of a Doctor, and practised with success. It was he who uttered the well-remembered declaration that the last gun fired for British supremacy in America would be served by a French Canadian. He presided over the Quebec Conference in October last. He was twice Premier, and was a Minister when he died. A firing party of her Majesty's regular troops and 150 men of Militia corps attended the funeral. The pall was borne by the members of the Cabinet, of which he was the chief at the moment of his death. He was buried with great honour. It is supposed that one of his colleagues will become chief of the Cabinet in his place.

DISEASE AND DRUNKENNESS.—Dr. Hardwicke, the Deputy-Coroner for West Middlesex, has held an inquiry at Stoke Newington touching the death of Mr. Henry James Gully, a warehouseman, who was found insensible in the street on Saturday last, surrounded by a crowd of people. The police rubbed his ears and slapped his face, believing he was drunk. He was then placed in a spring cart and removed to the station-house. His wife was refused admission to see him there. Five minutes after his arrival, however, the divisional Surgeon attended, and recommended his removal to his own house. He fell down in an epileptic fit, and on Monday he died from rupture of a bloodvessel in the lungs. The foreman of the jury thought that the wife should have been admitted to the station where her husband was lying under the necessary care of a Surgeon, and the jury hoped that in future the police would be more careful in ascertaining whether a person was suffering from a disease or from drunkenness before using violent measures of any kind. If disease was found to be the cause, the nearest Medical assistance should be obtained. A verdict of "Death from natural causes" was recorded.—*Times*, Friday, August 4.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** We are sorry that our present arrangements do not permit us to insert notices of marriage.

J. M.—See Tyler Smith's "Obstetrics." He quotes from Dr. W. Farr to the effect that they are 3 *per cent.*

Castleton.—Consult our last Students' Number, for September 17, 1864 determine whether the youth is to be Physician, Surgeon, Apothecary, or all three; then you will decide whether he shall pass the Oxford or Cambridge Local Examinations, or the Matriculation Examination of the University of London, or the Preliminary Examination at the College of Physicians or College of Surgeons; or at Apothecaries' Hall. The matriculation of the University of London, to be held next January, at Burlington House, is to be recommended. Write to the Registrar.

CASE IN MEDICAL ETHICS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—You will greatly oblige by inserting the following in your "Notes and Queries:"—

In a very remote region, having but two Medical men, the one military and the other civil, A, the civil Doctor has a contract with five sugar estates conjointly. He becomes very ill, and calls in the military *confrère* Z, who attends A very assiduously, and also goes up to visit each of the five estates, and to one of the five (X) he continues his visit upon three further occasions. A gets better, and sends home for a piece of plate to present to Z. During the transit of the plate the estates' agent, in settling with A, hands in part payment an account from Z to estate X of £6 12s. 6d. for his last three visits.

N.B.—There had been for some time a misunderstanding between A and manager of X, who had insisted on having an account from Z. Z handed the above-mentioned, and received the amount. A accepted the account in part payment of his salary, and the plate is just arrived. What ought A and Z to do? I am, &c. ZANY.

West Indies, July 21, 1865.

*** A should invite Z to dinner, and present him with the plate. Z should hand over the £6 12s. 6d. to A. This would be handsome, and doing things like gentlemen.

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The Medical Coroner of Belfast.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I had left the night bell, and even the stethoscope, at home—first victimising a kind young friend into my *locum tenens*—and I had firmly resolved to have nothing whatever to do with things Medical for weeks to come—in short, I was "on my holiday." No sooner, however, had I set foot on the shores of the Green Isle yesterday (the intended scene of my "relaxation") than a highly interesting "case" presented itself, and the old, every-day instinct revived in me.

It was a contested election for the office of coroner for the borough of Belfast, and a trial of strength between Physic and Law, the former triumphing by a large majority. This result, which is most gratifying to me on principle—for I fully concur in the views so ably advocated in the pages of the *Medical Times and Gazette* regarding the greater eligibility of a member of the Medical than one of the legal profession for the office in question—and my gratification is heightened tenfold in finding that the victor is no other than my old and esteemed friend, Dr. R. F. Dill. I may add that in laying claim to his friendship, it is a distinction shared in by very many of the citizens of Belfast, and I am sure that no appointment has ever been made in this same City of Belfast which has given more general satisfaction, both on public and private grounds. I make no apology for forwarding to you a report of the proceedings at the election contained in the Belfast *News-letter* of to-day; for I am sure you will be pleased to see the arguments you have so often urged making way among the laity, for the speech of Mr. Alderman Lindsay on the occasion, as the proposer of Dr. Dill, is nothing else than a summary of your opinions put in a very clear and impressive form. The large majority and the expression of kindly feeling which even his opponents gave expression to, must be highly gratifying to Dr. Dill.

I am, &c.,

An Occasional Correspondent Abroad.

Belfast, August 10, 1865.

Waltzing Operation for Cataract.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—If the following piece of experience be judged worthy a place in your columns, you will publish it accordingly:—

Some time since I was engaged by a man, coming from the interior of this country, to operate on him for cataract. The case was a very favourable one. I judged it to be a case of soft cataract, and determined to break it up. The patient was of the humbler ranks, and lodged at a coffee-house here—a beer-house it would be called in England. The *confrere* whom I had engaged to assist me was prevented from coming by some other pressing engagement, so the first competent person I met happening to be Dr. Bioni, of this city, I induced him to come and assist me. The patient was prepared, the pupil being dilated by belladonna on our arrival, and I determined to operate on the right eye first. We placed our patient on a low chair, and Dr. Bioni sat opposite him, holding the eyelids open. I placed myself behind the patient, holding his head firmly against my own breast, and supporting my right hand on the patient's temple, I passed into the eye, through the cornea, at its external side, the needle I chose to operate with. I had made a cut or two into the capsule, preparatory to breaking up the lens, when all of a sudden a terror seized the patient; he uttered a scream, stood up, and together we executed what a bystander may imagine to be a couple of turns of a waltz round the large room! I held the needle steady, and I held the head also as firm as possible; the needle was all the time in the eye. Dr. Bioni looked on with amazement. Fortunately I was taller and stronger than my patient. I was obliged to follow the movements of my patient's legs, but I held firm his head. After making, as I said above, the circuit of the room a couple of times, I ultimately forced my dancing patient down again on his chair, when I withdrew the needle, abused him roundly in good set terms, in which the modern Greek is not deficient, borrowing some of the choicest from the Turkish. I bound up the eye, however, applying cold, acting and giving directions as if all had passed according to rule. I made the observation to Dr. Bioni, "No harm has happened; this operation will very likely succeed." He told me afterwards that he thought I said so in order not to say, "L'œil est crevé," as I must have said something or other, he thought. I went the following day to visit my patient, but he had disappeared. "It was his affair," I observed to the people of the house, and I thought no more of it. Six months afterwards I found one morning Dr. Bioni walking up and down the Pharmacy in a very excited state, and when I entered he cried out, "Le voila! le diable, le voila; et il voit, il voit!" "There he is, that devil, and he sees, he sees!" And there he was, our waltzing cataract patient, the cataract absorbed, and with very good sight. He had brought other patients to me from a distance in the interior. This was the first and only occasion I performed this operation "en valtsant,"—like him who rode on the crocodile.

I am, &c. James M'Craith, F.R.C.S.,

Smyrna, June 8. Surgeon R.S. Hospital, Smyrna.

P.S.—*Apropos* of the modern Greek and its pronunciation. It is known to "Grecians" in our European schools, that the modern Greeks pronounced all their diphthongs, *οι*, *ει*, *αι*, and their vowels *υ* and *ι*, all alike, giving them the sound of *double e* in the English word "meet." Accordingly, their reading of Homer, or any other of their authors, is very different indeed from what is taught in our schools, and a great and learned dispute has arisen accordingly. Now, many years since I stumbled over a proof of the modern pronunciation being the right one, when studying the modern Greek. At least, the instance I am about to give will show how the priestess at Delphos pronounced her Greek. Thucydides relates that the Athenians sent to consult the oracle before the Dorian war, and the answer was,

"Ἥξουσι Δωριάσιν πόλεμος καὶ λοιμὸς ἅμ' αὐτοῖς."

Now, says the historian, we only knew afterwards that it was plague that was meant, not famine; showing that "λοιμος" and λιμος were pronounced alike, as the modern Greek pronounces them to-day—an argument for Professor Blaikie of Edinburgh to confute his opponents with, if such a distinguished Grecian has not it already at his fingers' ends. The variety of spelling, as in modern languages, gave precision to the written Greek.

COMMUNICATIONS have been received from—

Zany; Mr. R. Warrington; Mr. James Robertson; Mr. T. W. Bartleet; Dr. Joseph Mulrenny; Apothecaries' Hall; An Occasional Correspondent; J. F.; Mr. A. Aaronson; Mr. Daniel W. Parsons; Mr. Charles Williams; Mr. F. Andres; Dr. C. Kidd.

BOOKS RECEIVED.

The "Flint Implements" from Drift not Authentic: being a Reply to the Geological Evidences of the Antiquity of Man. By Nicholas Whitley. 1865.

*** In this pamphlet the author endeavours to show—1. That some of the so-called flint implements have been undoubtedly formed by natural causes, and not by the hand of man. 2. That there is not sufficient evidence to prove that even the most perfect flint "implements" are manufactured tools, but that the contrary opinion is the more probable. He thinks that geologists have, in the excitement of the hunt, overrun the scent, and suggests that they should "try back."

Selection of Documents and Autograph Letters in Testimony of the Cures effected by the Electro-Chemical Bath of J. F. I. Caplin, M.D. Translated from the French Edition. 1865.

*** A collection of laudatory epistles from theatrical performers and others. Sample:—"My dear, good, kind Doctor,—Never can my heart forget you! How much do I owe you every day testifies," etc., etc.

G. V. Townley, ou du Diagnostic de la Folie au point de Vue Legal. Paris: V. Masson et Fils.

*** The writer argues against the necessity of finding the criminal "guilty" or "not guilty," "responsible" or "irresponsible" simply, but advocates in similar cases the verdict of "guilty, with extenuating circumstances," whether these arise from moral or physical conditions.

The Pharmaceutical Journal. July. London: John Churchill and Sons.

*** Alleged Poisoning by Sulphate of Zinc, by W. Herapath, sen.; On the Food of Man in Relation to his Useful Work, by Dr. Lyon Playfair; On Combustion by Invisible Rays, by Professor Tyndall; List of the Members, Associates, and Apprentices of the Pharmaceutical Society, etc.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 12, 1865.

BIRTHS.

Births of Boys, 1065; Girls, 977; Total, 2042.
Average of 10 corresponding weeks, 1855-64, 1695·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	702	672	1374
Average of the ten years 1855-64	613·7	590·5	1204·2
Average corrected to increased population..	..	..	1324
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	3	5	8	..	3	7	30
North ..	618,210	5	4	7	2	10	10	40
Central ..	378,058	..	2	7	2	5	9	17
East ..	571,158	3	1	12	..	9	20	40
South ..	773,175	2	2	13	3	13	13	74
Total ..	2,803,989	13	14	47	7	40	59	201

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·672 in.
Mean temperature	62
Highest point of thermometer	76·5
Lowest point of thermometer	47·5
Mean dew-point temperature	54·5
General direction of wind	S.W.
Whole amount of rain in the week	0·78 in.

APPOINTMENTS FOR THE WEEK.

August 19. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

21. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

22. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

23. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical House, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

25. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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Hooper's Brighton Seltzer, and Vichy,

½-pints, 4s. ; pints, 5s. ; quarts, 7s. per dozen.
PURE SODA, 3s. ; PURE POTASH, 3s. 6d. per dozen.
HOOPER'S LITHIA WATER, 5s. 6d. per dozen.
5 grs. in each Bottle.
Six dozen carriage free, assorted or otherwise.

*** Mr. HOOPER has just received a shipment of NATURAL SELTZER WATER of this year's fillings, which he supplies as follows :—

Hamper, as imported, of 25 pints .. ... 14s. 0d. } Hamper
Do. do. 25 quarts .. ... 18s. 9d. } included.

Discount to the Medical Profession.
HOOPER, OPERATIVE AND MANUFACTURING CHEMIST,
7, Pall Mall East, and 55, Grosvenor-street, London.
Laboratory, Mitcham.

Pure Aerated Waters.

ELLIS'S, RUTHIN, SODA WATER.
ELLIS'S, RUTHIN, POTASS WATER.
ELLIS'S, RUTHIN, SELTZER WATER.
ELLIS'S, RUTHIN, LEMONADE.
ELLIS'S LITHIA AND POTASS WATER,
An excellent internal Remedy for Gout.

The public are particularly requested to observe that every cork is branded "R. Ellis and Son, Ruthin," without which none is genuine.

May be obtained from all respectable Chemists, Confectioners, and Hotel-keepers; and, Wholesale only, from R. ELLIS & SON, Ruthin, North Wales.

Aerated Lithia Water. — Messrs.

BLAKE, SANDFORD, and BLAKE are prepared to supply the LITHIA WATERS (of which they were the original manufacturers under DR. GARROD'S instruction) of any strength prescribed by the Profession for special cases. Those in constant use contain 2 grains and 5 grains in each bottle, either by itself, or combined with BICARBONATE of POTASH or PHOSPHATE of AMMONIA.

The following Waters as usual :—Potash, containing 18 grains of the Bicarbonate in each bottle ; Citrate of Potash, 30 grains ; Soda, 15 grains ; Ammonia, 10 grains ; Seltzer and Vichy from their respective analyses, and a very delicious, as well as useful, MINERAL ACID WATER.

BLAKE, SANDFORD, & BLAKE, Pharmaceutical Chemists, 47, Piccadilly.

Struve's Seltzer, Spa, Kissingen, Vichy,

and other MINERAL WATERS. Under Her Majesty's especial patronage.—ROYAL GERMAN SPA, BRIGHTON.—The bottled waters are sold at the Pump-room, NOW OPEN for the forty-first season ; and by GEORGE WAUGH and CO., Pharmaceutical Chemists to the Queen, No. 177, Regent-street, London, W. ; and by other respectable houses in London and the provincial towns, where Prospectuses, with the highest Medical testimonials, may be obtained gratis.

CAUTION.—Owing to the use of Struve's bottles by other parties attempting imitations, sold as "BRIGHTON Seltzer," "BRIGHTON Vichy," &c., an analysis of some of which has shown an utter disregard of their true chemical composition, please to observe that STRUVE'S name is on the label, and red-ink stamp affixed to every bottle of Struve's manufacture.

Dr. Althaus, in his recent work on "The Spas of Europe," says :—"If artificial mineral waters are prescribed, we should insist on STRUVE'S alone being used."

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RENNET AND PEPSINE WINE.
PURE COD-LIVER OIL.
LIEBIG'S FOOD, FOR INFANTS AND INVALIDS.
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Extractum Carnis "Liebig,"

GLUTEN BREAD, BISCUITS, CHOCOLATE, SEMOLA, FLOUR, &c., for DIABETES, DEBILITY, &c.

PREPARED MALT FLOUR for BARON LIEBIG'S SOUP for CHILDREN.

REAL TURTLE and other Soups, GILLON'S ESSENCE of BEEF, MUTTON, and CHICKEN ; MEAT LOZENGES, and every Article of Genuine FOOD for INFANTS and INVALIDS.

VAN ABBOTT,
DIETETIC DEPOT, 5, PRINCES-STREET, CAVENDISH-SQUARE, W.
Vichy, Potash, Lithia, and all other Mineral Waters.

LIEBIG'S FOOD

FOR INFANTS AND INVALIDS.
Prepared and Sold by M. E. FOSTER, English and Foreign Chemist,
196, Bishopsgate Without, E.C.
In Tins, 6d., 1s., and 2s., with Directions.

This food, for some time prepared by Mr. Foster for some of his German customers, has been highly approved by those Medical men who have prescribed its use. See letter from M.R.C.S., "Lancet," Feb. 4, 1865.

CARBOLIC ACID,

OR MEDICAL, COMMERCIAL, AND DISINFECTING PURPOSES,
at greatly reduced prices.
F. C. CALVERT and CO. (Original Manufacturers),
7, BOND-STREET, MANCHESTER.
Particulars free on application.

FOR SURGEONS, HOSPITALS, DISPENSARIES, CHEMISTS, AND EXPORTERS.

Tinctures, Concentrated. (Herrings'.)

Economy, Expedition, Uniformity, and Superior Quality are combined in these elegant Preparations. When diluted with seven parts of proof or rectified spirit, as the Tincture may require, the product will be found equal to that most carefully prepared by the formula of the Pharmacopœia, and in many cases far superior. The Economy and Expedition are obvious.

The difficulties of manufacture are overcome by an adaptation of the modern Quinine and Alkaloid process, whereby the active principles are obtained in a highly-concentrated form, and the large amount of spirit necessary for the exhaustion of the ingredients is recovered (for subsequent use) with far less loss than by ordinary or even hydraulic pressure.

HERRINGS and CO., 40, Aldersgate-street, London, E.C.

Tinct. Cinchon. Comp. Concentrated.

Tinct. Gentian Comp. Concentrated.
—— Hyoscyam. Concentrated.
—— Rhei Comp. Concentrated.
HERRINGS and CO., 40, Aldersgate-street, London, E.C.

Ext. Aloes Socot. Aquos. (Soluble).

HERRINGS and CO.

This preparation is submitted as a superior form of Aqueous Extract of Socotrine Aloes, giving a perfectly bright solution with cold distilled water, without the sediment of Resin, which is generally found in the ordinary Ext. Aloës Aquos.

Its use is recommended wherever Ext Aloës Socot. is ordered, and more especially in the officinal preparations, viz , Dec. Aloës Comp., Ext. Coloc. Comp., &c., and also for dispensing.

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BROWN AND POLSON'S

Patent Corn Flour.

Packets, 8d. Tins, 1s.
Prepared from the best Maize or Indian Corn.
Guaranteed perfectly pure.

CORRECTED RECEIPT FOR INFANTS' FOOD :—

To two tea-spoonfuls of Brown and Polson's Corn Flour mixed with two table-spoonfuls of cold water, add half-a-pint of boiling milk and water (equal quantities), boil for seven minutes and sweeten very slightly. It should be when warm about the thickness of cream.

Dinneford's Fluid Magnesia,

now Perfect in Purity and Strength.

"Mr. Dinneford's solution may fairly be taken as a type of what the preparation ought to be."—Pharmaceutical Journal, May, 1846.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES

ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

LECTURE I.

(Continued from page 164.)

That malarious influence is capable of producing functional paralysis is, I think, tolerably well established, though it is not a very frequent occurrence in the cerebro-spinal department. In the sympathetic it is of course present to a greater or less degree in every attack of fever. I do not refer at present to those transitory palsies which come on with the cold stage of an intermittent and cease at its departure, because these may be sometimes ascribed to anæmiating arterial spasm in the nervous centres, similar to that which we observe in other parts of the body. Dr. McCulloch speaks confidently on this point; he says: "If these paralytic affections sometimes usher in a new intermittent disease, being, like the coma, a sort of substitute for the cold fit, so have I seen them occur in the chronic state, and in both under circumstances that could admit of no dispute as to their real nature. A single fact out of many will serve to explain the grounds of this judgment. This is, that in a situation exposed to malaria and never free from its diseases, while the other members of a large family had the intermittent under different but ordinary forms, two younger ones were attacked with paralytic affections suddenly, the one in the leg and thigh, the other in the arm. The palsy disappeared almost spontaneously in both, and was succeeded by the regular quotidian." Mr. Bailly, in his treatise on pernicious fevers in Rome, mentions his experiencing daily a peculiar powerlessness of the lower limbs, which ceased after he took quinine. Perhaps, however, nothing is more proving as to the depressing effect of malaria on nervous power than the diminution of the powers of the intellect, often proceeding to perfect idiotism, which sometimes follows severe or long-continued remittents. Sir R. Martin says: "I have seen a complete but temporary prostration of the mental powers result from a residence in our terais and jungly districts in India, as in Gondwana and Aracan, but especially after the fevers of such districts."(a) He has favoured me, also, with the following history of his own case, drawn up by an Indian Medical officer:—A. B., aged 40, with the exception of a sharp attack of dysentery in 1856, enjoyed very good health until the Mutiny, in 1857. Went through much exposure and hard work in 1857, 1858, and 1859. Had cholera in July, 1857, a sharp attack of remittent fever in August, 1859, a severe attack of diarrhœa in July, 1860, and another in July, 1861. About the end of July, 1862, loss of memory came on suddenly while he was sitting at breakfast; several times during this and the following month could see only one-half of any word or object. In August he began to have muscæ volitantes; about the same time a rumbling noise in his head became very troublesome, accompanied by tingling and pinching sensations all over the body, which, by the month of December had become almost constant, particularly in the hands and feet. Had an attack of impaired memory and vision, with muscæ volitantes, and all the very disagreeable concomitant feelings not easily described, in April, at Calcutta, twice during the homeward passage, and three times during the summer and autumn months in Scotland, on each occasion the day following more or less exposure in the sun's rays. A very curious symptom was, that when the attacks were coming on all objects appeared to him of square form, so as to produce the effect of a chequered board; and this optical illusion was invariably followed, after twenty-four or thirty-six hours, by a paroxysm of ague. Under treatment, he improved, the attacks diminished in force and frequency, and his memory regained strength. There can be no doubt that this officer had suffered from the influence of malaria, as evidenced especially by the attacks of remittent fever, diarrhœa, and cholera. The disorders of special and common sensation, and the impairment of memory, may be reasonably ascribed to the action of the same cause depressing the power of the nervous system. The influence of exposure to the sun and of anxiety are noteworthy, the former reminding us of the effects of insolation. In a case related by Andral, which I shall cite in my third lecture, complete paralysis of all the limbs and total unconsciousness of many hours' duration recurred several times until the disorder was arrested by quinine.

Dr. Gordon(b) describes how a man may be prostrated by jungle fever and be insensible and half inanimate for several days. On consciousness returning he experiences pain in various parts, with profuse acid perspirations drenching him whenever he would sleep. Part of a limb or an entire limb may become absolutely powerless, though the sensation be little affected, and thus the patient is reduced to a state of perfect helplessness, from which removal to a cold climate is almost the only means that will recover him. Dr. Beatson says:—"After repeated attacks of intermittent fever, in addition to general muscular weakness, a partial paralysis of one or more limbs is not an uncommon occurrence." He ascribes it, however, to congestion of the nervous centres, inducing chronic degenerative change. Both these authors recognise paralysis as the result of malarious fever, and as the first considers change to a more bracing climate the best remedy, the presumption is that the disorder is not of organic character.

I can well believe that the above instances may not be convincing to many. Those, however, who have witnessed the prostration produced by malarious disease, and observed how eminently it involves and enfeebles the nervous system, will, I think, be inclined to agree with me that actual paralysis is no improbable event of its action.

The palsying operation of a severe electrical stroke must here be briefly referred to. Dr. Watson mentions the case of a girl, aged 11, who, after being struck by lightning became amaurotic and paraplegic, and had ptosis. The amaurosis ceased spontaneously after ten days, and at the same time the paraplegia also disappeared for a short time. It was very remarkable that the latter paralysis did not commence until two or three days after the accident, and was, therefore, not the result of mere shock. With tonics she soon recovered completely. This case can surely be regarded in no other light than as a dynamic derangement. Mr. Orton(d) records a case of immediate and complete paralysis of the right arm and hand, both as regards sensation and motion, from a like occurrence, which it is interesting to find was removed, after it had lasted three days, by a moderate application of the same agent which, acting with more intensity, had caused the disorder. The absence of organic lesion is in this case indubitable.

The sympathetic and vaso-motor nerves and centres seem to be especially liable to functional paresis. In all febrile and in most inflammatory processes at some period of their course we are sure that more or less of such paresis must take place. One of the most proving instances of the occurrence of such paresis is afforded in the production of well-marked low fever by fatigue. A distinguished Physician once informed me that he had suffered in this way twice, and that his condition on one occasion much resembled typhoid fever. Another gentleman has experienced, after over-exertion in walking, smart attacks of nocturnal fever and tremor. Excessive fatigue seems to have been the principal cause of a low fever attended with extreme lassitude and anorexia, which prevailed among the French troops during the revolution in 1848. Such pathological events are almost repetitions of Bernard's experiment on the whole sympathetic system, the nervous power of these centres being consumed in the motor apparatus, so that they fall into a state of temporary paresis. Without affirming that the elements of the tissues are not in some way influenced by the cessation of nervous influence, it is, I think, unquestionable that dilatation of vessels plays a considerable part in many important and common phenomena of malarious disease. The cerebral congestion of the hot stage, the enlargements of the spleen and liver, the pneumonias, and the more rare ophthalmic inflammations are evidently dependent in good measure on excessive determination of blood produced, as we may most reasonably consider, by paralytic dilatation of the arteries leading to the part. The powerful nervine which abates or cures a neuralgia has the like effect on these vascular disorders through its toning influence on the nerves regulating the condition of the vessels. Various common cutaneous eruptions which are controlled so

(a) "Influence of Tropical Climates," p. 301.

(b) Gordon, "Indian Annals of Med. Sc.," vol. vi., p. 20.
(c) Beatson, "Indian Annals of Med. Sc.," vol. vii., p. 76.
(d) Orton, *Med. Times*, July, 1848.

markedly by arsenic, eczema, impetigo, and pemphigus, are also instances of the same kind. From some enfeebling cause or other the centres ruling the vaso-motor nerves of certain districts of skin fall into a state of paresis, and straightway the part is flushed with blood, and secretion or exudation takes place according to the vital condition of the capillary walls and of the glandular cell structure. A patient at present under Dr. Sibson's care in St. Mary's Hospital, with left side hemiplegia, the result of cerebral hæmorrhage, had for several days an eruption of pemphigoid character on the palsied hand and foot, and nowhere else. A case has been related to me by Sir R. Martin of a lady who had suffered from frontal neuralgia and malarious fever, and in whom a largish patch of redness used to appear at intervals on the right forearm, from which such an abundant moisture flowed that several handkerchiefs would be saturated in half-an-hour. Such an occurrence reminds one very much of eczema-ichorosum, a variety described by Mr. E. Wilson, in which large quantities of fluid are discharged from the congested surface. He recognises debility in some form assimilative, nutritive or nervous, as the essential cause of eczema. Now, arsenic is scarcely inferior in its nervine properties to quinine, and it is clearly impossible to dissociate its marked efficacy in chorea and neuralgia (disorders of the cerebro-spinal system) from that which it possesses in cutaneous eruptions, menorrhagia, and chronic diarrhœa (disorders to a great degree of the vasomotor). I cannot but think that this possibility of explaining a number of separate facts by the original assumption is, as Dr. Whewell states, an argument of great weight in its favour. He says, "If we take one class of facts only—knowing the laws which they follow,—we may construct an hypothesis, or perhaps several, which may represent them; and as new circumstances are discovered we may often adjust the hypothesis so as to correspond to these also. But when the hypothesis of itself and without adjustment for the purpose give us the rule and reason of a class of facts not contemplated in its construction, we have a criterion of its reality which has never yet been produced in favour of falsehood." In correspondence with this statement, we remark that the original assumption that arsenic tends to increase and sustain failing nervous power accounts not only for its curing neuralgia, for which it might be originally framed, but also for its efficacy in chorea, ague, some skin eruptions, and menorrhagia, which are apparently very different phenomena.

The nerves of special sense seem certainly liable to suffer from functional paralysis. The condition termed "nyctalopia," or night blindness, is one of the best examples; it seems to be definitely connected with causes of depression. Romberg says cold, malaria, and the exclusive use of coarse vegetable food have been proved to cause it. It occurs exsively in Russia among the poor during Lent. Masturbation and scurvy give rise to it. Meissner (quoted by Copland) describes the epidemic prevalence of nyctalopia in Podolia during the Lenten fast. There was nothing observable in the eyes of those affected except great immobility of the pupils. The disorder commonly occurred at the same annual period, and ceased within a week after they resumed the use of animal food. Dr. Mackay (e) records the case of a lady, aged 30, who had resided in a relaxing climate in India, and had become completely blind of the right eye, and could only distinguish light from darkness with the left. The loss of sight commenced eleven years before, the right eye being first affected; the pupils were sluggish, but there was no other abnormal appearance; the cervix uteri was enlarged, congested, and superficially ulcerated. With iron and chiretta, and suitable local treatment for the uterine disorder, she quite recovered her sight in two and a-half months. It is, however, to be mentioned that she had removed to a more bracing locality which probably contributed no little to her recovery.

Dr. Eastlake (f) has recently recorded the case of a female, aged 34, who had nine children at the full time and no miscarriages. She has always enjoyed good health. On the second or third day after the birth of her second child, and after all her subsequent labours, she has suddenly become totally blind in both eyes, and also partially unconscious; when her senses return the amaurotic condition remains, and on an average has lasted from three to five weeks. No ergot had been taken; there was no albuminuria, no marked pallor, nor any great signs of debility. The results of a careful ophthalmoscopic examination, by Mr. Zachariah Laurence, were entirely negative, except showing a somewhat contracted state of the retinal arteries, which, however, was considered comparatively unimportant. Such amaurosis as this must be regarded, I think, as essentially different from that which occurs during pregnancy, and which, like many other nerve disorders of this period, may fairly be ascribed to remote (uterine) irritation. The disorder must plainly have been functional, and, as it does not seem explicable by anæmia of the retina, I believe it may be best referred to a kind of collapse of the system taking place on the removal of the uterine stimulation to which the nervous centres had been gradually accustomed. In phthisical women delivery is often followed by rapid decline. A man, aged 26, was recently under my care in St. Mary's who had various symptoms, especially neuralgic pain of the head, which appeared attributable to sexual excess. At the commencement of the attack his left eye became dim, and the dimness increased to loss of sight, such that at first he could hardly see the bars of the window. Ophthalmoscopic examination soon after his admission showed nothing morbid, except that in both eyes the arteries appeared small, and the veins large; the choroid was healthy. The left pupil was large, and insensible to light. He took valerian and ammonia and potass. iod. with ol. morrh., and in about six weeks recovered to a great extent the sight of the affected eye; he was able to see objects at 200 yards off, and to read a medium-sized type at eighteen inches distance. The left pupil regained its natural size and mobility. It seems difficult to take any other view of this case than that of a functional paresis of the retina owing to exhaustion of nerve power.

The auditory seem to be much less liable to primary functional paresis than the visual nerves. Those of smell and taste are not very unfrequently temporarily paralysed after attacks of influenza, and this without any such affection of the corresponding mucous membranes as could explain the occurrence.

One circumstance I desire to mark as common to all the instances I have cited; viz.—that the paralytic phenomena are not dependent on any peripheral irritation such as exists in all true cases of reflex paralysis. In some of them there may be an approximation to the next class I have to notice—that is to say, the exciting cause may partake somewhat of the nature of shock, but these are to be regarded as transitional, and not as typical instances. The evidence now cited must be admitted, I think, to be of weight, and chiefly so in this respect, that it exhibits the occurrence of paralytic disorder of various nervous centres under the influence of a great variety of causes, which, however, all agree in this, that they are of debilitating nature; while, conversely it shows that recovery from these disorders is procured by remedies which we know to invigorate and increase nervous power. I may say here that the action of a remedy appears to me to be a much more discriminative test than the most minute anatomical research. The latter can deal with but visible and formal changes, and it has been shown that it is not always easy to say how far these are causes or effects of the morbid action, or how far they are merely co-existent and without influence on the symptoms. The other, on the contrary, is an appeal to vital actions, and if the response be clear and plain it may convey to us far more information than any inspection could. I have long been persuaded of the truth of the saying adopted by the great Trousseau, "Naturam morborum remedia ostendunt."

The general conclusions which the above review inclines me to adopt are that primary paresis of ganglion cells in the nerve centres, encephalic, spinal, or sympathetic, is a condition of rather frequent occurrence, that it is commonly the result of enfeebling and prostrating influences acting for a longer or shorter time, that its phenomena may set in suddenly, that they are not dependent on general or local anæmia, or on a reflex irritation, that it is attended with no visible structural change in the early periods of its existence; but that, if prolonged considerably, it may become complicated with atrophic degeneration, and that the remedies suited to it are generally all such as can excite and maintain nervous power, sufficient rest, good food, pure air, nervine remedies, cod-liver oil, electricity. It seems to me very evident that if these conclusions are admitted we must regard functional nervous paresis as a form of disorder deserving to be most distinctly recognised in our nosology, and not merely tacitly admitted as a matter of probability. I believe that further consideration and experience will show that the conception of paresis must replace to some extent those of congestion and effusion which have been so largely invoked.

(e) Mackay, *Madras Quarterly Journal of Medical Science*, 1861, Jan.-April.

(f) *Dublin Medical Press*, January 11, 1865.

ORIGINAL COMMUNICATIONS.

ON TREPHINING FOR COMPRESSION OF THE BRAIN FROM FRACTURE OF THE SKULL, WITH REMARKS.

By BAMLET W. SWITZER, F.R.C.S.I.,
Assistant-Surgeon Bengal Medical Service.

As the successful use of the trephine for the relief of compression of the brain, or, indeed, I may say, the use of the trephine at all, is not common, from the rarity of suitable cases, I here record an interesting one which occurred in civil practice in India. I may premise that as it occurred in this country, and in a native, I had a far better chance of success than if at home operating in a cold climate on an alcohol-loving Briton. The simple lives led by villagers here, the unstimulating nature of their food, their total abstinence from spirit of all kinds, renders the treatment of the most extensive Surgical injuries far more favourable than it ever could be in Hospital practice at home; in addition to this, good food and alcohol, when given, act like charms. Beef tea, carefully disguised and called "medicine," rendered palatable to a Hindoo's taste by a drachm of tinct. assafœtida, being a thing his poor stomach never had a chance of trying, produces a magical effect, and plucks him bodily out of the grave. I had one wonderful instance of this, in which I kept a man alive who had cut his throat down to the vertebral column by beef tea through the stomach-pump until he could drink for himself. The charge of a charitable dispensary in India is full of interest and instruction; for there we meet with disease and injury occurring in people who lead almost perfectly natural lives, and gout, hysteria, dipsomania, and such-like do not complicate our cases. Very rare, or what would be called at home in Hospital *parlance*, fancy cases often turn up. I always expect to see something interesting in the verandah awaiting my morning visit: yesterday a double hare-lip and cleft palate; to-day it may be an arm in gangrene to the elbow-joint from neglected paronychia; to-morrow a child with two yards of its intestines hanging out, gored by a bullock. Of course I do not mean that cases like this follow each other with such rapidity; but no month passes in some districts without from six to twelve good cases for operation, and often much more. I had five cases of lithotomy on one morning in the station of Moradobad, and these had all been collected in less than a month. To show the frequency of stone in that district, I may mention that over sixty have been cut in one year. However, I had better relate my case.

Bowanee, a Hindoo, a healthy, well-made man, aged 30, was sent to my house by the magistrate of Shahjehanpore on July 15 with a note saying he would not speak or give his deposition. As he lay on the charpoy I saw his case was a serious one, and directed his immediate removal to the Charitable Dispensary, to which I quickly followed him. Dr. Curran, H.M.'s 88th Regiment, accompanied and assisted me in the case, the history of which was this:—On July 12 he and another man were fighting with sticks, and Bowanee received a blow of a lattie or club on the head, which he did not appear to mind, and remained quite sensible. On the morning of the 14th he was found to be unconscious, but apparently in a calm sleep, without stertor. He continued much the same until the evening of the 15th, 4 p.m., when I first saw him. When placed on the table in the Dispensary, it was evident something was wrong inside the head. His breathing was slow and laboured, cheeks puffing in and out, or, as Guthrie describes, "the breath came from the corner of the mouth like a whiff of smoke." Eyelids closed; pupils slightly dilated, and insensible to light or the touch of the finger on the cornea; outward strabismus of both eyes; very restless; and his hand constantly passing to his penis; a little froth about the mouth; pulse 80, small, but regular; no paralysis of the trunk. Looking at all this, and knowing the history, I concluded there was pressure on the brain by blood. Nothing could be learned from the appearance of the scalp, which was swollen and œdematous, but without any wound. A small bluish patch existed at the point of junction of left parietal with frontal bone on the left of the mesial line, showing where the blow had been struck. This pitted slightly on pressure, but did not yield under the finger, and was like an ordinary bruise. No irregularity under the scalp could be felt. While examining him on the table, his breathing became visibly more laboured and stertorous; so I determined to cut down at once (5 p.m.), and, if not otherwise guided by the appearance of the skull, to trepan to the left of the longitudinal sinus. I first made a V-shaped flap, the apex being an inch and a-half from the top of forehead, the two legs proceeding backwards—the one in the mesial line, the other outwards two and a-half inches. I allowed these incisions to bleed copiously before raising the flap. This I did with a tenaculum in its point. An extensive fracture in the left parietal bone running antero-posteriorly was thus disclosed, the bone on the right side of the fracture being driven under the left; so that a ridge formed by the thickness of the left parietal existed. As the line of this fracture followed very much the line in which his hair is shaved to, in the woodcut, I was obliged to greatly extend my second incision backwards and make another downwards and forwards from the previous point of termination; this gave me three large V flaps which were dissected up. The fracture was now exposed for about an inch and a-half in extent, bleeding was pretty smart, and two small arteries were spouting: I did not, however, bother with them, nor try to jam the point of an elevator in, but applied the pin of an inch trephine on the left or riding portion of the parietal bone, and took away a three-quarter

circle. This disclosed a large clot of blood in the course of the fracture. A portion was removed by sponge and forceps, but I could not elevate the bone. I accordingly took away a second circle of bone anteriorly, expressing still further the large clot. With the left parietal as a fulcrum, the elevator now easily raised the depressed bone to a level with the sound. The clot was as far as possible removed by forceps and sponge from the surface of the dura mater, which appeared glistening, white, and healthy. After this a copious flow of blood took place from inside the skull, which immediately relieved him, the breathing becoming calm as though in sleep. The flaps were simply replaced, a bit of wet lint being put over the exposed dura mater, and a loose bandage applied. During the operation he lost about a pint of blood, which otherwise I would have taken from his arm. Before commencing he had cal. gr. x. on the back of his tongue, and a turpentine and sulph. magnesia injection. Directed to be kept quiet, and have a little cold water from a sponge applied. He was in bed at 5.30 p.m., and was reported to be in the same state as after operation at 9 p.m.

July 16.—At 2 a.m. this morning consciousness returned, and he asked what had happened. He complained of no pain whatever. At my morning visit he was quite rational, and answered all the questions I deemed it safe to put to him. No pain in the head; lying perfectly easy; bowels not opened: removed the lint from the wound, and brought the flaps together with plaster. Cold water as external dressing: sulph. magn. and infus. senna for draught.

It would be tedious and uninteresting to continue a daily account of his case. Suffice it to say the wound freely suppurated, and all went on well, with the exception of a small artery spouting on the 23rd; this was stopped by a pad on the temporal, and turpentine to the point. He made a most perfect recovery, and was discharged from Hospital on the 10th August, the only deviation from health being slight strabismus remaining. I last saw him in October, when even

this had left: he had had no uneasiness since. I then took the photograph from which the wood-cut is made.

This case confirms the remarks in most Surgical works concerning the great length of time that may elapse after severe injury to the head, etc., before alarming symptoms come on. The man was struck early in the day on the 12th, and showed no symptoms of the serious lesion he received till the morning of the 14th, or about forty hours after. Considering that the left parietal bone was cracked through its whole length, and very likely part of the frontal and occipital also, one portion being driven under the other, this is at least surprising. Had I not made strict inquiry, I would have hesitated to believe that so serious a fracture with displacement could produce no immediate suffering.

If this man had been first seen in his perfect senses the day after the injury, and not complaining of anything, how difficult would an accurate diagnosis have been! This shows what great care a Surgeon must take in making either diagnosis or prognosis in cases of injury about the head, for an amount of mischief may often exist which it is physically impossible to ascertain. Most strange to say, as this man was recovering, a nearly similar case occurred, which, but for the error in diagnosis, would perhaps have been a companion case. The body of a man was sent to me for examination from a sub-division about thirty miles from the station. The police had found the man on the road insensible, but he very shortly recovered, and stated some one had struck him on the head. He was taken to the police Thanna, but complaining of his head he was sent to the sub-Dispensary. The native doctor in charge unfortunately mistook the case, and pronounced him to be shamming. He was brought back to the Thanna, where he died during the night. I found just the same thing had taken place here, except that it was the right parietal which had been smashed and driven in by direct violence, the dura mater being covered with clotted blood. Here the man appears to have been stunned at first by the blow, but very shortly after he recovered sufficiently to walk about, speak distinctly, and complain of his head. It is remarkable that no hemiplegia resulted in either case, yet a masked fatal injury was present. Blows on the head by clubs and latties (heavy bamboo wattles) are very common in India and very fatal. Many bodies come to civil Surgeons from the district with fractured skulls, in which I am convinced timely Surgical aid could save life; but in a district containing 4000 square miles, great difficulty of locomotion also existing, it is impossible that one Surgeon with three or four native assistants scattered about it, could be always at hand to afford help.

It must sometimes be a perplexing thing to a Surgeon when he purposes to trepan to know where he ought to make his incisions in an unwounded scalp, with nothing external to guide him, and the whole scalp so swollen as to render manual examination useless. From a number of cases of this kind which I have seen, I may safely say that in nine out of twelve the left parietal is the fractured bone. A man striking another with a stick holds it in his right hand; it is, therefore, brought down on the left side of his antagonist facing him—the reverse, of course, if the blow is given from behind. In these cases the bone generally gives way where struck; fracture by *contre coup*, I do not think, takes place except by a fall. Cases are recorded of men falling on the head fracturing the skull opposite to the place of contact, or fracturing the base; but I do not remember to have seen any case of *contre coup* fracture from a direct blow of stick or stone. The rule I would therefore deduce is, that, in the absence of any symptom or sign to guide the Surgeon, the history of the case would point out the practice. In the case of two men fighting with sticks the fracture is to be sought on the left side; if it is a man found insensible on the road, and who, most likely, has been struck from behind, I would try the right side. Hemiplegia is in general a safe guide, but should never be one when the fracture can be felt. Trephining at the fracture is the practice, even when the paralysis is at the same side, for the compression causing it is, doubtless, blood, that a free opening into the skull, even at a little distance from it, will evacuate. It must have been a very small part, indeed, of the clot on this man's dura mater that I was able to remove, but the prising up of the bone took the pressure off immediately. The large amount of blood this man lost was most salutary; no sign of inflammation occurred through his progress to recovery. Except for the first few days, when he was on tartar emetic mixture (carefully watched to prevent emesis) and an occasional purgative, he required no further treatment. One cause of the non-success of trephining, I believe, is its being delayed too long: pressure on the brain for a few hours is productive of far more mischief than an early operation is likely to cause; besides, the patient is better able for it early than late. I need not digress on the operation itself; it is exceedingly simple and easy of performance. Tetanus is said to have resulted from jagging the dura mater with the saw, but that can be readily avoided by plumbing the depth of the cut by a pointed quill, and cutting with a light hand when through the diploe. I would always encourage bleeding from within the skull when not coming *per saltum*. Nothing tends more to relieve the brain or prevent after bad consequences. Even had the operation eventually proved fatal from secondary causes, it might in many cases be of great present use in restoring temporary consciousness, and thereby allowing a man to settle his worldly affairs or prepare for the last great change.

Jessore, Bengal.

PATHOLOGICAL OPERATIVE SURGERY,

ILLUSTRATED CHIEFLY BY FOUR CONSECUTIVELY SUCCESSFUL CASES OF EXCISION OF THE HIP-JOINT, AND THEIR PERMANENT RESULTS.

By FREDERICK JAMES GANT, F.R.C.S.,
Surgeon and Pathological Anatomist to the Royal Free Hospital.

WHAT to do under any given circumstances, and how to do that which is then necessary, are questions obviously as distinct in Surgical practice as in the ordinary affairs of life.

In the previous lecture I brought Pathology to a definite bearing on the former aspect of Surgical practice, designating the kind of practice derived from its self-curative character as "Pathological Conservative Surgery." How to fulfil the indications of Pathology, whether of this character or otherwise, by the guidance of Pathological Anatomy during life,—by "Clinical Pathological Anatomy," as I have named this science, thus applied—in the design and performance of Surgical operations and manipulations, yet remains to be considered. "Pathological Operative Surgery," so designated for the sake of brevity, will now engage our attention.

This is a very extensive aspect of Surgical practice, comprehending, as it does, the pathological purpose, plan, and performance of Surgical operations. Any operation not itself pathological,—not an illustration of the guidance of pathological anatomy in its performance—is yet virtually a pathological operation, if only the purpose and the plan which govern its performance have that character. Indeed, if the purpose alone of any operation be pathological, it will sufficiently entitle such operation to be thus designated. In short, the considerations wherefore and whereby any Surgical operation is conducted being of paramount significance, even the former alone is sufficient to designate the operation.

But the purpose of any Surgical operation is the practical conception of "what to do" in fulfilment of some operative indication of pathology. All operations, therefore, are necessarily pathological, by virtue of their purpose, *e.g.*, to remove a diseased part of the body, or to repair some defect, congenital or acquired, and so forth.

Concurring in this respect, operations differ by virtue of the kind of knowledge which suggests their plan, and guides in their actual performance. They may be classified accordingly.

Some operations—their purpose being pathological—are nevertheless devised and executed by the knowledge of anatomico-vital conditions, with or without the light of functional conditions superadded. Operations of this class show the application of anatomy alone as presented during life, or of such anatomy with physiology combined; in operative Surgery. Thus, Hunter's operation for aneurism—pathological in its purpose—the ligaturing a sound portion of artery instead of a diseased part, was planned by anatomical knowledge of the upper and anterior part of the thigh, and the operation itself was also performed accordingly. Then, again, the additional knowledge of physiology is brought to bear in Mr. Fergusson's admirable operation for cleft-palate, which, although as a plastic operation for the repair of this defective formation is obviously pathological in purpose, was devised by considering the functional action of those muscles which maintain and widen the breach in the palate; and they, being chiefly the levator-palati and palato-pharyngeus, their division, accordingly, characterises the performance of this operation. The

division of muscles (myotomy), and of tendons (tenotomy) in any other part of the body for the purpose of repairing some deformity, congenital or acquired, further illustrate the same principle, and, indeed, suggested to Mr. Fergusson his operation. The combination of physiological knowledge with that of anatomy, as presented during life, rules the design and guides the performance of certain other plastic or reparative operations of Surgery, and of all those operations which pertain to orthopædic Surgery.

But it should be observed that the division of tendons subcutaneously is a distinct recognition of the fact that all subcutaneous lesions heal more readily by primary union than open wounds: in other words, this feature in such operations illustrates the guidance of pathology in planning and performing Surgical operations, and apart from any association with pathologico-anatomical conditions in the living body; for the parts—*i.e.*, the tendons operated on—are themselves in a healthy state.

All operations, the (pathological) purpose of which is the removal of any diseased or injured portion of the body, may be planned and performed in order to preserve as much as possible of the sound structures in removing the diseased or injured parts. Hence excision of a diseased joint rather than amputation of the limb.

This preservation of the anatomical and functional integrity of the body—obviously the aim, and the sole aim, of all Surgery—is now-a-days called "Conservative Surgery." A new term, without a new idea of any kind attached thereto, it is calculated only to mislead by implying something distinctive without really directing Operative Surgery from any original point of view.

Undoubtedly, "Conservative Surgery" clearly recognises the fact that local disease, *e.g.*, of a joint, is appropriately removed by local operation—by excising only the diseased part, rather than sacrificing the limb. So far, all such operations are undoubtedly of pathological origin; but, being specially designed and executed with the view of not sacrificing, unnecessarily, the least portion of *sound* structure—"the tip of a thumb," or even "a bit of overstretched skin"—conservative Surgery, in this sense, is simply another illustration of the application of anatomical and physiological knowledge conjointly, in all Surgical operations for the *removal* of any part, so as thereby to preserve, as much as possible, the anatomical and functional integrity of the body.

Ever aiming at this object, "Pathological Operative Surgery" approaches it in another—I might say an opposite—direction, and, therefore, from a no less different point of view, the difference being that this aspect of operative Surgery specially and primarily regards the *disease* or *injured* part,—the kind of lesion, and its extent, etc., and thus representing the least amount as well as the kind of operative proceedings, absolutely required, practicable or judicious; necessarily ensures the legitimate preservation of all that may be or become serviceable of the sound parts. This aspect of operative Surgery, therefore, governs not only operations for the removal of diseased or injured parts—it extends to all other operations which are not subject to anatomy and physiology.

Thus, as regards operations for herniæ, inguinal or femoral, in which the so-called "coverings" (of hernia) are effaced, by the pathological superventions of adhesion, thickening, and displacement; where, then, are all the diagramatic views which are still credited by purely anatomical Surgeons? where is the "cremasteric fascia?" where, oh where, is "the septum crurale?" In lithotomy, the parts cherished—by those of that school—have not, indeed, previously vanished, but they have then no meaning to the Pathologist. Where is the anatomy of the ischio-rectal fossa, except its boundaries, where the inferior hæmorrhoidal vessels and nerves across the fossa, the superficial perineal artery and corresponding two nerves anteriorly, the transverse perineal artery and corresponding nerve here also; and posteriorly, where is that "small branch of the fourth sacral nerve," of no less terrible import than these terminal branches of the pudic artery and nerve?

Avoiding the rectum, as a matter of course, the pudic artery externally being quite out of the right direction to the bladder, the Pathological Surgeon makes straight for the staff, in the membranous portion of the urethra, thus cutting through, indiscriminately, not dissecting, all these anatomical niceties; his left hand fore-finger rests at once on the transverse perineal muscle and free margin of the triangular ligament, which, together, form a firm bar—the "bar *sinister*," as I have termed it—resisting his further progress. By first dividing this bar, and sliding that finger upwards and inwards to the middle line—on a level with the descending ramus externally—its point at once strikes the groove in the staff, felt indistinctly, however, through the membranous urethra and compressor muscle. If, by this slight incision, the artery of the bulb be wounded, because that branch of the pudic should perchance be less than its usual distance, half-an-inch or so above the base of the triangular ligament, surely no anatomical knowledge could have foreseen this deviation. On the other hand, the bulb itself is so patent that it can scarcely be wounded. Applying the point of the knife underneath it, and on the apex of the finger touching the staff, its groove is entered, and the finger, depressing and protecting the rectum, the knife is safely slid onwards in the staff, slightly incising the prostate as it enters the bladder. The cutting part of the operation is over. Anatomically, therefore, all is over, by the first incision through the integuments, continued through the "bar," and this second on the staff.

But, on withdrawing the knife, the finger is introduced, discovering the *pathological* condition of the prostate and bladder, as it dilates the former and explores the latter to find the position and size of the stone. Then the introduction of the forceps guided by the finger, the seizure of the stone, and its extraction with the first gush of water, become comparatively easy, assured by such knowledge. In a word, the less anatomy and the more pathology in this operation, the better for the patient.

In the child—so patent is the membranous urethra, the groove in the staff so easily reached, there being scarcely any resistance offered by the "bar," then slight and yielding—that it is really necessary to avoid *making* anatomy by dissecting in the cellular texture of the fossa, and working it with the finger into a false bladder—an awful deception; or still, by fiddling the membranous urethra with the knife and finger alternately, to at length detach and drive it off the staff on to the bladder,—a more awful misadventure, because an irreparable one.

In both the operations which I have thus briefly described, that for hernia and lithotomy, I have aimed only at the principle of Pathological Operative Surgery—anatomy subordinate to pathology. The extirpation of tumours, especially malignant growths which, even under favourable circumstances, have affected surrounding parts, affords another excellent illustration of this principle, pathology guiding every turn of the knife in all such operations.

But any principle is always best advocated by a series of cases of the same kind, yet differing in detail; for, in observing their essential resemblance through all minor differences, the force and importance of the principle become conspicuous.

I shall, therefore, proceed to describe four consecutively and permanently successful cases of diseased hip-joint excision, dwelling chiefly on their operative character, and taking them in the order of convenience for this purpose.

The notes of the first and third of these cases were taken by Mr. Marriott, and those of the second and fourth by Mr. Foster, House Surgeons to the Hospital:—

Case 1.—Boy, 8 years old. Caries of femur; its head—cartilage entirely destroyed—neck, great trochanter, and one inch of shaft; similar disease of the acetabulum; immediate cause, cold; duration of disease, five years. Excision of two inches and [illegible] of bone. Recovery with a sound and permanently useful limb.

The report of this case states, that "E. M., admitted to the Hospital June 10, 1864, is of healthy conformation, and had good health until three years of age, when, having taken cold by sitting on stone pavement, inflammation of his left hip-joint began. It was comparatively painless until matter formed and the joint became more swollen. About eighteen months since an abscess broke and discharged considerably and permanently through a fistulous opening. Other sinuses followed. The thigh is turned inwards, forming an angle with the abdomen; but there is no notable shortening of the limb. At the end of five years the long-continued suppurative discharge has induced emaciation almost to the degree of advanced phthisis; the child is haggard and spiritless, his expression and manner deliberate, like that of a little old man, and he is altogether the picture of premature age."

Here, then, the diseased condition of the hip-joint still being persistent, as the cause in operation, thereby rendering the limb useless and undermining the general health, the removal of such cause by excision of the joint was plainly indicated; but, under the extreme circumstances of this case, I made a temporary compromise by resting the joint, at the same time

endeavouring to revive the power of assimilation and reparation by a nourishing diet and the administration of iron—the sesquioxide.

Choosing a favourable opportunity, after the lapse of seven weeks in Hospital, I performed the operation, subject to the principle I am advocating, the guidance of which will, I trust, be appreciated by my comments during, so to speak, its performance.

The incisions were guided simply by anatomical considerations. A longitudinal incision on the outer side of the shaft of the femur, to the extent of three or four inches, and terminating a little above the great trochanter, was followed by a slight transverse incision in that situation.

These incisions are, I think, effectual in all cases, and safer than any other in acetabular coxalgia, or in the event of dislocation backwards having taken place. The longitudinal incision below the trochanter leads at once to a portion of bone, which most frequently requires excision, and the transverse one just above the trochanter leads effectually to the head, neck, and acetabulum; while as a slight incision, owing to the extent of the first, it precludes the possibility of endangering the crural nerve and artery anteriorly, or the sciatic nerve and gluteal artery posteriorly, in the event of dislocation backwards. Whether or not, indeed, this second incision be requisite is just a matter of judgment, according to convenience in the operation. No Surgeon will wound the body, here or elsewhere, unnecessarily, ever remembering that even an additional incision is a further demand on the power of reparation.

But anatomy having merely directed these incisions, pathology is then and thenceforth busy at work. I was at once guided by discovering more clearly the kind and extent of the diseased condition as seen face to face.

It is of course unnecessary to remove any portion of soft textures around the bone which may hereafter be restored to a sound or quiescent condition, and become serviceable as a cushion. You, therefore, cut down to the bone at once, and detach the soft parts by still directing the knife towards and on the bone. Having arrived at its inner side, you avoid any chance of wounding the crural nerve and artery. But how? With these parts, etc., cramped up between the bone and Poupart's ligament, by the attitude of this little thigh from disease, and the incisions being now along the inner side of the shaft, corresponding to the first incision externally, surely here anatomical knowledge comes into the operation. Misled by such knowledge, the purely anatomical student imagines some anatomical precaution necessary in this situation, and by the attitude of the thigh rendered more imperative, to avoid wounding "the parts which pass beneath Poupart's ligament." Their habitual association in his mind suggests all those parts "proceeding from without inwards"—external cutaneous nerve, anterior crural, tendon of psoas and iliacus muscles, femoral artery, ditto vein, and crural branch of genito-crural nerve, included in the femoral sheath, and, perchance, revives our old friend the septum crurale, which won't pass on, but remains beneath up in the further corner. Aye, those very parts the anatomical student conjures up, which he nervously enumerates as they swim across his brain on the threshhold of the examination-room. But, see, the bone is waiting to be extricated simply by still directing the knife towards and on it, without otherwise thinking about the nerve and vessels, or anything further anatomical. A few touches thus with the knife, and the bone is free. I omit to notice the capsular ligament, which has long since given way, when the abscess broke, and has, perhaps, at length entirely disappeared.

In the present instance it was necessary to adduct and evert the limb to make the bone start from its socket; and such is the anatomical instruction generally given, with the additional one of another touch with the knife, just to sever the round ligament; but, in other cases, these manipulations are scarcely necessary to effect dislocation. The acetabulum has become so patulous, and the head of bone so reduced, or wanting altogether, that the neck or trochanter can be easily dislodged with the finger. Of course, therefore, the round ligament is gone also. In a third class of cases, dislocation backwards has taken place.

In all cases, however, adduction of the limb across its fellow presents the bone ready for the application of the saw; the diseased portion is then removed. In this case it was the remnant of the head, neck, and great trochanter, with one inch of the shaft, measuring altogether two inches and a-half. The head was entirely without a particle of cartilage, as was also the acetabulum; this, however, I left untouched.

The hæmorrhage was inconsiderable, and easily arrested, without the application of a single ligature. The wound was easily brought together with a few sutures, there being scarcely any tension, and water dressing applied. No splint was used, but the limb left to take the easiest position, or nearly that it had before the operation. The report concludes:—"This line of incision healed by primary union, excepting in one spot, where a sinus gradually closed from within. The child rapidly regained flesh, yet he remained blanched and pain-struck in appearance. On September 25 he left the Hospital; the hip-joint was moveable and the limb serviceable for some weight and progression, at present with the aid of a crutch."

Case 2.—Sailor, aged 26. Scrofulous caries of femur; its head—cartilage entirely destroyed—neck, great trochanter, and one inch of shaft; similar disease of acetabulum, and horizontal ramus of pubes; dislocation on dorsum ilii; immediate cause, injury to joint; duration of disease, four years. Excision of four inches of bone. Recovery with a sound and permanently useful limb.

The history of this interesting case was briefly as follows:—"W. M., on board ship, fell from the mast, 30 feet, and pitched on his left hip. The severe pain and swelling were relieved by cupping; but he has never since walked on that limb. A year afterwards he was sent to the Dover Hospital, where he remained for nearly three years, during which his hip received no local treatment. An abscess over the trochanter broke just as he arrived at Dover, and ten other abscesses subsequently formed around the joint. All of them freely discharged scrofulous pus, but no portion of dead bone ever came away. The pain was paroxysmal, sometimes very severe and lasting for days or weeks, with interperiods of perfect ease. Shortening of the limb became apparent after the first abscess broke, and since it has gradually become shorter."

March 28, 1864.—Admitted into the Hospital. The limb is three inches shorter than the sound one. It is much inverted, and the left knee rests on the opposite thigh. Dislocation backwards on the dorsum ilii has taken place. There is great obliquity of the pelvis. The limb is thin and flabby, but the upper third of the thigh is much enlarged, prominent, brawny, and presents twelve sinuses in the neighbourhood of the joint, two of which are over the ramus of the pubes. All of them lead down to dead bone. The paroxysmal pain still continues. He is pale and very thin, has scarcely any appetite, and has a bad cough." Under these circumstances, I postponed excision for a while, as in the previous case.

May 7.—I performed this operation, as in that case, the only difference being that, owing to dislocation having occurred, the whole operation was carried higher up, so to speak; and it was also on a larger scale. In excising a larger portion of bone—head, neck, great trochanter, and one inch of shaft, four inches in extent altogether, I proceeded sparingly. Two or three sections were made with the saw, until a firm, rose-coloured, healthy surface of bone appeared on section. Finding the cancellated texture of the shaft still discoloured and more friable than in a sound state, I scooped it out for about an inch, until healthy texture was reached, thus leaving a mere shell of hard bone, with, however, the periosteum attached to it and the soft parts. The sawn extremity, therefore, still retained its vascular connections. The acetabulum was but slightly interfered with, and I deemed it advisable not to meddle in any way with the ramus of the pubes.

A good deal of oozing hæmorrhage attended this rather formidable operation, rendered so by the considerable depth of the infiltrated soft parts, the evulsion of the bone out of its bed on the dorsum ilii, and the unusual size of the portion removed; yet such hæmorrhage was stopped effectually by plugging. No ligatures were required.

The subsequent record runs thus:—"Excepting excessive sickness from the chloroform, the patient's health improved rapidly, and he recovered without an unfavourable symptom. The large and deep wound healed by granulations.

"June 4.—The bone is covered. There is no pain. He sleeps calmly, enjoys his food, and is gaining flesh.

"July 27.—The wound has nearly healed. The sinuses over the ramus of the pubes still discharge a little pus, but of a more healthy character. Moving the limb occasions no inconvenience, and he now gets about on crutches. He has become quite fat. His jaded and cachectic appearance is converted into a ruddy complexion, with bright eyes, and a cheerful, or rather boisterous manner; and he himself says that 'William is a man again.'"

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Case 3.—Male child, aged 5 years. Caries of femur; its head, neck, both of which had disappeared; great trochanter, and small piece of shaft; similar disease of the acetabulum; dislocation, with abscess on dorsum ilii. Cause, injury to joint. Duration of disease, two years. Excision of one inch and three-quarters of bone. Recovery with a sound and useful limb, now three months after the operation.

In this case the child was run over, a wheel passing over his right hip. The history and eventual appearance of the joint and limb were essentially the same as in the last case, with this interesting peculiarity—that when the child was first brought to the Hospital, in June, 1864, dislocation on the dorsum ilii, and shortening of the limb to the extent of three inches, had supervened; in a word, the disease had advanced thus far without the abscess bursting, any discolouration of the integuments, or any pain to speak of. The limb was tolerably moveable. After a time he left the Hospital, still in this condition. He was re-admitted in October. The abscess had burst two days previously; and from that time matter was discharged freely from two sinuses, in the upper part of the thigh, both of which led down to dead bone. The child's general health has always been good.

November 12.—I performed the operation precisely as in the previous case, and the after-treatment was also the same. The result equally successful.

Case 4.—Dairyman, aged 16. Caries of femur; its head—cartilage destroyed circumferentially—neck, great trochanter, and two inches of shaft; similar disease of acetabulum; dislocation on dorsum ilii. Immediate cause, cold. Duration of disease, one year. Excision of four inches and a-half of bone. Recovery with a thoroughly sound and permanently useful limb. This case is reported in the *Lancet*, November 28, 1863.

The following conclusions, drawn from these four consecutively successful cases, seem worthy of notice:—

I. Age and sex: Two male children, 5 years, 8 years; a youth, 16 years; a young man, 26 years.

II. Kind of disease: Caries in each case, with total destruction of femoral cartilage in three cases; circumferentially only in one; the extent of bone diseased was the head, neck, great trochanter, and a portion of the shaft in each case, with an extra portion of cancellated structure of the shaft below in two cases; caries of acetabulum in each case, and of ramus of pubes in one; dislocation also on dorsum ilii in three cases.

III. Immediate cause: Injury in two cases; cold in two.

IV. Duration of disease: (1) Five years; (2) four years; (3) two years; (4) one year.

V. Extent of bone excised: (1) Two inches and a-half; (2) four inches; (3) one inch and three-quarters; (4) four inches and a-half, with about one inch of cancellated structure of shaft below, in 2 and 4. Small portions of acetabulum also removed in each case.

VI. Hæmorrhage inconsiderable in each case; no ligatures required.

VII. No splint used, the limb being left to the easiest position, nearly that which it had before operation, or had acquired by dislocation backward.

VIII. Healing of soft textures: By primary union in two cases; sound union in each case.

IX. Results: No bony anchylosis, but a moveable joint and the limb serviceable, for weight partially, and for progression, in each case.

Death from Burning by Steam. — While three mechanics were engaged near a steam boiler the heated steam suddenly burst in upon them, and when they were received into the Hospital St. Antoine, close by, they presented the symptoms of advanced asphyxia, and all died in from four to six hours after the accident. M. Broca expressed his opinion that such rapid asphyxia could only depend upon burning the pulmonary mucous membrane; for although the entire external surface was burned in the second degree, the asphyxia which might result from the suppression of the functions of the skin would not be so rapid in its progress. The autopsies confirmed this view. The lungs were found in a state of splenification, but they did not sink in water. The mucous membrane of the trachea and bronchi were of a violaceous black. The heart and great vessels did not, however, contain any of the congula observed in ordinary cases of asphyxia. These cases teach the precept that persons exposed to the contact of steam should refrain from breathing until they can gain access to the air.—*Gaz. des Hôp.*, No. 95.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

SANGUINEOUS CYST IN THE PAROTID REGION—REMOVAL—RECOVERY.

(Under the care of Mr. FERGUSSON.)

The following case is interesting from its comparative rarity. The tumour, on dissection, seemed to present the columnar or fasciculated appearance mentioned by Mr. Paget in his "Surgical Pathology," p. 409. It had, from external examination, all the appearances of a fatty tumour, and was at first diagnosed as such. Its great loss of bulk after removal from the body was remarkable. No distinct vascular supply could be made out on dissection:—

A. H., aged 60, was admitted into King's College Hospital, March 15, 1865. She noticed, twenty-seven years ago, a small moveable tumour of the size of a pea just under the right malar bone; it was attended with no pain for five or six years, when she began to have occasional pain in it. This has been rather more severe lately, though by no means constant. Up to eight months ago it had only reached the size of a large walnut, but since then it has enlarged rapidly, though it still gave her very little inconvenience.

She has always been a very healthy woman till a year ago; since which time she has been feeling very weak. Within the last month has been troubled with an excessive flow of saliva.

On admission, the tumour is about the size of an orange, oval, with its upper end larger and more fixed than the lower; it is lobulated and tapering, and very moveable; it extends from zygomatic process above to the angle of the lower jaw, and reaches back to the external auditory meatus. Near the upper part there is a portion of it upon which the superficial veins are considerably dilated, and there is some tenderness there. The tumour is hard in some parts and elastic in others. It does not interfere with either hearing or mastication. The facial nerve does not seem to be implicated.

18th.—Mr. Fergusson excised the tumour. It lay close on the masseter muscle, but did not implicate it. It was fibrous in structure, with a hæmorrhagic spot of about the size of a nut. It also contained one or two cysts: these cysts contained serous blood. Two ligatures were used. In the evening bleeding came on. The right side of the face was very swollen and œdematous, with ecchymosis on the cheek and lip. The wound was opened up, and a handful of clots removed. Perchloride of iron and exposure to the air stopped the bleeding. The edges of the wound showed some tendency to slough, but ultimately healed, and she left the Hospital in perfect health. There was some difficulty in closing the right eye completely, owing to division of some fibres of the facial nerve.

SANGUINEOUS CYST IN THE FLEXOR SUBLIMIS.

A somewhat similar tumour was removed by Mr. Fergusson a short time after this from the arm of a young woman. It was situated in the substance of the flexor sublimis muscle. She had a blow on the part affected some years previously. The tumour was about the size of a walnut. It presented the appearance of a degenerated nævus. It contained serous blood in its interstices, and some bony spiculæ. On dissection, several small vessels were found entering it.

THE LONDON HOSPITAL.

CASE OF FRACTURE OF THE SPINE, STERNUM, AND RIBS, WITH PECULIAR SYMPTOMS AS REGARDS THE PARALYSIS.

(Under the care of Mr. HUTCHINSON.)

The following case is of much interest as regards the diagnosis of fracture of the spine. The paralysis of the lower extremities was incomplete. In the front of the right thigh there was absolute want of sensation, but nowhere else—a peculiarity which was explained at the autopsy by the local injury to the roots of the nerves.

April 30, 1865.—George L., a watchman, aged 36. He

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was moving a ladder near the mouth of a pit in connexion with the new sewage works, when his foot slipped and he fell forty-five feet, down to the bottom of the pit, which was dry and quite level. He was quite insensible when brought into the London Hospital, about seven o'clock in the evening. He regained consciousness during the night, but next morning did not know in the least what had happened to him. He could move the left leg slightly. He could not move the right leg at all. He could move the toes of both, but those of the left better than those of the right. He could not feel above the right knee on the front of the right thigh at all, but he could do so very fairly below the knee and all over his left lower extremity. Sensation was, however, considerably diminished in his lower extremities generally. There was irregularity and abnormal motion at the junction of the manubrium with the body of the sternum, and the cartilage of one of the ribs (third or fourth) on the left side was broken. A flapping of the chest at this part could be seen distinctly as it rose and fell in respiration, which latter process was much laboured. A plaster and bandage were ordered, but the bandage seemed to annoy him so much and increase his difficulty of breathing that it was taken off again.

During the next few days he remained very ill, his breathing rapid and embarrassed, and his nights absolutely sleepless.

May 6.—He is more comfortable as regards his respiration, but has a troublesome cough. His left upper extremity is weak. He cannot grasp with the fingers in the least. His urine requires to be drawn off twice daily, and he scarcely feels the introduction of the instrument. Sometimes some urine escapes when he coughs. He passes his motions involuntarily. Respirations 44 in the minute; pulse 140 in the minute. He complains much of pain in his back and of thirst. Sensation is diminished in his left upper extremity, but is not wholly absent in any part of the hand or arm. In his lower extremities the loss of sensation is much as it was—complete in the front of the right thigh and diminished in other parts.

8th.—It has been repeatedly observed that his right pupil is larger than the left in the shade. The left is motionless, and probably paralysed as regards the fibres of its dilator.

After this he gradually failed in strength, his paralytic symptoms remaining much as they had been.

20th.—He died this day, at 12·45 p.m.

Autopsy.—About an inch and a half from the top of the sternum there is a very visible irregularity (from fracture), the lower end of the upper fragment being depressed almost half-an-inch. On cutting the skin, bruising of the pectoral muscles is found, above the irregularity; but below, over the whole of the lower part of the sternum, the bruising and the ecchymosis is very considerable. There is none in the deeper parts of the muscles, nor beneath them. The skin showed no evidence of contusion before it was cut. On removing the soft parts, we find that the prominence is just above the upper border of the second rib. On dissecting up the great pectoral muscles, we find slight ecchymosis in their deeper structure, and in that of the lesser pectoral on the left side. Passing backwards into the left lateral region the muscles are very considerably contused. On the right side, also, in the lateral region, there are numerous extravasations. Rigor mortis: Left arm none, and in right arm there is not nearly so much as usual. In the lower extremities it is moderate and equal, but there is not nearly so much as usual. The cartilage of the third rib is broken through about its middle. The outer fragment is depressed behind the inner one, and is still quite moveable. The sternum is fixed at the seat of separation. On removing the sternum, ecchymosis into the cellular tissue between the bone and the pericardium is observed. There are no pleuritic adhesions whatever. The lungs are pale and crepitant throughout. There is scarcely any congestion of the posterior lobes, and merely a few patches of emphysema here and there. On removing all the viscera, a fracture of the eighth rib on the right side, near its angle, is found, and also an appearance of rupture of pleura an inch and a half long, but which has now cicatrised. The lung shows no trace of injury. There is ecchymosis into the psoas muscle on both sides of the spine. On the right side the parts are very much bruised and discoloured, and pus may be pressed from a small cavity in front of the muscle and close to the right side of the body of the third lumbar vertebra. The abscess passes obliquely upwards, and is connected with a fracture in the body of the first lumbar vertebra. The body of this the first lumbar vertebra is completely crushed, but the spinal column is still perfectly straight, there being no permanent displacement. On the left side also there is comparatively little ecchymosis, whilst on the right side the upper roots of the lumbar plexus are surrounded with effused blood, and the muscular substance in which they are embedded is softened and almost in a state of suppuration. The termination of the spinal cord opposite the fractured vertebra was contused and softened, but had not been utterly crushed. There was no injury to the cord or to the vertebræ in the cervical region. In the left axilla there was much ecchymosis into the cellular tissue about the brachial plexus. The nerve trunks were stained by effused blood from their roots to the middle of the axilla.

In commenting upon this case, Mr. Hutchinson remarked that there were several different symptoms of much interest, for the elucidation of which he looked to the autopsy. In spite of the fact that the man could from the first feel in both legs and move both feet a little, a confident diagnosis of fracture of the spine had throughout been given. The existence of absolute paralysis of one part (front of right thigh) made, to Mr. Hutchinson's mind, it quite certain that something more than mere concussion had occurred. There was little doubt but that certain nerve roots at the seat of injury had been completely crushed, thus explaining this local and limited loss of feeling. The incomplete paraplegia of the lower extremities was explained by the contusion of the lowest part of the cord and the adjacent nerve roots. The explanation of the weakness of the left upper extremity and the paralysis of the dilating fibres of the left iris was less clear. There was no injury to the spine itself in the cervical region. The roots of the brachial plexus on this side, however, showed evident traces of severe bruising or stretching, probably the latter. Their trunks contrasted remarkably with those of the other side, being everywhere reddened and ecchymosed. Mr. Hutchinson expressed his belief that they had been violently stretched, and that as a direct consequence of this stretching was the imperfect paralysis of the upper extremity and of the cervical sympathetic nerve. He thought it probable that the man had fallen doubled forwards, his head violently bent upon his chest and to the right, and his left shoulder depressed. Thus the fracture of the sternum was probably caused by the chin itself. The displacement of the fracture suited well with this hypothesis, the upper part being behind the lower one. The chin was, he said, not an unfrequent cause of fracture of the sternum at this part. The crushed condition of the body of the first lumbar vertebra also favoured the idea that the trunk had been with great force doubled forwards.

MIDDLESEX HOSPITAL.

CASE OF STRANGULATED CRURAL HERNIA IN A MAN—OPERATION—RECOVERY.

(Under the care of Mr. HULKE.)

A BAKER, aged 64, of temperate habits and fair health, was admitted into Clayton Ward, April 22, 1864, with strangulated crural hernia on the seventh day. The moderately tense, slightly elastic, oblong tumour, two inches long, overlaid the inner end of Poupart's ligament, while, at its lower and inner border, it dipped into the crural canal. His tongue was furred, but moist; pulse 80, weak. He retched frequently a dirty greenish fluid. Before coming to the Hospital he had taken three doses of castor-oil.

Mr. Hulke operated by the small incision at the inner side of the tumour. The sac was opened; it contained a small knuckle of mulberry-coloured gut. The constriction was caused by fibres of the deep crural arch. Before the chloroform stupor passed off ¼ gr. of morphia was injected hypodermically. This was the only dose of medicine given. The first stool was passed four hours after the operation; the second not till the eighth day. He left convalescent May 23.

CASE OF VERY LARGE STRANGULATED SCROTAL HERNIA—OPERATION—RECOVERY.

(Under the care of Mr. HULKE.

Operations for the relief of large scrotal hernia are very often unsuccessful in saving the patient's life. The large quantity of bowel involved renders these cases very fatal. Recovery, in the present case, was probably due to the promptitude of the operation, six and a-half hours after strangulation began. A labourer, aged 40, who had been ruptured eight years, was admitted into Clayton Ward, at noon, December 23, 1863, with a strangulated rupture filling the left groin and scrotum. Its length, from a constriction at

the external inguinal ring to the bottom of the tumour, was 8½ inches, and its girth 18 inches. The upper part of the tumour was very tender and painful, and he complained of severe dragging pain in the lower part of the belly. His pulse was 80, and very small. He was very restless, and retched frequently. These symptoms dated from nine o'clock that morning. He had a reducible scrotal hernia on the right side.

The taxis in a hot-bath, and with chloroform, having failed, Mr. Hulke operated, making a limited incision over the external ring, where the constriction appeared to be situated. The gut could not be reduced till the sac, which was as thin as tissue paper, was opened, the obstacle being apparently the bulk of the tumour, which made it impossible to give a proper direction, by external pressure, to the portion of the gut lying in the neck of the sac. The wound suppurated, and was soundly closed on January 5. Next day, as no stool had been passed since the operation, fourteen days before, a castor-oil enema was given. This soon produced several copious evacuations. He left convalescent January 15.

STRANGULATED CRURAL HERNIA—OPERATION—DEATH.

(Under the care of Mr. HULKE.)

A woman, aged 38, who had been ruptured seven years, but had not worn a truss, was admitted into Bird Ward, March 29, 1864, with a strangulated hernia in the left groin. The tumour was tense, of a globular figure, two inches in diameter. It lay upon Poupart's ligament, and its lower border was traceable to the crural canal. Her pulse was 70, and very weak. She was much exhausted; had great pain in the navel, and retched frequently. These symptoms had set in four days previously, and the taxis had been tried several times perseveringly. Mr. Hulke at once operated by a short incision at the inner side of the swelling. The contents of the sac could not be returned till this was opened.

Its thickened neck, which had been separated from the crural ring and thrust inwards into the belly by the too zealous taxist, constituting an imperfect "reduction en bloc," was the seat of the strangulation. Death from peritonitis took place three days afterwards.

At the post-mortem examination the knuckle of gut which had been strangulated was found lying against the crural ring. It was thickened, of deep purple colour, and its surface was coated with lymph. There were evidences of general peritonitis, which had its focus in the strangulated bowel. A shrunken fibro-chalky hydatid cyst was found in the liver. Traces of former pericarditis were observed on the anterior surface of the left ventricle, and the lungs were extensively adherent and very œdematous.

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Medical Times and Gazette.

SATURDAY, AUGUST 26.

THE "MARCH" OF EPIDEMICS.

"CHOLERA is continuing its devastating march along the shores of the Mediterranean, and its advent into our country is heralded by an unusual pestilence amongst horned cattle." So say the newspapers. Now is this mere figure of speech? Is there a "march?" Are there "heralds?" And, if so, what are they? Are they creatures of the imagination, forces, influences, emanations, too subtle for chemical analysis? or are they matters obedient to the laws of gravity, chemistry, and life? What is it that "marches?" what are its favourite hostels? How can we bar the way? Such are questions anxiously pondered in many scientific circles just now.

Now, it is perfectly easy to conceive of diseases brought about by a concurrence of immaterial conditions—such as heat, electricity, moisture, and the like; and still more, that these conditions may foster or suppress the march of diseases of more palpable origin; just as a heavy snowfall or a hot simoom would arrest the march of an army. Still, common experience seems to point to this, that the cholera and fever do depend for their intensity on something material; that their march is much like that of locusts; that they have favourite halting and breeding places; and that whilst we may be helpless against electrical conditions (we don't despair, by the way, of combating even these some day), we can put a stop to the march of more palpable enemies—we may bar them out; or, if they come in spite of us, may starve them out and stop their propagation.

We think most of our readers will agree with us that the readiest way for cholera to march into a place is for some person ill of the complaint to move into it; or for clothes or other matters contaminated with the discharges from his body to come there. Then if all possible precaution be taken that the discharges from the sick man find their way into no drinking water; that they are not allowed to fester on an undrained surface where they can be wafted about by the wind in the shape of wet mist or dry dust; but that they are honestly decomposed or buried out of harm's way, then with the death or recovery of the sick man the "march" may cease. A clean place would be no fit place of entertainment for cholera.

Now, up to this time, cholera has been almost entirely confined to the Mediterranean seaboard—Alexandria, Smyrna, Constantinople, Malta, Ancona. Anyhow, if it come to us, it *must* come through a seaport. Then, in the name of common prudence, let us look at the condition of our seaports, and see whether they are places in which cholera would be starved out, or would increase and multiply. Would the enemy die out with the first case, or would it spread in the seaport, and be ready for a march inland? Portsmouth, Plymouth, Southampton, Dover, Harwich, Hull, Sunderland—how would the enemy thrive in either of them? He loves a low site—mud banks festering in the sun; sewage under the houses in filthy cesspools; sewage in the pumps which in every back yard of a country town alternate with the cesspools; sewage in the street gutters; sewage in the harbour at low water; dried sewage wafted into mouths and noses, and blowing on the meat in the butchers' shops—sewage, in fact, everywhere. If cholera should reach our outports, will it not have every encouragement to halt and refresh itself, and continue its march inland?

Then, supposing it should march to the poor districts of one of our great towns, will it find fit quarters there? What shall we say of the parish of St. George the Martyr, in one of the worst parts of the Borough? where an independent member of the Vestry, a Medical man, Mr. Rendle, upbraids the Vestry with the hundreds of wretched, filthy houses, with the neglect of the authorities in enforcing proper water supply and removal of refuse; where fever has been allowed to revel undisturbed; where the only excuse offered is, that the people are so filthy that they won't and don't care to be clean; and where Mr. Rendle openly taunts the local dignitaries with corrupt connivance at the evil, and threatens them that public indignation will demand that they shall be stripped of their misused authority, and subjected to that discipline so well suited for barbarians, a "central despotism."

It may be out of human power to stop the march of cholera absolutely; but the experience of three epidemics in 22 years (32—54) has taught us how to mitigate its ravages. It seems

almost childish to go over again the articles of the sanitary creed—pure water, fresh air, cleanliness, drainage, good ventilation, etc., etc. But we are afraid there are a good many persons whom no lessons will influence.

As for the cattle plague, its advent and the means by which it would be propagated were foretold three years ago by Professor Gamgee. All evidence shows that it has been imported from Russia, and propagated by mixing sound and unsound cattle in markets, and by the filth of the railway trucks and of the lairs in which the beasts are kept. If, as is asserted—as is done by the out-and-out free traders—it was not imported, but bred out of indigenous filth, the practical lesson is the same: cleanliness and removal of infected matter can alone stay the generation of the disease or its spread.

EXPENSIVE MEDICINES FOR THE POOR.

Some time ago we published a circular letter addressed by the Poor-law Board to boards of guardians directing their attention to the recommendation of the "Select Committee of the House of Commons on Poor Relief," that cod liver oil, quinine, and other expensive medicines required for the sick poor should be provided at the cost of the Unions, and requesting the guardians to consider what arrangements could be made with the view of carrying that recommendation into effect. We now understand that in very many instances boards of guardians have adopted this suggestion, and have relieved their Medical officers from their obligations under their contracts to supply these medicines at their own cost. The arrangements which have been made vary in different unions. In the majority of cases cod liver oil and quinine are now either supplied by druggists, on the orders of the Medical officers, the account being sent in to the guardians at the end of each quarter, and paid by them, or they are provided by the Medical officers themselves, the guardians reimbursing them the actual cost. In other instances, however, the guardians have procured a supply of cod liver oil, which is given out by the master of the workhouse or by the relieving officers as ordered by the Medical officers; in other cases it is provided by the relieving officers, who give orders for it in the same way as for wine, spirits, or extra nourishment, recommended by the Medical officers. There are also cases in which the guardians have increased the salaries of the Medical officers to cover the cost of the medicines supplied by them.

It is very desirable that Boards of Guardians generally should carry into effect the recommendation of the Committee on this subject, and thus remove any ground for the allegation that the sick poor, in some cases, are not provided with proper medicines on account of the cost which they would entail upon the Medical officers.

When commenting on that portion of Mr. Richard Griffin's proposed "Medical Relief Bill" which related to this subject, we stated our conviction that the interests of Medical officers would be better subserved by means of the interference of the Poor-law Board on their behalf, than by an appeal to Parliament. The result so far appears to justify our expectations; and, as it is but a few months since the circular was issued, affords good ground for hoping that, before the conclusion of the year, all Medical officers will find themselves in such a position in regard to these medicines as will enable them to do justice to the poor under their care without impoverishing themselves and their families.

THE NAVAL MEDICAL SERVICE AND THE WHIGS.

In a recent number of this journal we had occasion to notice a *brochure* from the pen of a veteran naval Medical reformer, Dr. Frederick James Brown, of Rochester, entitled "Requisitions of the Naval Medical Officers," and we have now before us a second and enlarged edition of the same, to which we desire to direct the attention of our readers.

Dr. Brown avowedly bases his "Requisitions" on the principle of equality with the army, but he now also gives us some very lucid tabular statements, showing very plainly, by comparison with the naval executive class, the disabilities that naval Medical officers labour under with regard to rank, pay, prize-money, honorary distinctions, and good service pensions.

When Sir John Pakington was First Lord of the Admiralty, he acknowledged from his place in Parliament that "the Medical officers of the navy had grievances of long standing," and that "he intended to give them all they asked for in spirit and in substance." Following this famous declaration came the Naval Medical Warrant of the 30th May, 1859, which has failed in its effect, as Dr. Brown has been at some pains to show, from no fault in its construction, but simply because the statesman who granted it retired from office, and was succeeded by a Whig-radical Administration, that have done all in their power to render the provisions of the Warrant null and void.

It is a remarkable fact that the self-styled *Liberal* Administration has evinced the utmost illiberality, and the greatest exclusiveness on the subject of rank both in the army and navy, withholding it, and all its contingent advantages, as far as they possibly could from the Medical officers of both services. And we have reason to know that the members of the Profession in the public service are disappointed that their brethren in civil life failed at the late general election to mark the disapprobation of the Profession at the conduct of the present Administration. The grossly unfair exclusion of Medical officers from Greenwich Hospital out-pensions in a bill which passed through Parliament at the close of the last session should have convinced gentlemen on shore, so to speak, that the present Government are hostile to the Profession. And if further proof was wanted of the total want of sympathy of the present Board of Admiralty with the Medical officers of the navy, it is to be found in the fact that the latter have been knowingly and wilfully excluded hitherto from the Order of the Bath. The Warrant of 1859 conferred a rank on all Surgeons sufficient to qualify them for admission to the Order; but the Admiralty render the Warrant of no effect by refraining from obtaining those necessary alterations in the statutes of the Order which the Warrant demanded. The thanks of the Profession are due to Dr. Brown for fully exposing this act of shameful neglect, and for his publication, in the edition of the pamphlet before us, of the 9th and 11th statutes, to which we particularly refer as requiring amendment.

At page 25 our author enters for the first time on the subject of preliminary examination, a subject which we hold to be of the first importance, and deserving of more consideration than he appears to have bestowed upon it. Strenuous advocates for the competitive system of examination, *we think it desirable that one and the same Board should conduct the examination for the Medical service of the army, navy, and Indian services.* We would not, as now, have the army and Indian officers presenting their separate lists of candidates for examination, and the navy picking up their candidates anyhow; but rather that there should be one list only, one and the same examination, the same preliminary training at Netley, and, at its conclusion, the successful candidates allowed choice of service in order of merit. This is the course pursued with the artillery and engineer cadets, and we feel assured that it is the course which should be pursued in selecting candidates for Assistant-Surgeoncies in the public service generally. The present system of examination in the navy is faulty in the extreme, and the sooner it is abandoned the better, for we hold that no man is capable of testing the qualifications of a candidate unless he is in the daily practice of teaching the subject he professes to examine upon. The sentence above in italics is to be found in the Report of a Royal Commission for 1858, and we strongly recommend it to the attention of the superior naval and military Medical authorities. And, in again recom-

mending Dr. Brown's pamphlet to the notice of the Profession, we may repeat with greater force what we said on a former occasion,—that we feel sure our naval brethren may safely rest their claims for redress on the statement thus advanced.

BURIAL v. CELLARAGE.

"Dust thou art, and unto dust shalt thou return." Such is the lot which all humanity must submit to; and it seems to us that the most decent and respectful method, that which is most obedient to the laws of Nature, most safe for the living, and that which most effectually secures the dead from unseemly disturbance, is plain burial in the lap of Mother Earth. For our own part, we pray that we may be buried deep, and never dug up again so long as the earthy elements of our being show aught of human shape. The human form, inanimate and turning to dust, is an object pitiful for its helplessness, terrible for its loathsomeness, hideous, and often indecently grotesque. None but a ghoul or vampire could look without awe at those terrible figures brought to light during the emptying of the vaults of St. Martin's-in-the-Fields, and it would be an offence against decency to describe them. Decency and charity alike require, then, that the mouldering fabric of humanity should be veiled from light, and allowed unwitnessed to undergo its final dissolution. Hence, to bury the dead, to conceal these frightful processes of corruption, has always been reckoned, amongst Heathens, Jews, and Christians alike, as one of the corporal acts of mercy. But what mercy dictates, pride revolts at. The rich man tries to put off the evil day when he must be mingled with the dust of the vulgar; but in the attempt he only the more surely exposes his remains to desecration. The history of mausoleums, mummy-pits, catacombs, and vaults of whatever description fully bears this out. The poor man buried in common earth may rest undisturbed—not always, by the bye. But the rich man is sure to be turned out. The luckiest thing for the deceased slumberers in vaults of late years has been the compulsory closing of vaults, and the filling them up and burying the coffins in earth and charcoal. This is a very small instalment of the works constantly going forward to remove the products of organic decomposition from the air of London and other large cities. The vaults in St. Martin's, St. George's, and many other parishes had been closed; those in St. Marylebone have lately been closed under the superintendence of Dr. Whitmore, the able Medical Officer of Health.

"The vaults beneath the parish church (he says in his Annual Report) contained 366 coffins, some in tolerable preservation, others rapidly decaying. In shifting these into convenient positions in their respective vaults, most intolerable effluvia would occasionally arise, which produced nausea and sickness in the workmen, and rendered the use of stimulants necessary.

"Beneath Blandford Baptist Chapel the scene which presented itself was indescribably shocking, and some idea may be formed of the dangerous condition of the place from the fact that on first entering the cellar leading to the vaults the flame of a candle was extinguished. In these vaults a large number of coffins had been deposited; those at the bottom had, partly from decay and partly from the superincumbent weight, become crushed, and as a consequence they were lying about broken to pieces, gnawed by rats, and mixed up with the crumbling remnants of mortality in sad confusion. As there was reason to believe that bodies had also been interred beneath the floor of the cellar, a bed of concrete six inches in thickness was laid over the entire surface, and it is satisfactory to know that this place, for so many years a loathsome and poisonous charnel house, has now been rendered perfectly clean and innocuous.

"In the vaults under St. John's Chapel 110 coffins were embedded; these were also in various stages of decay, and from many of them offensive effluvia arose."

Spite of the warnings involved in such narrations as these, the pride of the rich and the greed of the cemetery companies keeps up the custom of packing away bodies in catacombs. It is said, by way of palliation, that they are enclosed in lead. But the lead, by the action of the gases and fluids within, becomes converted into a brittle calx, and in time the products of decay make their way into the atmosphere, the coffin bursts or crumbles with its own weight, and the contents, after issuing out the most poisonous steams for years, are very likely carted out into a field by some generation of churchwardens who have forgotten the original tenants of the vault, and want space for fresh comers. There is even another mode of desecration incidental to the vaulting of bodies still more curious. The coffin of a well-known public character was deposited in a vault at Kensal-green:—

"This place (says the *Observer*) was exceedingly dry; so much so, that some of the coffins which had been there many years were falling to pieces, and the cloth over the wood work hung in shreds like tinder. At the upper part of the vault there is a place for a candle, and it is believed that in lighting this candle, either with a lucifer or paper, the man must have dropped a spark on to the cloth of the nearest coffin, and that it smouldered away unobserved until, coming into contact with the gas emitted through some aperture in the lead of the enclosed coffin, that ignited, and at once communicated flame to the wood of the outer coffin, and so on to the others on the same tier. There were five coffins completely consumed, with their contents, and a part of a sixth."

We wish the intelligent classes of the community would see the true bearings of such an accident, and discard the wretched flunkeyism of exclusiveness even in decay. At any rate, every coffin buried in a catacomb ought to be filled with charcoal, so as to absorb the venemous gases sure to be evolved at some day.

A FEMALE MEDICAL COMBATANT.

"An incident is just now being discussed in military circles so extraordinary that, were not its truth capable of being vouched for by official authority, the narration would certainly be deemed absolutely incredible. Our officers quartered at the Cape between fifteen and twenty years ago may remember a certain Doctor attached to the Medical staff there, and enjoying a reputation for considerable skill in his Profession, especially for firmness, decision, and rapidity in difficult operations. This gentleman had entered the army in 1813, had passed, of course, through the grades of Assistant-Surgeon and Surgeon in various regiments, and had served as such in various quarters of the globe. His Professional acquirements had procured him his promotion to the staff at the Cape. He was clever and agreeable, save for the drawback of a most quarrelsome temper, and an inordinate addiction to argument, which perpetually brought the latter peculiarity into play. He was excessively plain, of feeble proportions, and laboured under the imperfection of a ludicrously squeaking voice. Any natural 'chaffing' with regard to these, however, especially roused his ire, but was at length gradually discontinued on his 'calling out' a persevering offender, and shooting him through the lungs. About 1840 he became promoted to be 'Medical inspector,' and was transferred to Malta. There he was equally distinguished by his skill and his pugnacious propensities, the latter becoming so inconveniently developed upon the slightest difference of opinion with him, that at last no notice was allowed to be taken of his fits of temper. He proceeded from Malta to Corfu, where he was quartered for many years, still conspicuous for the same peculiarities. When our Government ceded the Ionian Islands to Greece, and our troops, of course, quitted the territory, Dr. —— elected to leave the army, and to take up his residence for the rest of his days at Corfu. He there died about a month ago, and upon his death was discovered to be a woman! Very probably this discovery was elicited during the natural preparations for interment, but there seems to be an idea prevalent that either verbally, during the last illness, or by some writing perused immediately after his (for I must still use the 'masculine') death, he had begged to be buried without any post-mortem examination of any sort. This, most likely, only aroused the curiosity of the two nurses who attended him; for it was to them, it appears, that the disclosure of this mystery is owing. Under the circumstances, the fact was deemed so important that Medical testimony was

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called in to report upon and record its truth. By this investigation not only was the assertion placed beyond a doubt, but it was equally beyond a doubt brought to light that the individual in question had, at some time or another, been a mother! This is all that is as yet known of this extraordinary story. The motives that occasioned, and the time when was commenced, this singular deception are both shrouded in mystery. But thus it stands an indubitable fact, that a woman was for forty years an officer in the British service, had fought one duel, and had sought many more, had pursued a legitimate Medical education, had received a regular diploma, and had acquired almost a celebrity for skill as a Surgical operator! There is no doubt whatever about the 'fact,' but I doubt whether even Miss Braddon herself would have ventured to make use of it in fiction."

The above is extracted from *Saunders's News Letter and Daily Advertiser* of August 14, and it has been the subject of not a little "club tattle." There need be no hesitation, therefore, about our stating what we have heard. The author of the above has fallen into many inaccuracies; but he is correct in the main point—the sex of the deceased. There is quite enough to stimulate curiosity and provoke astonishment in this bare fact without any artificial dressing. The deceased was very well known, and many were the stories and surmises circulated during his (?) lifetime. The physique, the absence of hair, the voice all pointed one way, and the petulance of temper, the unreasoning impulsiveness, the fondness for pets, were in the same direction. The deceased Doctor died in London—not in Corfu,—and was buried at Kensal-green. His declining years were comforted by the cat, dog, and parrot, so dear to elderly women, especially single ones.

It appears that a woman employed to perform the last offices for the dead discovered the sex. About this point she was very positive indeed, declaring that she was not likely to be deceived as the mother of a large family herself. "Call him a general? Why, *he's* a woman, like myself!" was her exclamation, spite of the paronomasia it involved. Moreover, she asserted, with equal assurance and decision, that there were undoubted signs of maternity. In these conclusions the woman was supported and corroborated by others.

The deceased had fought a duel, we believe; but whether she shot her adversary through the lungs is another thing. As to the "firmness," "skill in operating," "decision of character," etc., about her possession of these there may be a question; but about the querulousness, irritability, and quarrelsomeness, there can be none.

In 1813, when the deceased entered the army, the Professional qualifications required for the service were not of the highest order. Be that as it may, we have here all the elements for a first-rate novel. What an interesting autobiography it might have made! Was it an early folly that led her to find too late that men betray, and did she embrace the army as a means to soothe her melancholy, or with the hope of meeting and shooting her betrayer?

EPIDEMIOLOGICAL TRANSACTIONS—CONTRIBUTIONS TO ETIOLOGY.

The last volume of *Transactions* of the Epidemiological Society contains three papers which we think it well to notice. The first is by Mr. Thos. Hunt upon "Certain Endemic Cutaneous Affections Observed in Schools, Factories, and Warehouses." Especially he alludes to ringworm and scabies, the prevalence of which he attributes to the *combined* influence of four causes, either of which separately, he says, never presents a formidable difficulty in the management. These are *atmospheric impurity* of a constant and uniform character, in respect of which he says that children habitually kept within the four walls of any establishment get their general health deteriorated, and holds (with Celsus, by the way,) that in such cases a change would be beneficial even to a *worse* atmosphere. Secondly, *sameness of diet*, everlasting boiled mutton and potatoes, pea-soup, and oatmeal-gruel. He tells a story of a girls' school, from which itch was expelled by introducing turnips into the diet-table. There is much truth in this, we believe, and we are disposed to attribute other diseases that are sometimes endemic in schools—such as ophthalmia—very much to this same cause. Thirdly, *deficient exercise*. Mr. Hunt thinks children get tired of the playground, and should have exercise frequently out of it. He is right. Children's instincts all point to change: uniformity is certain destruction to their bodily and mental health. Fourthly, *contagion*, which operates most readily where, from the causes above enumerated, the health has been deteriorated.

We cannot have too many facts establishing the relative influence of bad drainage, foul effluvia, bad water, and overcrowding as causes of typhoid and typhus fever. A contribution is made by Dr. Harvey (since deceased), who investigated an outbreak of typhoid at a little village called Wing, near Leighton Buzzard, which was said to have been brought there by a young man named Pease, and to have spread from him throughout the village. Even if the last-mentioned fact had been substantiated, which it was not, it would have still left undisturbed the theory of Dr. Budd, of Clifton, as to the method of communication of typhoid by means of the intestinal excreta. Pease was, it seems, attacked with typhoid some three weeks or a month after coming into it; and if not the first his was one of the earliest cases. The family was very dirty; six persons slept in a bedroom containing 1200 cubic feet of space (= 200 each), and a privy for the use of fifty people was situated half-a-dozen yards from the back door, and so horribly filthy as to be almost unapproachable, some of the people defecating on their gardens even at the very threshold of the door. The other houses in the village were similarly overcrowded, and exposed to fœcal effluvia. The water supply was from land springs, collected in wells dug through the sand and gravel of the surface to the clay beneath, and contained 10 to 12 grs. of organic impurity to the gallon. We would just make one comment upon this. If overcrowding could produce typhus, why was not typhus here? for the bedrooms had not even a fire-place to assist by ventilation in modifying the atmospheric impurity produced by overcrowding.

The third paper we shall refer to is the opening address of Dr. B. W. Richardson, in which he reviews the progress made in epidemiological science, and points out the line of investigation which he considers should be pursued for the future. Among the solid gains of the science he enumerates the following:—1. The establishment of the fact that the true epidemic disorders are essentially specific, as a general rule, in particular classes of animals, and thinks that it teaches an important practical lesson, and will hereafter assist the etiologist in a process of reasoning based upon the peculiar organisation of the several animals. 2. The determination of the geographical limits of the great epidemical disorders. 3. The influence of season on certain formidable diseases. 4. The changes undergone by diseases according to elevation from the surface of the earth. 5. The establishment of the law that each specific or spreading disease has for its cause one special poison. While on this subject, he discusses the practical tendencies of the doctrine, and especially its bearing upon the value of preventive measures. He holds, and we think rightly, that the salutary influence of preventive measures, such as are advocated by sanitary reformers, is obvious; but, on the other hand, it is equally obvious that some of the fatal diseases, such as scarlet fever, measles, whooping-cough, etc., may be as fatal in a palace as in a hovel. Alluding to the well-known experiments of Dr. Barker on animals with cesspool air, and to Dr. Budd's observations on the spread and arrest of ovine small-pox—the one producing disorder which is not communicable and passes off when the cause is removed; the other the reverse of this—he infers that cases of specific

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disease exposed to such and similar gases become complicated by the nature of the air which the sufferer breathes, but not more; the precise symptoms which mark the communicable and specific disorder remaining the same, and in themselves running the same course. 6. The fact that epidemic diseases of a certain class do not usually recur in the same person; and 7, that in respect of one of them—small-pox—we have an almost certain prophylactic. Looking onwards, he holds that what is to be arrived at is—1. A better knowledge of the sources of poisons of the epidemic class. He thinks that with this view our attention should be specially directed towards the vegetable world, adducing his own observations of erysipelas arising from exposure to the dust of a threshing-floor on which wheat had been lying, Dr. Salisbury's observations on camp measles as originating in musty straw, and Dr. Kennedy's observation of an affection resembling measles being induced by the inhalation of some portions of musty flax-seed meal. 2. A more correct appreciation of the changes which these poisons produce in the body, and the way in which they destroy life. In regard of certain of them,—such as those of diphtheria, scarlatina, measles, whooping-cough, croup, and influenza—he thinks that, the normal changes in the blood being checked, a modified form of oxidation with new products arises, and especially a modification of the fibrinous constituent of the blood, leading to a separation of fibrin in the heart, as the precursor of death. In respect of others,—as typhus, yellow fever, and plague—he thinks the opposite condition is present, viz., an excessive alkalinity of the blood, leading to solution of the envelope of the red corpuscles, and discharge of free hæmatine into the circulation. 3. A more correct view of the modes to be adopted of destroying the effects of poison on the living organism. Taking the two classes of diseases just referred to, he advocates the use of ammonia and sulphites in the former, and, in the latter, remedies which hasten metamorphoses and neutralise alkaline products,—*e.g.*, mineral acids in typhus. Finally, he alludes to the value of iodine evaporated in the sick chamber as a means of destruction of those organic poisons which arise from the bodies of the sufferers. With regard to all this, we would say that after all, while it is the place of science to suggest rational means of combating disease, nothing but experience will establish their actual value, and the conditions under which their use may be expected to prove beneficial.

THE WEEK.

MILCH COWS IN LONDON.

We have been favoured with a proof of a "Return from the Metropolitan Association of Medical Officers of Health, of the number of cowsheds, of cows, and, so far as could be ascertained by inspection and inquiry, the number of cases of the cattle plague that have existed in each parish or district from May 1 to August 13, 1865." There appear to be forty-five parishes or districts, and returns are made from all except Islington, Charlton, City of London, St. Luke's, and Kensington. St. Martin's-in-the-Fields and St. James, Westminster, have no cowsheds and no cows. The Strand has "two, kept legally—*i.e.*, with a license; and four illegally—*i.e.* without license." In the former, 74; in the latter, 46 cows are kept. Considering that there is a heavy penalty attached to the keeping cows without a license, there seems great slackness in the local authorities that they do not enforce it. Including these in the Strand, it appears that 15,176 cows are usually kept within the Metropolitan District, to which we suspect 3000 ought to be added for the parishes from which no return has been received. In several parishes where the epidemic has prevailed, the numbers are greatly reduced; thus, in St. Marylebone there are only 746, whereas the usual number is 1314. The districts in which the murrain is known to have appeared are—St. Marylebone, in 279 cows; Holborn, 39; Hampstead, 125; St. Pancras, 140; Clerkenwell, 277; Mile-end and St. George's East, 60; Poplar, 34; Clapham, 25; Lambeth, 24; St. John, Southwark, 35; Lee and Kidbroke, 15; and Newington, 5. But the return states that these numbers are not to be relied upon, as they are of necessity derived from information supplied by the cowkeepers, whose motives for secrecy are obvious.

A CORONER'S DEFINITION OF INSANITY.

Ἐι μη 'ιάτροι ἦσαν, ὄυδεν αν ἦν τῶν γραμματικῶν μωρότερον. We won't translate this, but to those who don't understand Greek will say that it means that, thanks to coroners, there are people in creation madder than mad Doctors. If we are to believe the newspapers—and we are ready to say beforehand to Mr. Coroner Bird that we find it difficult—this elevated legal functionary has spoken out on the subject of criminal insanity in a way that ought to gladden the hearts of the Townleys and Constance Kents and of all their advocates and eulogists, and of all who mean to be their imitators. The doctrine of "can't help it" is to have full swing. A man murders his wife outright and then cuts his own throat. Somehow, the "insane impulse" which prompts these wretches to murder others is seldom quite strong enough to make them do the job effectually for themselves; so the man lingered a few days, and died in the Brentford Workhouse. An inquest was held. Evidence was given. Then the Coroner summed up thus (as reported):—

"Now you have heard the evidence showing very clearly that this man died of wounds inflicted by himself, and I should think you can have no difficulty in returning a verdict. You are not investigating, remember, any matters in relation to the death of his wife, for an inquiry has taken place with respect to that death, and if you are satisfied that the man was not in a sound state of mind when he cut his throat, you will return a verdict to that effect. *I think the best evidence of the state of mind of the man is to be seen in the act itself, for no man in a right state of mind would commit such a deed as this.*—A juror asked: Don't you think we had better hear evidence, which is to be obtained, as to the state of the man's mind just before the deed was committed?—The Coroner rejoined: What has that got to do with it? We don't want evidence as to the man's state of mind an hour before, or a day before, or a week before the commission of the act; but at the moment this act was committed.—A juror: Well, I believe that at the moment the act was done the man was in a right state of mind, and knew what he was about. I don't think a man can be sane one moment and insane the next.—The Coroner: Well, what do you think, Doctor?—Dr. Mackinlay: Well, this question of insanity is a very difficult one to answer. I should say the man was labouring under momentary excitement. Passion will render a man perfectly uncontrollable.—The Coroner: *And if a man is not under control he must be insane!!!*—Dr. Mackinlay: Well, I saw the man a short time after the commission of this act, and he was then perfectly rational.—A juror: If the man had lived to be arraigned at the bar for the murder of his wife, can any of us suppose that a plea of insanity would have saved him?—Several jurors: Certainly not.—The juror: Then, I say, we should return a proper verdict in this case.—The Coroner: What do you call a proper verdict?—The juror: Well, I certainly should not say that he committed this deed in an unsound state of mind.—The Coroner: Then return a verdict that he died from injuries inflicted upon himself.—Several of the jury thought that verdict would do; but one interposed with the question, 'But ought we not to have the evidence as to the man's state of mind?'—To which the Coroner replied, 'You have nothing to do with that.'—The verdict was accordingly returned that 'Daniel Dossett died from injuries inflicted by his own hand.'"

Here is law! Here is a moral for passionate people! You may be sane at five minutes to four and sane five minutes after; but at four, if you get into a passion strong enough, you may be uncontrollable; if uncontrollable, insane; if insane, irresponsible and unpunishable. Thank you, Mr. Bird. You have taken the shine out of the mad Doctors now. But somehow your doctrine sits not easily on the stomach of the British juryman.

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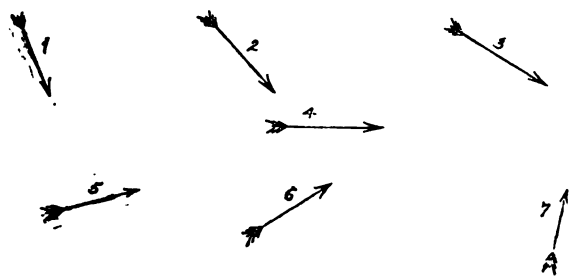
THE ARRANGEMENT OF THE FIBRES IN THE VENTRICLES OF THE VERTEBRATE HEART.

THE following is Dr. Pettigrew's summary of his observations upon this subject:—

"1. By exercising due care, I have ascertained that the fibres constituting the ventricles are rolled upon each other in such a manner as readily admits of their being separated by dissection into layers or strata, the fibres of each layer being characterised by having a different direction. 2. These layers, owing to the difference in the direction of their fibres, are well marked, and, according to my finding, are seven in number—viz., three external, a fourth or central, and three internal. 3. There is a gradational sequence in the direction of the fibres constituting the layers, whereby they are made gradually to change their course from a nearly vertical direction to a horizontal or transverse one, and from the transverse direction back again to a nearly vertical one. Thus, in dissecting the ventricles from without inwards, the fibres of the first layer, which run in a spiral direction from left to right downwards, are more vertical than those of the second layer, the second than those of the third, the third than those of the fourth, the fibres of the fourth layer having a transverse direction, and running at nearly right angles to those of the first layer. Passing the fourth layer, which occupies a central position in the ventricular walls and forms the boundary between the external and internal layers, the order of arrangement is reversed, and the fibres of the remaining layers—viz., five, six, and seven—gradually return in an opposite direction, and in an inverse order, to the same relation to the vertical as that maintained by the fibres of the first external layer. This remarkable change in the direction of the fibres constituting the several external and internal layers which is observed to occur in all parts of the ventricular walls, whether they are viewed anteriorly, posteriorly, or septally, has in part been figured by Senac and imperfectly described by Reid, but has not, so far as I am aware, been prominently brought forward by any one. A few arrows will illustrate the gradation in direction referred to. . . . .



Note.—The numbers represent the layers counting from without inwards.

4. The fibres composing the external and internal layers are found at different depths from the surface, and, from the fact of their pursuing opposite courses, cross each other, the fibres of the first external and last internal layers crossing with a slight deviation from the vertical, as in the letter X; the succeeding external and internal layers, until the fourth or central layer, which is transverse, is reached, crossing at successively wider angles, as may be represented by an ⋈ placed horizontally. 5. The fibres composing corresponding external and internal layers, such as layers one and seven, two and six, etc., are continuous in the left ventricle at the left apex, and in the right ventricle in the track of the anterior coronary artery, the fibres of both ventricles being, for the most part, continuous likewise at the base. 6. From this distribution of the fibres it follows that the first and seventh layers embrace on their convolutions those immediately beneath them, while these in turn embrace those next in succession, and so on until the central layer is reached—an arrangement which may in part explain alike the rolling movements and powerful action of the ventricles. 7. The fibres of the right and left ventricles, anteriorly and septally, are, to a certain extent, independent of each other; whereas, posteriorly, many are in common to both ventricles—*i.e.*, the fibres pass from the one ventricle to the other—an arrangement which induced Winslow to regard the heart as composed of two muscles enveloped in a third. It will be evident from this distribution of fibres that, while the ventricles are, for obvious reasons, intimately united, they nevertheless admit of being readily separated. 8. If the hinge-like mass of fibres (common fibres) which unite the right ventricle and the left posteriorly be cut through, and the right ventricle with its portion of the septum detached, the left ventricle will be found to be nearly as complete as it was before the separation took place, and to consist of four sets of conical spiral fibres, two external and two internal sets. On the other hand, the right ventricle and its share of the septum consists only of conical-shaped spiral fragments of fibres, or at most of flattened rings—a circumstance which, when taken in connection with others to be mentioned presently, has induced me to regard the left ventricle as the typical or complete one, the right ventricle being a mere segment or portion nipped off at some period or other from the left. 9. If the right ventricular walls be cut through immediately to the right of the track for the anterior and posterior coronary arteries, so as to detach the right ventricle without disturbing the septum, and the septum be regarded as forming part of the left ventricular wall, it will be found that the fibres from the right side of the septum, at no great depth from the surface, together with the external fibres from the left anthicular wall generally, enter the left apex in two sets; and if their course in the interior be traced, they are observed to issue from the left auriculo-ventricular opening, also in two sets; in other words, the left ventricle is bi-lateral. I would particularly direct the attention of investigators to this bi-lateral distribution of the fibres, as it has been hitherto overlooked, and furnishes the clue to the arrangement of the fibres of the left ventricle. 10. The double entrance of the fibres at the left apex, and their exit in two portions from the auriculo-ventricular opening at the base, are regulated with almost mathematical precision; so that while the one set of fibres invariably enters the apex posteriorly, and thence from the auriculo-ventricular opening anteriorly, the other set as invariably enters the apex anteriorly and escapes from the auriculo-ventricular opening posteriorly. But for this disposition of the fibres, the apex and the base would have been like the barrel of a pen cut slantingly or lop-sided, instead of bilaterally-symmetrical, as they are. 11. The two sets of fibres which constitute the superficial or first external layer of the left ventricle, and which enter the left apex in two separate portions or bundles, are for the most part continuous in the interior with the musculi papillares, to the free ends of which the chordæ tendinæ are attached. These columns occupy different portions of the left ventricular cavity, and give a very good idea of the symmetry which prevails throughout the left ventricular walls. Lastly. The apex is opened into and enlarged, and the auriculo-ventricular orifice widened by the removal of consecutive external and internal layers, from the fact of the left ventricular cavity tapering in two directions and forming a double cone."

An opaque model illustrating the directions of the fibres of the ventricles may be made by taking a piece of newspaper or paper with parallel lines drawn upon it, the length being twice the breadth, and then rolling it into a cone, beginning at the right hand distant corner, and making three turns and a-half. The lines will now show the direction of the fibres as described above, and will assist the reader in following Dr. Pettigrew's description.

FROM ABROAD.—THE WURZBURG OBSTETRICAL CLINIC—REGISTRATION OF BIRTHS IN FRANCE—THE FRENCH MEDICAL NAVAL SERVICE.

FROM an elaborate report by Dr. P. Müller on the Obstetrical Clinic at Würzburg, we extract the following summary of its proceedings during the thirteen years 1850-63. During this time there were delivered 4170 women, of which number 3970 were discharged, 148 were transferred as ill to the Julius Hospital, 65 died, and 7 remained in the Clinic. Of the 4170 births, 4105 were single, and 65 twin births, producing 4235 infants. Of this number, 3951 were born living, and 284 dead; and of the 3951 living infants, 3828 were discharged, 222 died, and 7 remained. The presentations were—head, first position, 2838, second position, 1077; face, first position, 10; second position, 12; breech, 66; foot, 52; cross, 54; undetermined presentations, 122. Labour was artificially induced in 15 cases, 11 times with more or less successful result. There were 252 applications of the forceps, with a successful result in 193 cases, the woman dying in 18, and being returned

as "ill" in 41. Of the infants, 214 were born living and 38 dead. There were 5 deliveries performed by means of the "aerotractor," on account of deficiency of pain, the women recovering in 4 cases and dying in 1, and all the children living. Turning was performed in 55 cases, 41 of the mothers remaining well, 9 ill, and 5 dying, 27 of the children being born alive, 21 dead, and 7 in a macerated condition. Perforation was performed eight times, two of the women dying. There occurred 213 cases of puerperal fever, of which 129 are returned as recovering, 20 as improved, 7 as uncured, and 57 as dying.

The delays which even obvious reforms are subjected to, notwithstanding frequent indications of the abuses to be remedied, is well exemplified in the mode of registering births which prevails in France. Within three days after birth the infant must be taken personally to the *mairie*, which, of course, in rural districts implies often a long journey in inclement weather. Physicians and sanitarians have for years pointed out how fertile a source of disease and death this transport is, and have demanded a domiciliary registration. To this all kinds of objections have been made, so that the most that has been conceded has been a permissive domiciliary registration, which, as it is attended with some expense, is beyond the reach of the poor, who, according to the statement of M. Depaul at a recent discussion on this subject, are subjected to the caprices of subaltern *employés* at the *mairies*. Still, M. Danyau and others, as the domiciliary registration is gradually extending itself, object to the proposition long since made by M. Loir, of rendering it compulsory. Why the English plan of registering the birth upon the testimony of a person who was present at the time should not be adopted it would be difficult to explain, as we do not suppose any additional security for the identification of the infant is obtained by its personal presentation to the worshipful mayor or his clerk. However, one feature of the French plan is deserving of our own imitation, namely, that registration of some sort is compulsory, while with us it is optional. Then, again, in the French system there is a registration of still-born children, while we take no account of these—a gross omission, both in a statistical and a juridical point of view.

The French Medical naval officers have had their grievances as well as our own, but not possessing the same facilities of publicity which prevail among ourselves they have not been able to make them generally known. What is better, however, they seem to have got them in great part remedied, so that the service has been placed upon a more satisfactory footing. By a decree just issued, on the recommendation of the Minister of Marine, their pay has been somewhat increased and their promotion rendered more rapid; and that some alteration was required may be inferred from the fact that until the present decree was issued the service was regulated by an ordinance dating as far back as 1835, somewhat modified in 1854. The service is now ordered to be constituted as follows:—1 Inspector-General, 3 Directors, 1 Assistant-Inspector, 10 Physicians-in-Chief (the title of Surgeon having been abolished), 12 Physician-Professors, 32 Principal Physicians, 125 Physicians of the first class, 200 of the second class, and 120 Assistant-Physicians; 1 Assistant Inspector of Pharmaciens, 3 Pharmaciens-in-Chef, 6 Pharmaciens Professors, 2 Principal Pharmaciens, 9 Pharmaciens of the first class, 18 of the second class, and 15 Assistant Pharmaciens; total, 558. The General Inspector, without having any of his important functions impaired, is provided with a council, composed of the Assistant Medical Inspector and Assistant Inspector of Pharmaciens, for the purpose of advising with him on all hygienic measures. One important improvement consists in the relative increase of superior officers, and consequent promotion, the superior officers now being 59 to 445 subalterns, instead of as before 50 to 440. The pay has also been increased to a moderate amount, varying from 200 to 600 francs additional, although how small it still continues may be judged from the fact that the chief Medical officer, the Inspector-General, or as we should call him Director-General, only receives 12,000 francs per annum. In future the *concours* is to be confined to the Assistant Physicians and the Professors. These last are attached to the naval Medical schools at Brest, Rochefort, and Toulon, which are in the somewhat anomalous position of being able to impart an efficient instruction without having the power to confer a diploma. It seems that the Government attach much importance to the student becoming early initiated into the duties which will fall to his lot on board ship, and hence insist on his education being conducted at these ports, allowing the time so employed to count as service for pension; and the populations of these towns are said to afford special facilities for recruiting this branch of the service.

THE

THIRTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(*From our Special Correspondent.*)

SPECIAL DISCUSSIONS ON SUBJECTS SELECTED BY THE COMMITTEE OF COUNCIL.

In order to give occasion for brisk and useful discussion on the subjects of leading interest, the Committee of Council, at the suggestion of Dr. Richardson, set aside two mornings for the discussion of certain subjects selected after much consideration by a sub-committee. It was arranged that on Thursday morning the subjects introduced should relate to Scientific Medicine; and that on Friday morning State Medicine and Public Health should be the order of the day. Two questions were cited for each morning: the openers of the debate were selected beforehand, and for several weeks previous to the meeting, notices of each subject were circulated amongst the members. As the method was new to the Association, much interest was felt as to its success. The result was most satisfactory: and from henceforth these open debates, to which all the speakers come prepared, will be an important feature in the annual record of proceedings.

(*a*). Scientific Medicine.

Discussion 1.—*The Antecedents of Cancer.*—The first question opened for discussion was as follows:—

Are there any antecedent conditions influencing the production of Cancer?

Mr. Charles Moore, of the Middlesex Hospital, was entrusted with the opening of the debate on this topic.

Mr. Moore said that in this inquiry there must be agreement as to the conditions and the period of the disease which were to be the subject of discussion; and he expressed his own conviction that cancer commenced at the appearance of the first tumour. At the terminal examination of a case of cancer there might be tumours throughout the body; but one of them had preceded all the rest, and one in many instances constituted the solitary and the fatal malady. To what antecedent conditions could this first tumour be traced? It had been alleged that there was a prior disease of the blood; but neither chemistry, the microscope, nor argument had established that allegation as a fact. Dr. Fenwick had discovered changes in the gastric and intestinal mucous membranes of persons dying of cancer, but had not been in a position to demonstrate these or any other changes previously to the outbreak of the disease. Local irritations, both abundant and various, had their part as causes; but they were not of themselves adequate to produce cancer. The remaining occasion supposed to initiate cancer was comprised in the notion of its constitutional nature. This notion Mr. Moore examined at some length. The constitutional nature of cancer was held to be proved by the following chief reasons: 1. Its final universal diffusion in the body; 2. Its growth in various textures; 3. Its supposed outbreak in many tumours simultaneously; 4. Its local occurrence after operations on the primary disease; 5. Its appearance in internal organs, notwithstanding its final extirpation from its first seat; 6. Its repitition in members of the same family; 7. Its relation to tubercle. These facts in some cases, and the bearing of others on the question of the constitutional nature of cancer, Mr.

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Moore contested, calling especial attention to the remarkable manner in which cancer was inherited as a local disease. He then gave reasons for concluding cancer to be primarily a local disease. 1. Its invariable origination as a single tumour. 2. The dependence of the later tumours on the first, as proved by—*a*, the similarity of the morbid substance in various textures and distant organs; *b*, the order in which it is disseminated; *c*, the delay, the progress, and dispersion of cancer by operation; *d*, the possibility of its extirpation by an early and adequately extensive operation. 3. Its heritableness as a local more than as a general peculiarity. 4. Its preference of the healthiest persons. In this last fact was comprised the chief observation as to the antecedent condition of those who become subjects of cancer. Their previous life has been eminently healthy; their appearance when attacked is healthy; the adjoining tissues are natural; longevity is remarkable in the parents of these persons; those attacked are generally the strongest and often the eldest of a family; the disease increases numerically with the wealth and well-being of the nation; and it prevails in great excess in the healthest divisions of the country.

At the conclusion of his argument Mr. Moore was warmly cheered.

Dr. Richardson confined his observations to one point—viz., the localisation of cancer in particular parts of England. Mr. Moore had studied the point from mortality of cancer in certain districts, Dr. Richardson had studied it from the vital statistics of Hospitals; but both of them had arrived at the conclusion that there were certain spots where cancer was rife, and other spots where it was comparatively rare. Both of them had, for instance, fixed on Norwich as an illustration of the first kind, and on Reading as an illustration of the second. The Association might consider there was fair ground for the inference—quite a new inference—that cancer was under the influence of certain local or social conditions which materially influenced its development.

Mr. Jonathan Hutchinson contended for the origin of cancer as a local disease. He thought the commencement of cancer implied a morbid activity of one or more cells, that had a tendency to develope themselves very rapidly without regard to the requirements of the other parts of the economy.

Dr. Mead (Bradford) had come to the conclusion that cancer in its early stages was purely a local disease.

Dr. Stewart coincided with Mr. Moore's proposition that cancer often attacked the most healthy individuals, and recorded a case where a strong, powerful navvy, who had never felt any inconvenience until three weeks before his admission, died from a cancerous tumour on the liver, which could not have existed altogether more than six weeks; previous to which attack the patient had enjoyed the most robust health. He believed there was ground for the view that local causes were at work in producing cancer.

At the close of the debate a resolution was carried that the Medical Officer of the Privy Council should be requested to institute an inquiry in respect to the localisation of cancer in England.

Discussion 2.—*Question: Is there any Foundation for the Hypothesis of the Origination of Disease by Zymosis or Ferment?*

This discussion was opened by Dr. Richardson, who began by stating that the hypothesis that, in certain diseases, there is a fermentative process analogous to the fermentation of wine, was first advanced by Willis in the seventeenth century; and the hypothesis had held its ground until now. Was it true? It might be admitted that the introduction of certain organic poisons into the organism was followed by a divergence from the ordinary standard of health; whether the poison were introduced into the blood from without, as in vaccination and syphilis; or from within, as in rheumatism. The diseases which seemed to be produced by such action of poisons were— small-pox, vaccinia, syphilis, gonorrhœa, rheumatism, scarlet fever, diphtheria, measles, typhus fever, typhoid fever, cholera, pyæmia, glanders, hydrophobia, and perhaps tetanus. Dr. Richardson said these poisons were separable—as separable as snake poisons. He related a series of experiments bearing on the separation of one form of pyæmic poison. He doubted the cellular character of the poisons as necessary to their construction, but said they were nitrogenous. They were all neutralised by bromine and by mercurial salts; and they seemed to form salts with hydrochloric acid, as morphia does. They were probably organic alkaloids, of the ammonia type. Of these poisons, some might be derived in the first instance from without the organism, and even from the vegetable world; but, in many instances, they were products of the body itself — secretions or excretions— modified either by the oxygenation of the blood, or by exposure to the air out of the body, and by peculiar decomposition. The natural secretions of some animals—as the snake secretion—were poisonous to other healthy animals; and human saliva was poisonous to inferior animals, such as rabbits. The poisons differed in their action; and the same poison might produce different symptoms. Thus scarlet fever poison might cause malignant fever or mild fever. Dr. Richardson was of opinion that this depended on the organic constitution of the poison itself at the period of its absorption. The poison of pyæmia, which was present in the secretions of wounds, could produce two forms of disease—one in which the leading signs were those of typhus; another, in which they were those of inflammatory fever, with fibrinous separation and fibro purulent deposits. In the first class of cases, the poisons acted immediately on the blood, causing death from direct interference with the process of oxidation. In the latter class, the action was more prolonged; and new products of oxidation, lower than carbonic acid, were the result: these lower products—acids, such as lactic—acted as secondary poisons. In some diseases, the secretion first poured out might be simple; but when exposed to air it underwent change, became poisonous, was absorbed, and led to death from secondary action. In this manner, simple diseases often assumed a fatal form. A common illustration of this fact was afforded in tonsillitis merging into diphtheria from secondary absorption. The quantity of poison introduced into the system, or the rapid absorption of the poison, intensified the symptoms, but did not alter the type. The type was changed by the action of the air on the poison, and by the stage of the decomposition of the poison. The author held that there were conditions of the atmosphere in which these poisons underwent specific changes, giving rise to special disease. He accounted for Surgical fever in this manner. The influence of the poisons in every case was on the blood, and was most simple. The poisons all more or less prevented free oxygenation; and thus they changed the character of the secretions of the body, rendering them in turn poisonous, and capable of reproducing their likes. In conclusion, Dr. Richardson urged that there was no foundation for the theory of zymosis, in the common acceptation of that term, *i.e.*, there was no propagation of the poison in the blood by formation of such poison from cell to cell. The process consisted in transformation of the natural parts of the organism, not in the production of new organic developments cell by cell.

After an interesting discussion, in which Dr. Budd, Mr. Steele, and Mr. Wood took part, a vote of thanks was carried to Mr. Moore and Dr. Richardson.

(*b*) Subjects Relating to State Medicine and Public Health.

Discussion 1.—*Question: What Measures should be Advocated by the Association for Securing an Improved Position to Medical Scientific Witnesses in Courts of Law?*

Dr. Symonds (of Clifton) opened this debate. He began by speaking of the difficulties under which Medical witnesses laboured in courts of law—difficulties which often neutralised their evidence. For instance, they were often called upon to give direct answers to questions put on the spur of the moment; and, in addition to that, they were required to cast aside the current language of their Profession, and utter their thoughts and opinions in words which did not fully convey their meaning. There were also other difficulties; and the existing practice was disadvantageous not only on account of the incapacity of his audience to understand the witness, but also because he was constantly endeavouring to accommodate himself to them. The best witnesses were those who gave their evidence without any anxiety as to the impression which their statements might produce; but Medical men, feeling the responsibility of their position, and the serious results depending on their words, and knowing that most of those who heard them might not comprehend them, naturally felt very solicitous to express themselves in such a way that they might be understood, and, in consequence of that, the value of their evidence was frequently much deteriorated. Dr. Symonds also mentioned that Medical men were very much underpaid for the scientific evidence they were called upon to give. The great question to consider, then, was, whether some amendment in the mode of obtaining Medical evidence could not be obtained? In his opinion, that amend-

ment might be obtained; and he believed that that Association might be instrumental in inaugurating certain reforms. As a remedy for these inconveniences, he thought that regularly qualified Practitioners should be established by the Government, and placed where Medical men could consult them in cases of great difficulty, and sometimes delegate to them certain extra duties. Medical men were called upon occasionally to give certificates of insanity, and those certificates might be the means of bringing them into courts of law in the character of defendants. It should be borne in mind that in giving those certificates they often conferred a benefit on the family of the insane man by separating him from them, and also to the man himself, by removing him to a place of safety; and, in the third place, to society, by taking away a person dangerous to life and property. In granting these certificates Medical men ought to have the support of officers appointed by Government; and he thought they ought to be released from the responsibilities of those certificates; and if the Legislature refused to take away the responsibility they would be justified in refusing to give certificates. He suggested that these Medical officers should be placed on Boards of Health. In conclusion, he moved:—"That a committee be appointed to take into consideration the present position of Medical Practitioners in respect to Medico-legal investigations, and to confer as to the expediency of pressing upon the Legislature the appointment of State Physicians, whose duties might embrace both Medico-legal inquiries and the care of the public health; that the committee be requested to present their report at the next annual meeting of the Association, or to report to the Committee of Council; and that the Committee of Council be requested to devote a sum not exceeding £20 to the purpose of carrying out the objects of this resolution." He also moved—"That the following gentlemen be requested to serve on the committee now appointed: Dr. Jeaffreson, Sir Chas. Hastings, Dr. Richardson, Dr. Stewart, Dr. Barker, Dr. R. Hall, Dr. Acland, T. Heckstall Smith, Esq., Dr. Robertson, Dr. Westall, and Dr. Tuke." [The names of Dr. Symonds and Mr. Rumsey were subsequently added.]

Mr. Rumsey thought that there should be thorough preparation for the office which Dr. Symonds had suggested; that undivided attention should be given to the subjects with which such an officer would have to deal; and that such an officer should be placed in a thoroughly independent position by the Legislature. He should not be a witness either for the prosecution or for the defence, but should act as *amicus curiæ*. He did not advocate specialities in the Profession, of which he thought they had more than enough already. But it was impossible for one engaged in the ordinary practice of the Profession to bring to bear the knowledge which might be required instantly for some difficult inquiry; and although a few persons were available as witnesses on scientific and abstruse matters, yet the number of such required to be greatly increased. These officers should have certain definite districts assigned them; and in addition to acting as Medical jurists, they might also discharge the equally important duties of officers of health; and if they had charge also of the registration of births and deaths, much more accurate statistics than those at present collected would be obtained. For the elucidation of the more difficult questions that might be brought before these Medical jurists, he would suggest an ambulatory commission, composed of men of the highest eminence, who would go, like the judges on circuit, wherever their services might be called into requisition.

Dr. Radclyffe Hall observed that the cases which usually brought the members of the Medical Profession into collision were those of poisoning, lunacy, and accidental injury. He did not see any way of getting out of the dilemma of Medical men giving conflicting evidence in a case of the latter description, where the question to be solved was, whether he imagined persons would recover from certain anomalous nervous symptoms. After alluding to several recent cases of poisoning, he suggested, as a means of obviating conflicting Medical evidence, that certain Medical men, and not less than three, should meet and deliberate upon the facts, and then pronounce a decision on the matter to be investigated. In that way individual responsibility would be lessened, greater justice would be done, and it would materially tend to put an end to conflicting Medical testimony in the cases to which he had adverted.

Dr. Markham pointed out that one argument had been overlooked by Dr. Symonds, which was likely to have great influence on the minds of those engaged in the administration of the law. It was, that often in deciding whether a criminal was a lunatic, the investigation was not conducted according to law; in illustration of which he cited the case of Townley. This brought justice into disrepute; because, after a criminal had been found guilty by a jury and sentence had been passed, the Lunacy Commissioners or some other authority interposed and overrode the decision of the Court and the jury. He thought that, in all cases of difficulty or doubt the assistance of an expert should be called in to decide the point at issue, and that then the jury should give their verdict, which should be strictly adhered to.

Dr. Harrington Tuke also spoke upon the question, and in doing so pointed out that the judges themselves did not agree in their ruling as to what exonerated a prisoner from responsibility for his actions.

The President put the resolution to the meeting and it was carried unanimously.

This debate was very animated, and the manner in which Dr. Symonds opened it—so clearly, elegantly, and judicially—called forth general admiration.

Discussion 2.—*Question: Why are Sanitary Measures not always followed by a decrease of Mortality?*

The discussion was opened by Dr. Robertson, of Nottingham. The conclusions arrived at were:—1. Boards of Health should be established in every township, and composed of two laymen, one Medical man, one lawyer, one civil engineer, and other inferior officers, all properly qualified for the office by their talents, their education, and their experience. 2. These Boards, while endeavouring to carry their wishes into effect in a conciliatory manner, should, on the principle of *salus populi suprema lex*, have full compulsory powers when the public good required it. 3. Each Board should form an annual digest from its reports, and transmit this for incorporation into the annual report of the General Board. 4. A systematic and uniform plan of registering atmospheric phenomena, in connection with disease, should be carried on at certain stations throughout the kingdom. 5. In laying out new streets, and in altering and extending old ones, ample provision should be made for a supply, in purity and abundance, of light, air, and water. 6. Drainage, sewerage, and paving should be carefully attended to. 7. In the erection of churches, schools, and in other public buildings, and in private houses so far as possible, ventilation should be more carefully attended to. 8. Measures should be taken to ascertain the amount and character of sickness in different localities. 9. The habitations of the poor should be placed under special superintendence. 10. Baths (if on ever so small a scale) should be established in every city, town, and village. 11. The sale of patent medicines should be discouraged, instead of encouraged, by the Legislature. 12. Unwholesome, spurious, and adulterated articles should be confiscated, and their vendors fined. 13. Institutions should be formed to train and qualify nurses for the sick. 14. The subject of infant mortality should be referred to a committee, and brought under the notice of the Legislature.

In the discussion that followed, Mr. Whitfeld, of Ashford, led the way. He said that with the view of checking the spread of any infectious disorder in the locality where he resided, he had built a cottage to which all such cases might be removed, the charge for the right to do so being secured by the annual payment of sixpence for each individual. This Institution had been in existence for six years, and had been the means of completely checking the spread of small-pox on four different occasions. But he had found by experience that, although those afflicted with small-pox would readily pay £5 to be cured, very few would give sixpence a-year to prevent the danger of being attacked by it.

Dr. Budd (Clifton) exhibited a wire dog-muzzle, prescribed by the authorities of Berlin for the prevention of rabies. He explained that the use of the muzzle had reduced the cases of hydrophobia from the bites of dogs from the large number of 123 to, at the very most, three during the years in which its use had been enforced by the authorities.

Dr. Ransome (Manchester) thought nothing had been done to prevent the overcrowding of the population of large towns. It was a fact that, whilst the population of the country at large had only doubled during the present half century, the population of many large towns had quadrupled. There was, therefore, intense compression of human life in great centres; and the result was necessarily increased mortality, notwithstanding all the sanitary improvements that had been effected.

Mr. Turner (Manchester) thought that one fruitful cause of the apparent failure of sanitary measures was the entire ignorance which prevailed amongst the masses of the people respecting sanitary measures. The Sanitary Society of Manchester had been endeavouring to remedy this by giving periodical lectures on sanitary matters. The poor especially were grossly ignorant of the laws of existence, and had no conception of the possibility of poison entering the system except through the mouth.

Dr. Richardson (London) thought there had been a considerable revolution, both in the public opinion and in the opinion of Professional men, on the question under discussion. There was a time when sanitary science was almost totally unknown; and there was a time when it was thought that its perfection would result in a millennium of health. In the parish of Marylebone, the mortality a few years ago fell lower than he had ever known it before, being only 19—22 in every 1000 of the population; whilst, in the Cavendish-square district (where Dr. Burrows resided), the mortality had actually been reduced to 17½ per 1000 inhabitants. But, whilst there had been a gradual extension of sanitary measures and regulations, the mortality of the parish had lately increased, until, by recent returns it was shown to be nearly 27 in every 1000. He thought that there were two reasons for this failure of sanitary measures to reduce the mortality. The first was, that in this country the Legislature did not, and perhaps never could, directly legislate for the individual. The other was, that there were causes at work which physiological science could alone fathom. Dirt was no doubt the ally of disease, but there could be disease—aye, and spreading disease—without dirt. We had, in fact, yet to learn the true nature of the organic animal poisons. When they were understood, sanitary science, so called, would be extended far beyond the mere removal of smells and nuisances, and preventive Medicine would be a science in truth.

Dr. Burrows (London) thought there had been unusual causes in operation which had affected the mortality of Marylebone, to which Dr. Richardson had not adverted. The construction of the Metropolitan Railway, and the great middle level sewer, through the centre of the parish, had, in his opinion, prejudicially affected its healthiness. Soil saturated with animal matter and excretions had been thrown to the surface, the exhalation of the gases from which into the atmosphere would certainly be detrimental to health. Besides, schoolchildren and workmen were in the habit of standing by the side of the works for a length of time inhaling the noxious effluvia. When he held the office of Physician to St. Bartholomew's Hospital, it was remarkable what an increase there was in the number of patients brought to the institution whilst the Metropolitan Railway was being constructed through the parish of Clerkenwell. Had Dr. Richardson, with his usual penetration and ability, taken what he (Dr. Burrows) had stated into consideration, he would probably have admitted that the construction of the works referred to had had something to do with the increase of mortality to which he had alluded in the parish of Marylebone. He was frequently called to consultation in towns in the vicinity of London, and had invariably noticed that, whilst any great sanitary improvement was in progress, there was positively a great increase of disease, although eventually the healthiness of the locality would be materially augmented.

Mr. Propert agreed thoroughly with the remarks of Dr. Burrows.

The meeting then adjourned.

THE PUBLIC ENTERTAINMENTS.

The pleasure derivable from the social character of the British Medical Association is not the least of the inducements by which the members are brought together, and on the present occasion the hospitality shown has certainly never been surpassed—it would be hard to say never equalled, though even that might almost be said. In the College every day a sumptuous luncheon, equivalent, indeed, to a dinner, was laid for all the members; while the President, whose hospitality was princely, actually took a separate house and filled it with guests. Mr. Ebbage, the local secretary, and the Medical Committee, were also untiring in their efforts.

THE SOIRÉES.

There were two *soirées*, one general, on Wednesday, and one by the invitation of the President, on Thursday evening. Both were held in the Pump-room. The first was confined to gentlemen; at the second ladies were present in large numbers.

The exhibitions of curiosities and of useful objects were not extensive, but were better by far than extensive, for they were carefully selected and rich in interest. Of late your *conversazione* has become borish from the embarrassment of riches; too many tables, too many things on a table, everything to see and nothing to be seen. At Leamington there was enough to look at, and something to learn at each glance.

One of the most interesting collections, exhibited at both *soirées*, belonged to Dr. A. Callaghan, D.C.L., and consisted of portraits, autographs, and letters of eminent Medical scholars. There was a letter of John Hunter and another of Ambroise Paré; while in portraits, all of the choicest age and character, there were those of Ambroise Paré, the father of operative Surgery; Galileo; Olaus Wormius, the Danish Physician and anatomist (1654); Harvey, the discoverer of the circulation; Glisson, the eminent English anatomist; Jenner, the discoverer of vaccination; Boerhaave, and his pupil Van Swieten; Radcliffe, the founder of the Radcliffe Infirmary at Oxford; Morgagni; Malpighi; Cullen; John Hunter; Scarpa; Blumenbach; Bichat; Broussais; Linnæus; Buffon; Cuvier; Galvani; Volta; Sir Humphrey Davy; Spurzheim and Gall; and Laennec, the inventor of the stethoscope. Dr. Callaghan is a very learned antiquarian scholar, especially in matters of Physic; and those members who were able to receive a half hour's insight into our great and wonderful past derived from his exertions to please them a treat they had not before enjoyed.

Mr. Redfern, of Warwick, supplied some rare and curious articles from his extensive collection. The most noticeable were, an old barber-Surgeon's bleeding-basin; an antique marble foot, with sandals; large gallipots from Florence in majolica ware; an old pestle and mortar of bell metal, dated 1596; a small silver mortar beautifully chased; and a silver caudle-cup apostle-spoon, alluded to by Shakespeare and Ben Jonson.

Mr. Swinson, of Leamington, exhibited a rare print of Holbein's picture of Henry VIII. presenting the First Charter to the Court of Barber-Surgeons (one of the paintings in the Merchant Taylor's Hall); near to which was a photograph of the engraving, executed by Mr. Ebbage, the local secretary.

Dr. Gibb, of London, contributed a collection of medals, in the various metals, of Medical men and philosophers. Besides the well known large and scarce medals of Cheselden and Brodie, by Wyon, in bronze, were those of Todd and Cusack, struck within the last few years. Next in importance and rarity were the still larger Italian medals of Redi and Cocchius, of dates 1684 and 1745. In the English series were those of Roger Bacon and Harvey; Friend, Barker, Mead, and Fothergill; Sir William Brown (President of the College of Physicians in 1765), Saunders, Quekett, Liston, and Holmes. There were others of the Glasgow Academy, the Charing-cross, Westminster, and London Hospitals, and Royal Infirmary for Children. Amongst the foreign were Ambroise Paré, Jean Fernel, Vesalius, Bichat, and Gall; Corvisart, Linnæus, Boerhaave, and Hoffmann; Guido Poterius, Scarales, Galvani, and Haller. The Medical Societies of London and of Paris, and the Faculty of Medicine of Paris, Rome, and Amsterdam, had their representatives. In addition, there were medals of Priestley, Hutton, Franklin, and Newton; Sir J. Banks, Francis Bacon, Locke, and Milton; Walter Scott, Samuel Parr, Voltaire, Folkes, Galileo; and Sir William Logan, just struck by J. S. Wyon. He also showed a very unique collection of tokens and medals of Shakspeare, which possessed considerable local as well as general interest.

Mr. Vaughan Russell contributed a variety of mineralogical specimens, principally from South America.

In addition to the above there were tables by some of the leading firms connected indirectly with Medical science.

Messrs. Savory and Moore, represented by Mr. Sweitzer, displayed a variety of special preparations and auxiliaries to Medicine and Surgery—viz., new preparations for ophthalmic use introduced by Mr. Ernest Hart, and consisting of discs of gelatine impregnated with atropine, Calabar bean extract, iodide of potassium, morphia, ergotine, bromide of potassium, and bromide of ammonium. With these was an improved eye douche. They also exhibited their simple and elegaant granular effervescing citrates, carbonates, and iodides; their new preparation, "The Soluble Effervescing Citrate of Bismuth"—a preparation worthy of something more than a passing notice; the Datura Tatula for asthma; Liebig's extract of meat; and Savory and Moore's improved form of Liebig's food for infants.

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Messrs. Gardner and Robbins, represented by Mr. Robbins, exhibited various forms of oxygen inhalers, oxygennesis. preparations of manganese, peroxide of hydrogen, and the new oxygenated saline waters, described in our last number.

Messrs. Krohne and Seseman, represented by Mr. Krohne, exhibited Dr. Siegle's apparatus for the atomisation of fluids, with Dr. Andrew Clark's hand ball spray producer, and other instruments for the same purpose. They showed the adaptation of the spray process for disinfection and deodorisation, as described also in our last impression. Their new dilating bougies, made of sea-tangle, for dilating the lacrymal duct, attracted considerable attention, as also the laryngoscopes and light-condensers exhibited by the same firm.

Mr. Salt, of Birmingham, showed patent abdominal belts and spine supports, orthocnemic and umbilical trusses, and other similar Surgical contrivances.

There were a number of microscopes belonging to residents in Leamington, a small telescope, and a large and powerful one of improved construction, the property of Mr. Southern, F.R.A.S.

In addition to the above, at the President's *soirée*, Mr. Ladd exhibited the new thermo-electric battery invented by Marcus, of Vienna. The force of this battery is derived from heat supplied by gas, the heat, in passing through the battery, which is composed of different metals in bars, being transformed into electricity without destruction of substance. The battery works a powerful magnet, and promises to be of great service. It does Mr. Ladd great credit to be the first to introduce this instrument to the scientific public.

One other new instrument was shown—viz., a lantern for throwing upon a screen figures of opaque objects. This lantern does for opaque figures what the oxy-hydrogen microscope does for transparencies. It is the production of Mr. Chadburn, of Liverpool, and it admits of wide application in the lecture-room. Mr. Chadburn himself brought the instrument into play at the President's *conversazione*, and Dr. Richardson placed in it actual sections of the brain and of bone, photographic microscopical specimens, and portraits of great Physicians of the past. A short lecture was thus improvised, which created much interest.

Fete in Jephson Gardens.

On Thursday a *fête*, provided by the local authorities, was held in Jephson Gardens, Dr. Jephson presiding. Two or three hundred gentlemen sat down to a dinner in a large tent, and the enjoyment was great. Very extensive preparations had been made for an illumination, but unfortunately a pelting rain said the *fête* must stop with the feast.

The Dinner.

The last act of the Association was the true Englishman's natural final—a dinner. Oh, the dinner! what shall I say of it? Simply and shortly, that mine host of the Regent did his best, and that a meeting, throughout vigorous and ably sustained, was capped by a farewell gathering at which nothing prevailed but fair speeches, excellent humour, and one pervading wish—to meet again, friends as ever.

In the course of the meetings about two hundred enrolled their names. In addition to those gentlemen who have been referred to as taking part in the debates, there were, with others:—Dr. Armstrong, Gravesend; Mr. Ashton, London; Dr. Ballard, London; Dr. Barclay, Leicester; Dr. Bartleet, Birmingham; Dr. Beales, Congleton; Dr. Begley, Hanwell; Dr. Bidwell, Albrighton; Dr. Birt, Leamington; Dr. George Bodington, Sutton Coldfield; Mr. Bottomley, Croydon; Mr. Bridger, Cottenham; Dr. Brown, Edinburgh; Dr. Bryan, Northampton; Dr. Bucknill, Rugby; Mr. Bullock, Warwick; Dr. Camps, London; Mr. Ceely, Aylesbury; Mr. Clay, Birmingham; Dr. Davies, Birmingham; Dr. Day, Stafford; Dr. Desmond, Liverpool; Mr. Eddowes, Pontesbury; Dr. Fayrer, Henley-in-Arden; Dr. Fletcher, Birmingham; Mr. Flint, Stockport; Dr. Goodchild, Warwick; Dr. Goodfellow, London; Dr. Haward, London; Mr. Hemming, Kimbolton; Mr. Higginbottom, F.R.S., Nottingham; Dr. Hitchman, Mickleover; Mr. Jeaffreson, Leamington; Dr. Johnstone, Birmingham; Dr. Kelly, Taunton; Dr. Kingsley, Stratford-upon-Avon; Mr. Lane, London; Mr. Lund, Manchester; Dr. M'Intyre, Odiham; Dr. Mackesy, Waterford; Dr. Marshall, Clifton; Mr. Nesbitt, Wolverhampton; Mr. Paget, Leicester; Mr. Langston Parker, Birmingham; Dr. Paul, Camberwell; Mr. Pemberton, Birmingham; Dr. Ray, Dulwich; Mr. Rhodes, Glossop; Dr. Routh, London; Dr. Russell, Birmingham; Dr. Seaton, Sunbury; Dr. Skinner, Liverpool; Mr. Southam, Manchester; Dr. Stookes, Liverpool; Mr. Terry, Northampton; Dr. Thomson, Leamington; Dr. Turner, Stockport; Dr. Vose, Liverpool; Dr. Wade, Birmingham; Dr. Waters, Liverpool; Dr. Webster, Northampton; Mr. T. Spencer Wells, London; Dr. Westall, Kensington; Dr. Wilkinson, Manchester.

REVIEWS.

The Restoration of Health. By W. Strange, M.D., Physician to the General Hospital, Dispensary, and Orphan Asylum, Worcester. London: Longman and Co.

The aim and scope of Dr. Strange's book are explained by the second title of it, "The Application of the Laws of Hygiene to the Recovery of Health; forming a Manual for the Invalid and a Guide in the Sick Room." As the public will in these days meddle with medicine, and feed themselves with scraps of knowledge and half-knowledge of disease and its treatment, he endeavours to provide them with sound teaching on the philosophy of the restoration of health, and some really scientific enlightenment "upon physiological and pathological subjects bearing upon the real nature and causation of disease." Works addressed to the public on Medicine are but too generally useless or mischievous, full of fine-sounding phrases signifying and teaching nothing, or dwelling so much on symptoms and treatment as to delude the public into the belief that by reading they can qualify themselves to understand and treat disease; that by learning phrases they become able Physicians. Dr. Strange repudiates the idea of "teaching every man to be his own Doctor;" his object is to enable his readers to intelligently obey the Medical attendant's instructions and aid his efforts; and he has done his work, on the whole, well. The first part of the book is devoted to "a sketch of the operation of the ordinary vital agents in the production of disease," the first chapter treating of the nature of disease and its characteristics; the second of the causes, predisposing and exciting, of disease; the next chapter is on "the art of avoiding disease, and general preventive measures;" and in the several sections of the chapter instruction is given how best to oppose a tendency to derangement of the digestive organs, of the respiratory, circulatory, and secreting organs, of the nervous system, and of the muscular system. Then "the patient is taken from the day on which he enters the sick room until that on which he is completely restored to health; the influence of the natural stimuli of air, temperature, food, drink, exercise, bathing, sleep, climate, soil, and situation, change of air and scene, etc., upon the stages of his illness being severally examined," and full and minute directions are given on the qualifications and duties of a nurse, and on the "casualties of the sick room."

Dr. Strange's instructions are generally good, and his explanations sound and clear, and the book will be very useful to the public. He modestly expresses his "hopes that junior Practitioners will also find the work useful to them, especially the third part, as forming a manual of practical hygiene, from which some assistance may be rendered to their patients in the management of their convalescence." He will not, we think, be deceived in this hope; and we think, also, that many a Practitioner may be glad to learn from it a lesson in the art of explaining scientific subjects in clear and simple language.

We cannot say that we agree with all that he says; but as he deals with theories as well as with facts he would not himself expect to find that all Medical men agree with him. Nor can we say that we accept all his "facts;" for instance, when giving directions how to ward off an impending fainting fit, he says: "Give a cup of warm tea with a teaspoonful or two of brandy in it. This acts better than plain brandy and water; the aroma of the tea carries the brandy along with it, and thus acts immediately on the sensorium." We doubt if it's a fact that the warm tea and brandy acts better than brandy and *hot* water; and if it is we certainly do not understand Dr. Strange's explanation of it. One of the chief dangers in writing a book of this sort is, that one is tempted to "explain" too much. But, as we have already said, on the whole the book is a safe and useful guide and teacher.

An Appendix to the work contains a number of useful dietary tables and directions for making broths, jellies, puddings, enemas, poultices, baths, etc.

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Notes on Spa; or Observations on its Chalybeate Springs; also on the General Aspect of the Surrounding Country, its Numerous Resources for the Health and Amusement of Invalids, etc. By Thos. Cutler, M.D., Resident Physician at Spa. Pp. 129. Seventh Edition. Brussels. 1865.

The success of a watering-place, and especially of a chalybeate, does not depend so much on the excellence of the water as on suitability of the climate, accessibility, and sources of amusement.

Spa is to our mind the most pleasant watering-place in Europe. Wiesbaden is delightful, Homburg is gay, Baden Baden is charming, but none of them present such varied pleasures as Spa.

Spa is easily accessible, and yet, fortunately, a change of carriages is requisite at Pepinster, and the great mass of retired publicans, *et hoc genus omne*, who annually see how far they can succeed in vulgarising the Rhine, pass over Spa in happy ignorance of its propinquity.

The climate is most salubrious. The town is situated 1000 feet above the sea level, and yet it lies in a valley surrounded on three sides by the beautiful Ardennes hills.

If you are tired of the noise of cities, and wish to be alone, and really to ruralise, go to Spa, hire one of the sure-footed ponies, and ride a mile or two over the hill. Or, if your misanthropy be only lukewarm, content yourself with walking a little distance out of the town, penetrate into the woods, and sit down on a rock by a babbling brook, fully convinced that if you see any one it will only be some enthusiastic artist in search of subjects for sketches. If, on the contrary, you are socially inclined, still go to Spa. What can be more charming than the morning ride round the springs, the promenade when the band is playing, and when bright eyes and blooming cheeks are evidence either that the waters have worked wonders or that Spa has attractions for others than the broken-down and anæmic. Then there are the balls, and reading-rooms, and playing-rooms. The play is not now so high here as it is at some of the German watering-places.

Spa has, even more than other watering-places, had strange fluctuations of popularity. The visit which Charles II. paid to it appears to have been the commencement of its modern popularity. In the eighteenth century, Dr. Cutler tells us that sometimes no fewer than thirty princes of Royal blood met at Spa. Peter the Great has left a substantial memorial of the benefit he received from the waters. Probably he used them for the same purpose that Byron used hock and soda-water.

Spa suffered at first from the introduction of railways. If chalybeate springs were necessary, Prymont or Franzenbad or Brückenau were preferred, and Spa was neglected. For the last ten years, however, Spa has been gradually regaining its legitimate position as the Queen of Chalybeates. Dr. Cutler's book is well known both to French and English readers. The present edition is corrected and brought up to date. It ought to be read by every one who thinks of undergoing a course of ferruginous waters.

Medical Lexicon; a Dictionary of Medical Science: containing a Concise Explanation of the Various Subjects and Terms of Anatomy, Physiology, Pathology, Hygiene, Therapeutics, Pharmacology, Pharmacy, Surgery, Obstetrics, Medical Jurisprudence, and Dentistry, Notices of Climate and of Mineral Waters, Formulæ for Officinal, Empirical, and Dietetic Preparations; with the Accentuation and Etymology of the Terms and the French and other Synonymes, so as to Constitute a French as well as an English Medical Lexicon. By Robert Dunglison, M.D., LL.D., etc., etc. Thoroughly revised, and very greatly modified and augmented. Philadelphia: Blanchard and Lea. 1865. London: Trübner and Co. Pp. 1045.

We have printed this lengthy title in full, because it gives a good description of what the book really is. It is something more than a dictionary, and something less than an encyclopædia. This edition, the eleventh, of the well-known work, is a great improvement on its predecessors. The labour and time which must have been spent in its compilation is enormous, and the author seems to have found it as much as he could bear, for he quotes Scaliger's epigram:—

"Si quem dura manet sententia Judicis olim
Damnatum ærumnis supplicilisque caput
Hunc neque fabrili lassent ergastula massâ
Nec rigidas vexent fossa metalla manus
Lexica contexat; nam cætera quid moror? Omnes
Pœnarum facies hic labor unus habet."

The book is one of the very few of which it may be said with truth that every Medical man ought to possess it.

A Handbook of the Practice of Forensic Medicine, based upon Personal Experience. By Johann Ludwig Casper, M.D., Late Professor of Forensic Medicine in the University of Berlin, etc. Vol. IV.: Biological Division. Translated by Geo. Wm. Balfour, M.D. New Sydenham Society. 1865. Pp. 364.

This volume completes the celebrated work of the accomplished Professor, who died last year. The subjects treated of are "Disputed Results of Bodily Injuries and Ill-treatment unattended by Fatal Consequences," "Disputed Bodily Diseases," "Disputed Mental Diseases," "Civil and Criminal Responsibility," and "Insanity" in its Medico-legal relations. The work altogether is not one to be reviewed, but rather to be studied and referred to in occasions of difficulty and embarrassment, such as are constantly arising in the course of every Medical man's career. It embodies, as is well known, the experience of one of the most experienced and acute observers that has ever devoted his mind to this important branch of practice. It is well that the work is now in the hands of, we suppose, nearly all the reading portion of the Profession in England.

On Radiation. The "Rede" Lecture delivered in the Senate House before the University of Cambridge on Tuesday, May 16, 1865. By John Tyndall, F.R.S. Longman. 1865. Pp. 62.

The quantity of information compressed into these few pages is perfectly astonishing, and yet one does not feel in reading them that the condensation has cost the author any effort. The following extract from Professor Tyndall's concluding remarks will give an idea of the subjects illustrated by the author:—"The general nature of light and heat was first briefly described; the compounding of matter from elementary atoms, and the influence of the act of combination on radiation and absorption were considered and experimentally illustrated. Through the transparent elementary gases radiant heat was found to pass as through a vacuum, while many of the compound gases presented almost impassable obstacles to the calorific rays. This deportment of the simple gases directed our attention to other elementary bodies, the examination of which led to the discovery that the element iodine dissolved in bisulphide of carbon possesses the power of detaching with extraordinary sharpness the light of the spectrum from its heat, intercepting all luminous rays up to the extreme red, and permitting the calorific rays beyond the red to pass freely through it. This substance was then employed to filter the beams of the electric light, and to form foci of invisible rays so intense as to produce almost all the effects obtainable in an ordinary fire. Combustible bodies were burnt, and refractory ones were raised to a white heat by the concentrated invisible rays. Thus, by exalting their refrangibility, the invisible rays of the electric light were rendered visible, and all the colours of the solar spectrum were extracted from utter darkness. The extreme richness of the electric light in invisible rays of low refrangibility was demonstrated, one-tenth only of its radiation consisting of luminous rays. The deadness of the optic nerve to these invisible rays was proved, and experiments were then added to show that the bright and dark rays of a body raised gradually to intense incandescence are strengthened together—that to reach intense white heat, intense dark heat must be generated. A sun could not be formed or a meteorite rendered luminous on any other conditions. The light-giving rays constitute only a small fraction of the total radiation, their unspeakable importance to us being due to the fact that their periods are attuned to the special requirements of the eye. Among the vapours of volatile liquids, vast differences were also found to exist as regards their power of absorption. We followed, moreover, various molecules from a state of liquid to a state of gas, and found in both states of aggregation the power of the individual molecule equally asserted. The position of a vapour as an absorber of radiant heat was proved to be determined by that of the liquid from which it is derived. Reversing our conceptions, and regarding the molecules of gases and vapours, not as the recipients, but as the originators of motion—not as absorbers, but as radiators, it was proved that the powers of absorption and radiation went hand in hand, the self-same chemical act which rendered a body competent to intercept

the waves of ether rendering it competent in the same degree to generate them. Perfumes were next subjected to examination, and, notwithstanding their extraordinary tenuity were found vastly superior, in point of absorbing power, to the body of the air in which they were diffused. We were led thus slowly up to the examination of the most widely diffused and most important of all vapours—the aqueous vapour of our atmosphere—and we found in it a potent absorber of the purely calorific rays. The power of this substance to influence climate and its general influence on the temperature of the earth were then briefly dwelt upon. A cobweb spread above a blossom is sufficient to protect it from nightly chill; and thus the aqueous vapour of our earth, attenuated as it is, checks the drain of terrestrial heat, and saves the surface of our planet from the refrigeration which would assuredly accrue, were no such substance interposed between it and the voids of space. We considered the influence of vibrating period and molecular forces on absorption and radiation, and finally deduced from its action upon radiant heat the exact of amount of carbonic acid expired by the human lungs."—Pp. 57.

Des Fistules Génito-Urinaires chez la Femme. Par IGNACIO RODRIGUEZ DA COSTA DUARTE, Chirurgien de l'Université de Coimbre, etc.

On Genito-Urinary Fistules in Women. By IGNACIO RODRIGUEZ DA COSTA DUARTE, Surgeon of the University of Coimbra. Paris: Baillière and Sons. 1865. (Pp. 96.)

IN many of those unfortunate cases where there is an abnormal communication between the genital and urinary passages, the urine is retained for a certain time instead of dribbling constantly away from the vulva.

The reason of this is, that from the position of the fistula the urine requires to rise to a certain height in the bladder before it reaches the abnormal opening. It may thus happen that a patient with a tolerably large fistula may yet be able to retain her urine for two or three hours, provided always that she remain in that position, which allows the water to gravitate as much as possible below the fistula level.

Dr. Duarte proposes to take advantage of this for the purpose of curing a urinary fistula radically by rest alone. He gives a case in which he cured a patient of a vesico-uterine fistula by keeping her lying on her left side for forty-days, the urine being drawn off by the catheter every three hours.

In those cases of vesico-uterine fistula where an operation would be attended with great difficulty, we can conceive that it might be worth while to give this method a trial, especially if a cutting operation were seriously objected to by the patient. We suspect, however, that the uncertainty and tediousness of the proceeding will never make it popular, even in those cases where it appears most applicable.

The chief object which Dr. Duarte had in writing the book which lies before us was to propose that in cases where the whole anterior walls of the vagina have sloughed, and where the urethra is impervious, a fistula should be artificially made between the rectum and vagina, and then that the vulva should be sewn up. He argues that in such a case, even if we succeeded in reopening the urethra, and then sewed up the vulva, the urine would still trickle away, from the absence of a sphincter to retain it. By establishing a recto-vaginal fistula, however, and closing the other orifices, we convert the rectum into a cloaca, which is guarded by a sphincter strong enough to retain the urine as well as the fæces. Dr. Duarte has not as yet performed this operation, and before he does so we trust that he will make himself acquainted with the effect which urine in the rectum produces. It causes tenesmus much more violent than does the presence of the most liquid fæcal evacuation.

In his little book Dr. Duarte further gives a short *resumé* of the etiology, pathology, diagnosis, and varieties of operations for genito-urinary fistulas.

We are glad to see that the Portuguese University has got a Professor so thoroughly *au niveau* of the obstetric Surgery of the present day.

The Nineteenth Report of the Commissioners in Lunacy. 1865. Pp. 96:

ONE or two very important matters are dwelt upon in this Report. One of these is the amount of controlling power which ought to be vested in the Medical Superintendent of an asylum. The tendency of visiting Committees, consisting of county justices, who, as a body, are supremely ignorant of those things which they ought to know when acting in that capacity, is to curtail the powers of the Superintendent in favour of some non-professional person or persons to whom they commit the management of this or that department, not considering the effect which such divided authority may have on the salutary working of the establishment. This was found to be the case in three instances,—viz., at the Cornwall Asylum, the York Lunatic Hospital, and the Birmingham Asylum—in two of which amended rules having this object were submitted to the Secretary of State for approval, while in the last instance such an arrangement had been in force some years without having received the requisite sanction. "The clerk and steward stated that the charge of, and responsibility for the general condition and good order of the establishment, for the personal cleanliness and comfort of the patients, and *for everything but attendance strictly and exclusively Medical*, had been entrusted by the Committee to himself on the male side, and to the matron on the female side. . . . Protecting the chief Medical officer in that least important part of his duty which consists in administering medicines, it removed beyond his control or direction the most important part, consisting in what is called moral treatment, which upon nothing depends so much as upon the class of attendants employed, and the manner in which their duties are discharged." The Commissioners very properly condemn the association of idiots with ordinary lunatics in county asylums, and state that it is their desire to promote and encourage the establishment of institutions for idiot children extensively over the country, to be conducted on the plan so successful at Earlswood. To facilitate the operations of such institutions, they "think it desirable that the requirements of the Lunacy Acts not essential to the special object should be dispensed with, and that, amongst other things, all forms of orders, Medical certificates, returns, etc., should be as much as possible simplified." They express a hope shortly to see these objects attained by legislation.

A Treatise on the Construction, Proper Use, and Capabilities of Smith, Beck, and Beck's Achromatic Microscopes. By RICHARD BECK. Van Voorst. 1865. Pp. 142.

THIS work is in large octavo, and is illustrated with engravings of all the apparatus necessary for microscopical investigations, together with engravings of test objects, all of which are excellent as works of art. The description of all the apparatus is given, together with the mode of using it so as to obtain the most satisfactory result. It is strictly technical from beginning to end, and is furnished with a copious index. We strongly recommend the work to such students as are about to enter upon microscopical inquiries. It will save them a great deal of time, and their friends a great deal of trouble in advice and explanation, if, when they require information as to the means which the ingenuity of microscope makers has devised for accomplishing various objects, they will consult this book. Messrs. Smith and Beck have done good service in putting it forth.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

EDINBURGH, August 2, 1865.

WE have to record the close of another session of our Medical School. Forty-six candidates received yesterday the degree of Doctor of Medicine, seventeen the preliminary degree of Bachelor of Medicine and Master of Surgery, and four that of Bachelor of Medicine. The number who received the degree of Doctor of Medicine is this year considerably below the average; for the last eight years this has been about seventy-one. The degrees of Bachelor of Medicine and Master of Surgery have been conferred only since 1862. Gold medals were awarded to three of these candidates for their theses—a distinction regarded the highest in the Medical Faculty of the University, as to obtain this honour the candidate must have succeeded in producing original research and observation "worthy of publication." In the present stage of transition and uncertainty, when old customs and regulations are rapidly disappearing, we sincerely trust that no innovating voice will

be raised to advocate the removal of this means of distinction. We could point to many important researches that have advanced Medical knowledge to a valuable extent which the hope of gaining this honour has originated. More important still has been the introduction to the field of original investigation which it has afforded to many who now occupy its most prominent positions. On this occasion gold medals were gained by Dr. Lightbody, for "Observations on the Comparative Microscopic Anatomy of the Cornea of Vertebrata;" by Dr. Wyllie, for an essay on the "Physiology of the Larynx;" and by Dr. Clark, for a thesis on the "Reproduction of Limbs of the Crustacea." A class of honours was also adopted, for the first time, for those candidates who had distinguished themselves in their examinations. Hitherto, the Edinburgh degree, with honours, included only the thesis gold medallists; we apprehend that this class will still retain this privilege, which by "use and wont" has been allotted to them.

Our University cannot boast of a hall. All academical ceremonies and meetings are held outside her walls. The University Council borrows from a dissenting religious body, and the Senatus confers degrees in the Assembly-hall of the Established Church; and in this building the graduates were capped by the Vice-Chancellor and Principal of the University, Sir David Brewster. There is every prospect of this unsatisfactory and unpleasant poverty being very shortly removed. The collections of natural history, which usurped so disproportionate a share of the University buildings, are being removed to form a part of the conjoined "Museum of Science and Art," and there is every reason to believe that the vacated rooms will be transformed into a hall in every way suitable for academical purposes.

The post of Promoter of the Medical Faculty was filled by the junior Professor, Mr. Spence, successor to the late Mr. Miller. The learned Professor, in his address, congratulated the young graduates on their success in obtaining Professional honours. He alluded generally to the changes which had been lately introduced into the curriculum, and expressed a hope that reforms would be increased. Recent Medical legislation, he considered, had a proper tendency, and the oft, and perhaps severely, criticised action of the Medical Council was supported. No doubt expectation has not been altogether satisfied; but how rarely does moderation, or even reason, restrain impatience or allow due weight to those obstacles which always oppose great and sweeping changes. How rarely do we recollect that—

> "The ample proposition that hope makes,
> In all designs begun on earth below,
> Falls in the promised largeness."

Professor Spence considered that reform in Medical education still demands attention in the following details:—"1st, The arranging of the periods or terms of study; 2nd, The regulation of the order of attendance on the different courses required, because, as some of these subjects are means to an end, they should be studied first, so as to prepare the student to follow intelligently the courses of instruction on the great practical subjects of Medicine and Surgery;" and, 3rd, he thought "consideration should be given to the question whether, by dividing some of our classes into junior and senior divisions, as is done in other faculties, the teaching might not be simplified and much repetition saved." The remainder of the address was occupied with excellent general advice, for the guidance of the young graduates, of a somewhat miscellaneous character, and ranging from the reporting of cases to the subject of matrimony. This portion of the Promoter's address contained little to be alluded to. Its subject-matter may be found, well worn, in many such orations, and forcibly suggestive of

> "An ancient tale twice told,
> And in the last repeating troublesome."

No University ceremonial appears complete without the ubiquitous presence of the popular Dean of the Medical Faculty. This, we fear, will be the last occasion on which he will be present in his official capacity. Professor Balfour has intimated his intention of resigning the dean-ship, and, if he does so, his loss will be a generally-felt calamity. There could not be a kinder or more true friend of the student, or one willing and able to expend more trouble and time in the promotion of his interests. A few of the Professor's pupils have collected the photographs of a large number of his former students, and these have been presented to him in two very handsome albums. It is rumoured that Professor Balfour's successor in this office will be either Professor Bennett or Professor Laycock.

With a few more pulls at the oar we shall hope to land ourselves on the rippling, sunny beach of summer holiday. Already our academical halls are deserted, and, even now, the few who remained, half-impatient, to receive the crowning honours of their long and anxious sessions of labour, have scattered. Let us hope that they will reap abundant harvests, and soon occupy positions from which they can hear and consider with complacency even the dread-inspiring exclamation of the great Hunter—"God help you!"

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 27.

Dr. ALDERSON, F.R.S., President.

A PAPER, by Mr. J. LOCKHART CLARKE, was read on

THE PATHOLOGY OF TETANUS.

In this communication the author describes the condition of the spinal cord in six cases of tetanus. In every one of these there was not only more or less congestion of the blood-vessels, but there were also definite, and frequently extensive, lesions of structure, such as have never yet been discovered. These lesions consisted of disintegrations of tissue in different stages of progress, from a state of mere softening to that of perfect fluidity, and were accompanied by certain exudations and extensive effusions of blood. They were found chiefly in the grey substance, which, moreover, was in many places strangely altered in shape—unsymmetrical on the opposite sides, or partially fused with the adjacent white column in a common softened mass. Although lesions of this kind existed, in one form or other, in every region of the cord, they were absent in some places; nor did they ever, for long together, maintain the same shape, size, or appearance, but were constantly and alternately increasing, diminishing, or disappearing, at short but variable intervals. These lesions in tetanus are precisely similar in character to those which the author has discovered in the spinal cords of many ordinary cases of paralysis; and on comparing together the lesions and symptoms of both kinds of diseases, he finds good ground for the support of the following conclusions:—1st. That the lesions are either not present, or are present only in a slight degree, in those cases of tetanus which recover. 2nd. That they are not the effects of the great functional activity of the cord, manifested in the violent spasms, but are the effects of a morbid state of the blood-vessels. 3rd. That they are not alone the causes of the tetanic spasms. 4th. That the tetanic spasms depend on two separate causes—firstly, on a morbidly excitable condition of the grey substance of the cord, induced by the hyperæmic and morbid state of its blood-vessels, propagated from the injured nerves and resulting in exudations and disintegrations of tissue; and, secondly, on irritation propagated and spread through the morbidly excitable cord from the same source—from the periphery, by the diseased nerves.

Mr. BROOKE thought the facts brought forward by the Author tended strongly to support the views of Dr. Radcliffe on muscular action. He should say that they pointed to the conclusion that in tetanus the disintegration of the spinal cord must necessarily imply diminished, not exalted, functional activity.

Mr. DURHAM said that he had examined, on the plan introduced by Clarke, the spinal cord of a patient who had died of hydrophobia. He found intense congestion with extravasation in the dorsal region, but congestion only in the lower parts of the cord.

Mr. GANT referred to a post-mortem on a case of tetanus, in which a very large quantity of blood was found in the vertebral canal. To the naked eye the cord did not present any remarkable appearance; it was very elastic.

Dr. ALTHAUS asked the Author how many cases of tetanus he had examined, as in some cases in which the cord had been examined no changes had been found.

Dr. HARLEY thought the Society was deeply indebted to Mr. Lockhart Clarke. They were indebted to him because he had opened a new field. Until Schroeder van der Kolk began his investigations, nothing had been done in this way. He (Dr. Harley) thought that with the researches of Clarke a new era in the study of nervous diseases had commenced.

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We still hear, he said, of insanity as a disease of the mind, and as if it were nothing more than mere functional derangement. He thought, however, that such phrases as "functional derangement" were doomed. Functional derangement was but an apology for our ignorance; catalytic action was something we do not understand; vital action a cloak for our ignorance. He believed that, thanks to Lockhart Clarke, such terms would disappear, and he could but half express his great obligations.

Mr. Lockhart Clarke, in reply, stated that the observations described in the paper were made on the spinal cords of six cases of tetanus; and that since the communication of the paper he had examined the cords of three more cases with precisely similar results. The lesions and alterations of structure, though numerous, were in some places exceedingly small, and appreciable only under glasses of considerable magnifying power.

A paper, by Dr. Samuel Fenwick, was read on

THE MORBID CHANGES IN THE STOMACH AND INTESTINAL VILLI PRESENT IN PERSONS WHO HAVE DIED OF CANCER.

The object of this paper was to induce pathologists to examine the blood-making organs in cases of cancer, instead of confining their attention to the structure and development of the tumour. The microscopical examination of the stomach and intestines in fifty-seven cases of cancer were given. In fifteen cases the breast was the organ affected by the cancer, and in eleven the mucous membrane of the stomach was atrophied, the solitary glands were enlarged, and the gastric tubes adherent or destroyed. Chemically, there was an excess of fat in the mucous membrane. Physiologically examined, there was a deficiency in its power of dissolving albumen. In four cases the microscope showed no appearance of disease. Twenty-four were cases of cancer of the uterus, and in only three was there any serious disease of the gastric mucous membrane, but in five other cases the tubes were unusually adherent. Chemically—in some there was an excess of albumen, in others of fat, and in others a large amount of gelatine could be extracted. Physiologically examined, the power of digesting albumen was lessened. There were eighteen cases of cancer of other parts of the body, and the condition of the stomach varied according to the part affected. Brunner's glands, the villi, and intestinal tubes, presented similar appearances of disease. The villi in some cases were in a state of fatty degeneration; in others the basement membrane was greatly thickened, and the number of nuclei increased. The most general form of disease was a deposit of pigment in the villi. Although the Author was of opinion that the facts were not sufficient to enable him to determine whether these diseased conditions were the cause of the cancer, or only a result of some other pathological condition producing both, he thought the subject worthy of the attention both of pathologists and Practitioners of Medicine.

A paper, by Dr. H. G. Sutton, was read on

FIBROID DEGENERATION OF THE LUNGS.

A section of a fibroid lung shows that in parts it is solid, firm, tough, and conveys a grating sensation while being cut with the knife. The indurated portions are either smooth and non-granular, or in other cases markedly granular in appearance. Closer observation shows the consolidated portion to be mapped out in different colours, having a so-called "grey granular appearance," which is due to the increased quantity of inter-lobular tissue, and, scattered amidst the latter, a large quantity of dark pigment matter. The consolidation is not the primary stage; but the earlier indication of this change is seen in the apparently increased quantity of the connective tissue of the lung. The two sides of the pleura are usually found to be very firmly adherent, and in some cases the pleura is very much thickened. The fibroid induration is liable to undergo degeneration, and in consequence cheesy-looking matter is occasionally noticed amidst the hard fibroid masses. Further, in consequence of this degenerative transformation, the new tissue softens down, and a cavity is produced, which is usually discovered in one or in both apices of the lungs. The microscopic examination resulted in showing—1st. That there had been a formation of new tissue elements, and that these were such as are usually considered to represent newly-formed connective or fibroid tissue. 2nd. That the newly-formed fibroid tissue had invaded, and in some parts destroyed, the normal lung-tissue; or, in other words, the lung had undergone fibroid degeneration. 3rd. That these fibroid elements were found to be the most highly developed in the immediate vicinity of the connective tissue surrounding the minute bronchial tubes, lobules, and lobulets, and also in the vicinity of the thickened pleuræ, which would appear to show that the cell formation had commenced in the connective tissue of the lung, and that it had extended in every direction amidst the elastic fibres of the air-sacs until the pulmonary cells were completely filled up and obliterated. The clinical history appeared to show that this disease is very commonly found in those who have suffered for many years with vesicular emphysema and chronic bronchitis, also that acute pleurisy appeared to have been in some cases the immediate exciting cause; but the evidence tends to show that pleurisy is an accidental, and not essential exciting cause, and well-marked cases of fibroid lungs have been discovered in which no history of pleurisy could be obtained, and the post-mortem examinations showed no induration of the pleuræ. In the majority of the cases there was a history of intemperance, especially of long-continued spirit-drinking. The fibroid degeneration was in by far the majority of cases found associated with fibroid changes of the liver, kidneys, capsule of the spleen, pyloric end of the stomach and of other organs. Nearly all the patients were males of middle or advanced life, although it does occur even before thirty, and in every case a particular conformation of the body was observed. Dr. Sutton draws attention to certain facts which tend to show that these fibroid changes are not due to so-called "scrofula," but that it is a general "fibroid disease," and is associated with a fibroid diathesis. It has been found possible, and in many cases by no means difficult, to diagnose this form of chronic lung disease from that which it is most likely to be mistaken for—that is, from tubercular phthisis.

Dr. Graily Hewett said that it was well known that collapse of the lung was associated with emphysema. He would, therefore, ask the Author if the part affected by fibroid degeneration had not been previously collapsed.

Dr. Sutton replied that he had no knowledge that collapse of the lung gave rise to fibroid degeneration, but he thought that under the microscope a piece of collapsed and atrophied pulmonary tissue might be mistaken for fibroid transformation; nevertheless, it was not difficult to distinguish one from the other. In the collapsed lung the elastic fibres lie side by side, and if of some standing gives a general linear or fibrous appearance; but on closer examination it may be noticed that each individual elastic fibre can be traced to some distance, and that the margin of the elastic fibre is well defined, and the light being readily refracted through its centre, it presents a bright sparkling appearance; whereas, in the fibroid change, the newly formed fibres are imperfectly formed, and each individual fibre cannot be distinguished. Other differences, Dr. Sutton remarked, he had called attention to in his original communication.

MEDICAL NEWS.

University of London, 1865.—First M.B. Examination:—

Examination for Honours.

Anatomy.

First Class.—Jeremiah McCarthy, M.A. Dublin (Exhibition and Gold Medal), Trinity College, Dublin.

Second Class.—George Arthur Kenyon, St. George's Hospital; Robert Shingleton Smith, King's College.

Physiology, Histology, and Comparative Anatomy.

First Class.—Henry Franklin Parsons (Exhibition and Gold Medal), St. Mary's Hospital.

Organic Chemistry and Materia Medica and Pharmaceutical Chemistry.

First Class.—William Alsept Richards (Exhibition and Gold Medal), King's College.

Second Class.—Jeremiah McCarthy, M.A. Dublin, Trinity College, Dublin; Henry Franklin Parsons, St. Mary's Hospital; Robert Shingleton Smith, King's College.

Pass Examination.

Entire.

First Division.—William James Garrett, St. Bartholomew's Hospital; Frederick Harry Haynes, St. Bartholomew's Hospital; George Arthur Kenyon, St. George's Hospital; John Wreford Langmore, University College; Jeremiah McCarthy, M.A. Dublin, Trinity College, Dublin; Henry Franklin Parsons, St. Mary's Hospital; William Alsept Richards, King's College; Robert Shingleton Smith, King's College.

Second Division.—Herbert Ray Archer, Charing-cross Hospital; Thomas Alpheus Buck, Guy's Hospital; William Turberville Buckle, King's College; John Cavafy, St. George's Hospital; Joseph Groves, B.A., King's College; John James, University College; Duncan McLachlan Maclure (studied before 1839), Westminster Hospital; Henry Morris, B.A., Guy's Hospital; George Vivian Poore, University College; James Sawyer, Queen's College, Birmingham; William Thomas, Queen's College, Birmingham.

Excluding Physiology.

First Division.—George Rolph Raine, Guy's Hospital.

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Second Division.—Charles Taylor Aveling, St. Thomas's Hospital; Edward William Berridge, St. Bartholomew's Hospital; Joseph Priestnall Cheetham, Guy's Hospital; John Reuben Bathurst Dove, London Hospital; Reginald Eager, Guy's Hospital.

Physiology only.

First Division.—Julian Augustus Michael Evans, University College; John Spencer Ferris, King's College; Ralph Gooding, B.A., King's College; George Wallington Grabham, St. Thomas's Hospital; John Grimes, King's College; John Pearson Hughes, University College.

Second Division.—Clement Smith Barter, St. Bartholomew's Hospital; Henry Hargreaves Birtwell, St. Thomas's Hospital; John Wickham Legg, University College; George Hunt Orton, St. Bartholomew's Hospital; Paul Henry Stokoe, Guy's Hospital.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, August 17, 1865:—

Charles James Hardy Smith, Upper Craven-place, Kentish-town; Geo. Hy. Madeley, Holland-road, Kensington; Louis Francis Lundy, Feltham, Middlesex; Henry Weekes, Brompton, Kent; John Pearson Hughes, Llandery, South Wales; Nelson Albert Hilder, New-terrace, Camberwell-park; Charles Thomas Heaven, Thistle-grove, Brompton; John Gittins, Shrewsbury; Edwin James Fairland, Guy's Hospital.

The following gentleman also on the same day passed his First Examination:—

John Yeomanson, St. Bartholomew's Hospital.

APPOINTMENTS.

***** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.**

APPLEBY, F. H., M.R.C.S. Eng., has been elected House-Surgeon to the Newark-on-Trent Dispensary and Hospital.

CHURCH, W. S., M.B., has been elected Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

CRIBB, WILLIAM, M.R.C.S. Eng., has been elected Assistant Medical Officer for the Workhouse and Infirmary of St. Giles' and St. George's, Bloomsbury.

DAVIDSON, JOHN H., M.D. Edin., has been appointed Assistant Medical Officer to the Birmingham Borough Lunatic Asylum.

DUDLEY, JOHN G., M.D. Cantab., has been appointed Physician to the Surrey Dispensary.

DUNCAN, Mr. A., B.A., has been elected Librarian and Secretary to the Faculty of Physicians and Surgeons, Glasgow.

ONES, Mr. H. B., has been appointed Dispenser to the Dispensary, Newport, Monmouthshire.

LLOYD, DAVID, M.R.C.S. Eng., has been appointed Medical Officer to the Workhouse of the Carmarthen Union.

M'CORMACK, Dr. J., has been elected Acting Apothecary to the Cork Fever Hospital.

MORRIS, TREVOR, jun., M.D. St. And., has been appointed Certifying Surgeon under the Factory Acts for Ashby-de-la-Zouch.

ROWLAND, J. D., M.R.C.S. Eng., has been elected House-Surgeon to the Carmarthenshire Infirmary, Carmarthen.

IDDALL, J. B., M.D., has been appointed House-Surgeon to the Blackburn Infirmary.

SMITH, HENRY F., M.B, has been elected Accoucheur to St. George's and St. James' Dispensary, King-street, Regent-street.

DEATHS.

BEAU, M., the well-known Physician of La Charité, and Member of the Academy of Medicine, died last week of apoplexy, not having reached his sixtieth year.

CLAYTON, Dr. W. H., at Kentucky, formerly of Chipping Campden, Gloucestershire, on June 27, aged 59.

COURTENAY, Dr. HUDSON, M.B. Lond., J.P., at Baltinglass, County Wicklow, on August 18.

DAVIDSON, JOHN, M.D., at 11, Grafton-street, Brighton, on August 17, aged 49.

DIEUDONNE, Dr., for many years President of the Medical Society at Brussels, on August 10, aged 55.

ELSTON, WILLIAM A., M.R.C.S. Eng., at Bugbrooke, Northamptonshire, on August 4, aged 53.

REENISH, JOHN, Surgeon R.N., at Stubbington, Hants, on July 29.

HAWKINS, FREDERICK R., M.R.C.S. Eng., Surgeon on board the *Lady Melville*, on her voyage home from Calcutta, on June 25, aged 29.

HEYDEN, Dr. EDUARD, at Frankfort-on-the-Maine, on August 13.

MARYAN, JAMES H., Surgeon, at Waltham, Leicestershire, on August 6, aged 77.

MOSTYN, JOHN W., M.D. Glasg., Surgeon-Major 76th Regt., at Madras, on June 17.

PATCH, JOHN, M.D., late Physician-General Bombay Army, August 20, aged 67.

WRAITH, S. HOPE, F.R.C.S. Eng., J.P., at Over Darwen, Lancashire, on August 14, aged 49.

POOR-LAW MEDICAL SERVICE.

RESIGNATIONS.

*** The area of each district is stated in acres. The population is computed according to the last census.

Abingdon Union.—Mr. Wm. Cribb has resigned the Fifth Dist $^{14}_{6}$; area, 12,220; population, 2377; salary, £10 per annum.

Drayton Union.—Mr. James Doubleday has resigned the Fourth District; area, 11,625; population, 2419; salary, £21 per annum.

Honiton Union.—Mr. J. S. Burd has resigned the Eleventh District; area, 2100; population, 299: salary, £4 10s. per annum. Also, the Workhouse; salary, £42 per annum.

Leominster Union.—Mr. Eugene Goddard has resigned the First District; area, 36,641; population, 10,740; salary, £200 per annum.

Melton Mowbray Union.—The Waltham District is vacant: area, 17,042; population, 3097; salary, £40 per annum.

Stockton Union.—The Stockton District is vacant; area, 11,399; population, 17,349; salary, £50 per annum.

Stourbridge Union.—Mr. Thomas M. Harding has resigned the Second Oldswinford District; area, 2083; population, 9521; salary, £53 per annum.

Yeovil Union.—Mr. George Stuckey has resigned the Fourth District: area, 9662; population, 4966; salary, £60 per annum.

APPOINTMENTS.

Aylesbury Union.—Thomas Knight, M.R.C.S.E., L.S.A., to the Seventh District until March 25, 1866.

Daventry Union.—George N. Swinson, M.R.C.S.E., L.R.C.P. Edin., to the First District and the Workhouse.

Hertford Union.—James Tily, M.R.C.S.E., L.M., to the Fifth District until June 24, 1866.

Liverpool Parish.—James H. Barnes, M.R.C.S.E., L.R.C.P., L.S.A., to the Workhouse.

Rotherham Union.—Harry D. Foote, M.D. Edin., M.R.C.S.E., to the Rotherham District.

MURRAIN IN THE "GREAT EASTERN."—When the *Great Eastern* steamed from Valentia upon the important business of laying the Atlantic cable, she carried a supply of victual so various, so large, and so choice as to provoke the envy of ordinary seafarers. How many live oxen, sheep, chickens, ducks, geese—what wonderful provision of sweet vegetables, and ice, and wine—was told at the time; but, after all, the voyagers got no beef. Before the vessel had been long at sea murrain appeared among the oxen, and one after another they were killed and thrown overboard. Nothing was known on board the ship then that the same pestilence was ravaging our herds at home.—*Pall-Mall Gazette.*

THE CHOLERA.—(From the *Times'* Malta Correspondent.)—Valetta, Aug. 18.—The cholera does not yet show any disposition to decline, nor, indeed, to extend itself to any great degree; but business is almost paralysed, and much distress prevails in consequence. The poor continue to be almost the sole victims. A system of relief has been organised by charitably disposed persons, who visit and assist the sick and the bereaved, and point out to the police such localities as call for intervention on behalf of cleanliness. The following are the returns for the week:—

	Attacks.	Deaths.
Friday	40	26
Saturday	43	24
Sunday	64	33
Monday	46	32
Tuesday	47	31
Wednesday	61	33
Thursday	46	29

There have been also 57 cases and 32 deaths in Gozo during the week. Among the military it has almost entirely ceased within the last few days. A Government notice issued on the 16th inst. intimates that, cases of cholera having occurred at Marseilles, arrivals from that port with foul bills of health would be subjected here to ten days' quarantine, and in case of sickness on board to 12 days'.

CHLOROFORM.—On Saturday morning last the wife of the Rev. Alexander Gregory, the much respected pastor of the Free Church, Anstruther, was found dead in bed. The unfortunate lady was subject to an acute chronic malady, to alleviate the pain of which she was, unhappily, accustomed to make use of chloroform. She had procured in the course of Friday a considerable quantity for the purpose of rubbing the cheek of some member of the family who was suffering from toothache. After partaking of supper she felt somewhat indisposed, and retired to her bedroom about 8 o'clock that evening. The first intelligence that anything unusual had happened was given about 6 o'clock next morning by the cries of her little daughter, who slept in the same room, and who naturally had become greatly alarmed at the continued silence of her mother. Dr. Macarthur was promptly sent for, and lost no time in obeying the summons; but the cause of death was self-evident, as a handkerchief containing chloroform was found lying over the mouth of the deceased lady. That the sad event was accidental there is not the remotest reason to doubt, the only mystery which hangs over the case being the manner in which it occurred. It is

conjectured, with every degree of probability, that the poor lady, feeling herself unwell, had taken chloroform to induce sleep, and, having done so incautiously, she had become the victim of the powerful and insidious soporific.—*Dundee Courier and Argus.*

RELIEF IN CANCER.—Dr. Brandini, of Florence, has recently discovered that citric acid will assuage the violent pain which is the usual concomitant of cancer. One of his patients, aged 71, at the Hospital of Santa Maria della Scala, was afflicted with cancer on the tongue. There was no possibility of performing an operation, the surface attacked being far too extensive, investing the base, the sub-lingual, and the sub-maxillary glands. The poor man in the midst of his torments asked for a lemon, which was nothing very remarkable, as cancerous patients generally have an extraordinary liking for acids. But the seat of the disorder being in the mouth, a circumstance was observed which might otherwise have escaped attention:—the juice of the lemon diminished the pain.

A CATTLE PLAGUE IN AMERICA.—The *Memphis Bulletin* of July 25 has the following:—"We learn from a gentleman who has just returned from Philips and Crittenden Counties, Arkansas, that the planters in the Mississippi bottoms have been and are still suffering severe losses by the death of their horses, mules, cattle, and hogs by a singular disease, which is carrying them off in great numbers. In the early part of the summer an incredible number of black gnats made their appearance in the bottoms, and attacked not only cattle and horses, but also birds, wild turkeys, deer, and other game, with such ferocity as to kill in a short time quite a number of them. After the disappearance of the gnats, a disease broke out among the cattle, horses, and hogs, and has been raging for some time, and is still prevailing, though the indications now are that the epidemic—for such it appears to be—is abating. This disease very closely resembles erysipelas, the attacked swelling up, sometimes under the breast, at other times on the side, but more frequently under the throat, and dying in generally from twenty-four hours to forty-eight hours after being attacked. Our informant conversed with several intelligent planters who have been great sufferers by this strange disease, among them a Physician eminent in his Profession, and all of them concurred in the opinion that it was closely allied to erysipelas, and also that the visitation of the gnats in the early part of the summer had some influence in producing the disease. It is thought that the great amount of poison which was necessarily absorbed into the system by the bite of the gnat—which is a most poisonous insect—is developing itself in the disease which is now ravaging the whole animal race in that region. Some cases, when taken in time, are cured by precisely the same treatment practised in cases of erysipelas, painting with iodine the affected parts having a fine effect. The loss of stock, especially of hogs, has been very great. One planter in Walnut Bend has lost over 200 hogs and seven horses and mules, besides oxen and milk-cows. Another, living a short distance above the one named, has lost thirteen mules and horses, and hogs and cattle in proportion. This is only two of many similar instances of losses sustained. On Saturday morning it was reported that two men, who had been treating their cattle for the prevailing disease, had been similarly attacked, their throats swelling up in an alarming manner."

A FARMER'S SENTIMENTS ON THE CATTLE MURRAIN.—The following letter from Mr. Clare Sewell Read, of Plumstead, contains a truer and more common-sense account of the cattle plague than we have seen elsewhere in the like compass:—"I gather from your letter that in your opinion the cattle murrain has been 'very much exaggerated.' Perhaps it may, but a highly contagious and infectious disease, which seldom destroys less than 50 per cent. of the stock it attacks, and frequently as much as 80 and 90 per cent., cannot fail to alarm us farmers. An outbreak among our own cattle would cause serious embarrassment to all, and would already have proved the ruin of some small farmers, if our association had not been started. You say this 'cattle disease is no new thing.' To me it is quite new. I have been among cattle all my life, and have never seen the like before. You recommend inoculation. Supposing it successful, would it not tend to extend the area of contagion that we are striving so hard to lessen? But our Veterinary Surgeons seem unanimous in condemning inoculation, and some even question its possibility. You caution us against believing that this new disease is introduced by foreign stock. In our county every outbreak is most distinctly connected with imported cattle. We farmers are constantly advised to take science for our guide, and the highest scientific authorities in the veterinary profession tell us that this disease is the identical *rinder-pest* of Russia. More than one hundred years have elapsed since any such murrain has visited our shores, but this disorder is more or less common among the cattle of the east of Europe. It is only within the last few months that we have received any quantity of cattle from Russia. If this disease is not imported, it is certainly a very strange coincidence that Russian cattle and Russian murrain should have both chosen the same month to pay us a visit. You attribute the prevalence of the disease to the sudden change in the weather, and the consequent luxuriance of our pastures. We have had many such changes in my recollection, and no doubt very many more remarkable ones have occurred within the past century. Yet, strange to tell, we had no outbreak of the murrain between the years 1745 and 1865. Supposing your theory correct, it is curious that in the London cowhouses, where no change of diet took place, the disease first manifested itself with such fatal virulence. If rank grass has anything to do with the development of the murrain in East Norfolk, we should look for it on the good grazing lands of the Yare and the Bure rather than the short bite of Whitwell-common and the poor pastures around North Walsham. It is very necessary that it should be clearly understood that the murrain is no pulmonary disease; it has much more the character of typhoid fever. All the mucous membranes of the animal body are affected, but the substance of the lungs rarely presents any morbid appearance in rinder-pest. It is quite possible—nay, it is most probable—that the brutal treatment which foreign cattle undergo in their transit to the English markets may render them peculiarly liable to develop this or any other disease. That a large percentage of them do die with us most graziers in East Anglia can testify. I had never had but two lots, and I lost more than half of them with pleuro-pneumonia. May be our climate does not suit them, but I would ask, if the cattle of Europe are so much more healthy than our own, why do they require all these Government inspections, quarantines, regulations, and interferences which are so common on the Continent? One thing in England is certain, that since the introduction of foreign stock our cattle and sheep have been attacked with maladies to which they were previously strangers. I cannot believe that in Norfolk the importance of this visita-visitation has been seriously exaggerated. The effect of our united movement has, happily, succeeded in confining the disease to those immediate neighbourhoods in which it made its appearance. The first week or two it spread like wildfire through the adjoining villages, but since proper regulations have been insisted on the area of contagion is not much extended. Only this fresh instance has occurred within the past few days:—A cow from the very parish in which the first outbreak occurred was most unwarrantably sent to market, and was there bought cheap by a poor unlucky man, who kept only three cows. The fresh purchased animal as well as the other three are dead, and a neighbour's cow, on the other side of the road, was the next victim. Surely, this instance, and the success of preventive measures, show the wisdom of putting a stop to all traffic in cattle for a few weeks, and demonstrate that it is only by prompt and decisive measures, taken in the first instance, that we can hope to rid ourselves of this most fatal disease. And when we again begin to buy cattle, it will be necessary that every farmer should subject his new purchases to rigorous quarantine before mixing them with the other stock."—*Times.*

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—REPORT, 1864-65.—The first duty of the Association at the commencement of the past year was the difficult one of electing a President in succession to the late Dr. Thomson. This duty was rendered still more difficult by the eligibility of each of the candidates proposed to fill the vacancy. The choice ultimately fell on Dr. Robert Druitt. The propriety of this selection has been amply proved by the zeal with which Dr. Druitt has since attended to the interests of the Association. The number of ordinary members of the Association now amounts to forty-one, besides eighteen honorary members. With four exceptions, the whole of the Metropolitan Officers of Health belong to the Association. The Association has suffered the loss of Mr. Grainger, one of its honorary members. It is unnecessary to do more than to allude to his long connexion with sanitary science, and the ability with which he advocated its claims before they were so well understood and recognised as at the present time. Dr. Bernays, of St. Thomas's Hospital, was elected an honorary member;

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and Dr. Whitmore, having succeeded Dr. Thomson as Medical Officer of Health for Marylebone, became a member of the Association. During the past year fifteen meetings of the Association have been held, nine of which were evening meetings for reading papers and for discussions on scientific subjects. The average attendance at each was slightly greater than in the preceding year. The free use of the Scottish Corporation Hall continues to be kindly granted for the meetings of the Association, all of which have been held there during the past year. The following series of papers, brought forward and discussed at the evening meetings, will show the variety and importance of the subjects which have engaged the attention of the Association:—1. "The Defective Supply of Water for Domestic Use in the Poorer Districts of the Metropolis" was brought forward by Mr. Liddle. He pointed out the evils resulting from an intermittent, and advocated the general adoption of a constant, supply, and the use of an apparatus to prevent water being recklessly wasted. This subject was discussed at three meetings, when a resolution in accordance with Mr. Liddle's views was adopted. 2. A paper was read by Dr. Barnes "On the Means of Lessening the Danger to the Living arising from the Retention of the Dead in Inhabited Dwellings, and especially for Securing the Timely Removal of the Dead." The danger of retaining amongst the living the dead bodies of persons dying from infectious diseases, the difficulties of removal, the necessity for the establishment of public mortuaries, the propriety of using disinfectants, and the desirability of some more summary mode of action than by the provisions of the Diseases Prevention Act, were the points chiefly insisted on. A series of valuable suggestions was drawn up by Dr. Barnes, embodying his views on this subject. 3. Mr. Erasmus Wilson read a paper "On Preventive Medicine, as Illustrated in the Proper Use of Food," in which he stated that the cause of many skin diseases in children might be traced to a deficient innutritious diet, and that these might be prevented, and often cured, by a liberal varied diet, in which animal food should greatly predominate. 4. Dr. Letheby delivered a very interesting address "On the Means of Testing the Illuminating Power and Chemical Purity of Coal Gas," which he illustrated by numerous experiments, a variety of apparatus having been fixed for that purpose. He exhibited the different appliances, and explained the various methods for estimating the illuminating power of gas used in England and on the Continent, and pointed out the most approved plan now in use. 5. A paper was furnished by Dr. Bernays, "On some Points connected with the Sewers and Sewage of London," in which he expressed his belief that no system of drainage could be effectual in abating the evils so long complained of, if sewage was still allowed to flow into the Thames; that sewers required frequent flushing; and that the sewage should be deodorised. He also referred to the different schemes proposed for the utilisation of sewage. 6. The subject of the Preservation of the Open Spaces around London was brought under the notice of the Association by Dr. Puckle, in the absence of Mr. Doulton, M.P. for Lambeth; and a resolution was agreed to to the effect that it was absolutely necessary for the health, exercise, and recreation of the inhabitants of the metropolis, that these spaces be preserved intact. 7. The question as to "Whether, considering the Increased Mortality of the last two years, Sanitary Measures could be considered a failure," was introduced by the President, when he enumerated many of the improvements effected by sanitary operations, the benefits he considered had been derived from them; and pointed out what he believed to be the causes of the continued high death-rate. A discussion—continued during two evenings—took place, members arguing from the experience of their several localities, that great public benefit had resulted from sanitary efforts. 8. Dr. Ballard contributed a paper "On the Russian Pestilence, in relation to the subject of Quarantine and to Sanitary Matters at home." This subject was introduced at the time when some excitement existed in the public mind from the fear of the importation from Russia of some virulent epidemic; the object being to consider the question of the efficacy of quarantine regulations, Dr. Ballard arguing in their favour, with such modifications as modern investigations might suggest. Members, however, generally expressed their opinion to be, that the most rigid quarantine had failed in preventing the spread of epidemic diseases. 9. "The Contagious Diseases of Eyes," especially those having their origin in Workhouses, was brought under the notice of the Association in a very lucid paper by Mr. Haynes Walton. 10. At a special meeting of the Association, a very elaborate paper was read by Dr. Clouston, of Carlisle, "On the Production of Dysentery by Sewage Irrigation," in which he gave an interesting description of an outbreak of dysentery in the Cumberland and Westmoreland Lunatic Asylum, which after the closest examination appeared to derive its origin from the use of sewage on some clayey soil attached to the asylum, and which was only checked by diverting it into another channel. He described the peculiar symptoms characterising the epidemic, which differed from the ordinary dysentery of tropical climates, and entered minutely into the post-mortem appearances. In addition to these subjects, each of which is more or less directly interesting to Officers of Health, was one of especial interest to them in the direct performance of their duties, to which the attention of the Association was directed by the Medical Officer to the Privy Council—viz., the opinion of the Association as to any required amendments in the existing sanitary laws as affecting the metropolis. This subject engaged the most careful consideration of the Association, at meetings convened for that special purpose. Every member was invited to give the results of his experience in the working of the different sanitary laws under which he acted, and to point out any alterations he might consider necessary. A series of suggestions for amendments in the following Acts was drawn up and forwarded to the Privy Council—viz., the Nuisances Removal, the Common Lodging Houses, the Diseases Prevention, the Building, and the Metropolis Water Companies' Acts. Some suggestions were also appended relating to the appointment and duties of Medical Officers of Health. A monthly analysis of the waters supplied by the various metropolitan water companies was kindly undertaken by Dr. Letheby, for the information of the Association, and arrangements were made by members for furnishing him regularly with samples of the different waters. This analysis includes the total quantity of impurity, the loss by ignition, and the amount of oxidisable organic matter. An offer was made to furnish the Registrar-General with a copy of the analysis for publication with his Weekly Return, but was declined, as he had previously entered into other arrangements for that purpose. Dr. Letheby, however, continues regularly to supply the Association with the results of his analysis, for which its thanks are eminently due to him. The important position the Association maintains, and the influence possessed by its members in diffusing a better knowledge of sanitary laws—than which few greater boons can be conferred—continue to be still more generally recognised; and is encouraging to all to continue their career of usefulness, by devoting themselves to those endeavours which have for their object the physical and social benefit of their fellow creatures. —George Buchanan and J. Northcote Vinen, Hon. Secs.; July, 1865.

A Common-sense View of Education. — We should be glad, indeed, to see a general knowledge of physical science a more common acquirement than it is at present, but it can never, we believe, be a substitute for the "liberal arts" which are the staple of our highest education. The study does not train those faculties which are most required in the daily intercourse of civilised life. Natural philosophy, in Bacon's words, may make men "deep," but logic and rhetoric, with their kindred arts of grammar and language, alone make men "able to contend," while history is still the source of "wisdom" and poetry of "wit." These latter studies will always remain, as they are appropriately styled at Oxford, "the humaner studies." They teach more about human nature, and are, therefore, more fitted to train men for their intercourse with their fellows. Moreover, the few years of their life before they offer themselves at the last of these examinations afford probably the only time which these young men are able to devote to the general cultivation of their minds. After this they are probably absorbed in some special pursuit, and their intelligence is only called out in one channel. It is the more important, therefore, that they should employ this time in the most liberal studies which their special necessities will permit. It is a wise instinct by which Greek is supplanted by French; and a young man in the middle classes could not, on the whole, receive a more useful general education than by acquiring a competent knowledge of English, Latin, French, and mathematics.—*Times, August* 17.

Meningeal Hæmorrhages in New-born Infants.—The following are some of the conclusions with which M. Hervieux terminates a paper upon this subject:—1. The usual seat of these hæmorrhages is the arachnoid or pia-mater. 2. The cerebral substance is often found softened when in contact with the peripheric meningeal coagula; but pathological

ramollissement, which is a very rare occurrence, must be distinguished from ramollissement from imbibition *post-mortem*, which is very common. 3. Intra-cerebral hæmorrhage sometimes accompanies the meningeal hæmorrhage. 4. It is rare to find meningeal hæmorrhage unaccompanied by excessive engorgement of the venous system of the cephalic extremity, especially the cerebral sinuses and the veins entering them. 5. The meningeal hæmorrhage of infants is almost constantly accompanied by apoplectic congestions of the principal viscera and sero-sanguinolent effusions into the serous cavities. 6. The symptoms, ranged in the order of their frequency, are torpor and immobility, contractions, clonic alternating with tonic convulsions, and paralysis of one side of the face or the body. 7. Sometimes sudden in its onset and rapid in its course and at other times more slow in its progress, as the affections which precede it, as algid sclerema, gastro enteritis, etc., it offers a duration varying from some hours to ten or fifteen days, rarely exceeding ten, and it is usually fatal. 8. While it is indubitable that in many cases meningeal hæmorrhage is a consequence of laborious labour, there can be as little doubt that the hæmorrhagic diathesis, engendered by various morbid conditions, plays the principal part.—*L' Union Méd.*, No. 81.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Massey Harding's paper on Small-pox shall be inserted as soon as possible. The unexpected length of the report of the British Medical Association has deranged all our calculations.

C. *V.*—French on Asiatic Cholera. The chapter in Aitken's "Science of Medicine." The vice of most works is that they are written under the bias of some theory, which blinds the eyes and understanding of the authors, whether in favour of purgatives, salines, etc., etc. Mr. Barwell's work on Cholera seems practical, and written from the life.

Chemists' Practice.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—An individual who keeps a chemist's and druggist's shop in the town in which I reside, and who has no Medical or Surgical qualification, is in the habit of visiting patients, and supplying them with medicines. The fact is well known in the town, and he follows the practice so openly and unblushingly that one would almost suppose he fancies that he is not transgressing the law. I do not for a moment believe he charges for visits.

Will you have the goodness to give me your opinion on the subject? Does such a person render himself liable to a penalty who visits patients, supplies them with medicines, charges for the medicines, but does not charge for visits? I am, &c.

August 18. Investigator.

P.S.—I am aware that, if liable to penalty, the Apothecaries' Act is the only law by which he could be sued; the question is, does the person alluded to transgress that law? Apart from the above, I would mention one of the evils of chemists being allowed to visit is, that (as regards the public) it gives them a Medical character, and brings them a greater amount of counter practice than they would otherwise have.

*** Without doubt the Apothecaries' Act is infringed, and should be put in force. It is a weak thing in itself, and cruel to the unlettered public, to let these men get the position of Medical Practitioners. The Council of the British Medical Association are now rich, and would doubtless but be too happy to furnish funds, if needful, for so laudable an object.

The Philosophy of Chloroform Accidents.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am not aware that I have, nor was it my intention in any manner to have, misrepresented the views of the Practitioners of the Islington Dispensary on chloroform; the obscurity or misinterpretation belongs rather to the subject itself, which is more or less conjectural, and not a little puzzlesome as to the right meaning of the words asphyxia, apnœa (which are correctly, *quoad* chloroform, synonymous), syncope, etc.

After watching carefully over ten thousand cases of chloroform administration, I would say that I do not believe enlarged tonsils have much or anything to do with accidents from chloroform. Such a complication would make the administration slow or imperfect, and rather prevent the inhalation of an overdose; but, as far as we can judge from experiments on lower animals, the cause of death is oftener of the nature of spasm of the glottis from over dose, or apnœa from over narcotism of the respiratory muscles and diaphragm, than such a casual slight thing as enlarged tonsils.

The irritability of the glottis, larynx, pharynx, tonsils, etc., even under the deepest coma of chloroform, is something wonderful: the chloroform seems to act directly on certain nerves of the larynx associated with the diaphragm, described especially by Rosenthal. It is curious in ovariotomy how very safe chloroform seems to be, the cause being very obviously the irritation of air, or the Surgeon's hand in the peritoneal cavity, exciting the diaphragm also. The experienced observer also knows how safe chloroform is in midwifery practice, for here the diaphragm abdominal muscles (also respiratory muscles) are acting with vigour in concert with the uterus.

Enlarged tonsils, even as a cause of deafness, is something of a mythus, much more so, I perpend, as pressing on the glottis—the cardinal cause of danger in chloroform administration. It is curious nearly all the typical cases of death in over 250 deaths from chloroform have been in healthy adults (men, not women), all in trivial Surgical operations, never in the capital or formidable, exhausting operations; the deaths sudden as from spasm, very many where delirium tremens or choreic symptoms existed; the busy wheels of life stand still, the busiest the soonest, but as to the tonsils, I must remain a doubter. I am, &c.

Sackville-street, August 12. Charles Kidd, M.D.

Medical Responsibility in the Case of Workhouse Infirmaries.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Every reader of the cases of neglect in Workhouse Infirmaries must have been more than once deeply grieved on reading of the enormous abuses which are there shown as existing. But there is a serious omission in the reports. I refer to that just degree of blame not being placed where it ought. Who has charge and is responsible for the treatment of these sick and infirm? The Medical officer. I admit, of course, the great, often the insuperable, difficulties he has to encounter in the faithful discharge of his onerous duty; and now comes forth the point I wish to adduce. It is reasonably assumed that the duty of this officer is due first to the sick; that he has taken the offices under the condition of performing towards these sick poor all that their case requires from him as their Medical attendant. Here let me concede all that can be said in excuse for so much neglect towards these sick poor; but the plain fact remains that the Medical officer obtains the situation under no qualifying condition of only doing that which extrinsic circumstances will from time to time admit of, but on the undoubted assumption of his doing all that, to the best of his knowledge and judgment, the case demands. Now comes the question, Is this essential condition complied with? An ample answer is furnished by the reports; and here, as in all like cases, it will be rejoined that, if one man would refuse to lend himself to the injustice,—for it is simply this, however we may blink it—another can easily be found who will have no such unpleasantly particular scruples. The answer to this must be, Let it be so; and the sooner the principle of this answer be acted upon, and not till then, the sooner we shall have swept away all that mockery and sham now existing too generally in our workhouse infirmaries.

It is surely not necessary for one word to be said in vindication of the principle now stated; and while I am fully aware of the force of the rejoinder above given, I must add an expression of regret that its force is allowed to be so great as to furnish an apology or excuse for every failure of duty. For, hence, we have so prevalent that which is too generally only an enormous mockery of Medical treatment,—club practice, a Medical man undertaking to practise for a "club" at 2s. and 2s. 6d. per head per annum! and that other sham, union practice, the Medical officer undertaking the duty at a remuneration the fitness of which requires no description from me. In each of these instances it may be stated generally that the remuneration is, perhaps, sufficient to pay the salary of an assistant to do the work; and how? "Well, if I don't another will;" which being translated into its full meaning gives this: "If I don't help to carry on a system of practice which, it must be admitted, falls far short of the demands of the case, and is therefore beneath me as a Professional man, another will; and so I may as well have the few pounds as not, though I know that I cannot, at the salary given, afford to do justice either to my patients or to myself; while at the same time I promise, by the very fact of assuming the situation, to do full justice to my patients, if not to myself." If this be not the true meaning of the much-used rejoinder I shall be happy to be informed what is.

I shall not trespass further upon your space by showing how the principle now sought to be established as a practical and operating fact would not only redound to the higher estimation by the public of our Profession, but come in time to fulfil that pecuniary condition too frequently and exclusively considered at present. I will end by simply asserting broadly that the Medical officer who continues the system is without any doubt aiding and abetting the same. I am, &c.

Hanley, August 15. J. D.

Electro-Magnetism in Post-partum Hæmorrhage.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The following case, illustrating the beneficial effect of electro-magnetism in post-partum hæmorrhage, is, I think, worthy of record, for it more than answered my most sanguine expectations, after hand pressure on the uterus, pressure on the abdominal aorta, ergot, and the cold douche had failed. Mrs. B., a fine, healthy young woman, 27 years of age, was suddenly seized with violent labour-pains, at 1 o'clock p.m., November 24, 1864. She sent immediately for me, but I was unfortunately out at the time. Messengers went in every direction for a Medical man, and a considerable time elapsed before any assistance could be procured. Dr. Watters, St. Anne-street, at length arrived, and found one child born and Mrs. B. flooding a good deal. He detected another child in the uterus, made pressure on the fundus, and, presentation being natural, delivery was easily and rapidly effected. The flooding now became profuse and alarming, and Dr. W., finding the placenta adherent introduced his hand into the uterus, cleared out its contents, applied a bandage and pad and cold to the vulva. My assistant, Mr. Burrows, now arrived, and Dr. W. left the case in his hands. Notwithstanding all his efforts to arrest the hæmorrhage, Mr. Burrows saw that the patient was sinking rapidly. He tried ergot without producing any uterine contraction. He then removed the binder and grasped the uterus, directing the attendants to administer brandy freely. He tried the cold douche; but still the hæmorrhage continued. He then made pressure upon the abdominal aorta, and for the first time he observed a beneficial result; the flooding was arrested. He kept up the pressure for an hour. I then arrived (at half-past 3 o'clock), and was shocked at the sight which met my gaze on entering the room. The patient, anæmic, cold, almost pulseless, was lying in a pool of blood. There was only a slight draining from the uterine sinuses. I felt the uterus through the abdominal walls; it was large, flabby, and felt empty. I passed one hand into the cavity and removed a few small clots, at the same time keeping up pressure with the other hand. Finding that neither pressure nor the irritation of the hand in the uterus excited any muscular contraction, it occurred to me that electro-magnetism was our *dernier ressort*. I relieved Mr. Burrows in keeping up the pressure on the abdominal aorta, and directed him to drive to my house for my electro-magnetic apparatus. He arrived in a few minutes, and I proceeded without delay to apply one pole inside the uterus, while the other was being applied externally over the abdominal walls. The lowest power was first used, and then gradually increased to a medium. In a few minutes I felt slight contractions, and after continuing the current for half an hour I was enabled to grasp the whole of the uterus in my hand. I retained it in this manner for better than half an hour, and then applied a tight binder and pad. After clearing away as much of the *débris* as possible, Mrs. B. became quite conscious, and

complained of being cold. I gave some brandy and hot water, and, fearing to continue hot drinks, I put extra clothing over her and directed a female to lie beside her. When she became warm she fell into a doze. I left her for a short time now, 5 o'clock.

At 6 o'clock very sick; skin warm; pulse 140; complained of binder being very tight. Ordered chloric ether and spt. ammon. co. every half hour; the binder to remain. No flooding.

Half-past 9.—Improving in every respect. Ordered the mixture every hour; cold beef-water for drink.

Mrs. B. continued to improve daily, and was afterwards enabled to nurse both children. She is now, August 16, 1865, as florid and healthy-looking as ever.

In this case the patient owed her life, in the first place, to the pressure which was maintained so persistently on the abdominal aorta, and most assuredly also to electro-magnetism. Had transfusion been used here the vital fluid would have permeated the system only to find an exit through the patent uterine sinuses. I have used the electro-magnetic fluid in one other similar case with the like beneficial result.

I am, &c.

Daniel Walter Parsons, L.R.C.S.I. and L.M. Rot. Hosp. Dublin,
Late Hon. Surgeon to the St. Anne's Disp. and Eye
and Ear Institution.

Liverpool.

The Treatment of Scarlatina.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Perhaps, with the exception of Asiatic cholera, there is no disease in the treatment of which the Physician is more undecided and hopeless than in the severer forms of scarlet fever in children under seven years: the observations I now make applying only to the malignant, and too often fatal, variety, the milder type requiring very little treatment. He is called to a little patient of from one to four years of age, in, perhaps, from the fourth to the sixth day of the attack, labouring under excessive nervous prostration; skin hot, either free from rash or covered with a red or vivid eruption; face flushed; suffused eyes; nostrils stopped with a thick discharge; tonsils swollen and ulcerated; enlarged and painful glands occupying the neck near the angles of the lower jaw; tongue thickly coated with a brown or black fur; deglutition very painful; great thirst; bowels generally relaxed; pulse quick and feeble; respiration difficult, owing to the obstruction to the free passage of the air both at the nares and throat, the lungs of themselves being seldom affected.

This is by no means an exaggerated description of scarlatina maligna. The following is the plan of treatment that I have for some time past pursued in such cases, and with invariable success:—

I impress on the attendants that the little sufferers require fresh air, perfect quietude, the bed seldom made, the linen only changed either soiled or wet; no beef-tea, mutton-broth, custard, eggs, jelly, wine, nor brandy to be given on any account;—the regimen to consist of merely, for drink, cold water, a tablespoonful at a time, barley-water, effervescing lemonade and water in equal parts, and milk and water; for food, teaspoonfuls at a time of bread sopped in tea, thick barley-water, arrowroot, and boiled milk. I moreover inform the nurses that the prescriptions contain opium, and that, therefore, they must pay strict attention to the injunctions given as to the administration of the medicine, viz., to ascertain if the patient be easily aroused, and if conscious when awake, before giving each dose.

The Medical treatment is as simple as the regimen, our chief object being to tranquillise the nervous system, so as to enable its great centres to tide over the shock they must necessarily sustain from the poisoned condition of the blood; and, in the second place, to preserve the heart and circulation against the collapse from diarrhœa,—the most common, or from hæmorrhage of the bowels, kidneys, or nose,—an occasional complication.

I have found the following prescriptions to meet the indications mentioned above. The first I used in the case of a boy, aged 5½ years, who had the fever in as severe a form as I have ever met with. He experienced much difficulty in swallowing; tongue quite black; abscesses in the throat, neck, and behind the ears; bowels open five or six times in the course of the night and day; extreme nervous debility. ℞ Acid, nitric, dil., 3ss.; acid, hydrochloric, dil., 3ss.; tinct. opii, ℥xx.; tinct. catechu, 3ij.; ether, chloric, ℥xx.; syrup, simp., 3iv.; aq. purs, ad. 3iv. M. A tablespoonful to be taken every one, two, three, or four hours, so as to keep patient perfectly tranquil and the bowels constipated. He consumed about four ounces of this mixture from every twenty-four to thirty hours for twelve days, during which time the bowels had acted but once, and that from a dose of calomel and scammony prescribed for him by a Medical man whom I was obliged to ask to visit my patient during my unavoidable absence, and which dose, by the way, very much aggravated the symptoms. The convalescence was protracted, owing to the abscesses, as well as from anasarca. However, the boy ultimately made a perfect recovery. His mother informed me that she lost a boy, two years previously, of the same disease, at Birmingham.

R. T., a female, aged 8. A case of unusual severity, with abscesses, purulent discharge from ears and nostrils, deglutition and breathing very difficult. Diet as already given. ℞ Acid, sulph., dil., 3ss.; tinct. catechu, 3ij.; tinct. opii, ℥x.; ether, chloric, ℥vj.; ol. anisi., gr. iv.; sy. simplicis, 3iv.; aq. purs, ad. 3ij. M. A teaspoonful every one, two, three, or four hours. Treatment persisted in for fourteen days, consuming about two ounces of the mixture in the twenty-four hours. The bowels did not act for a fortnight, when two drachms of Epsom salts were substituted for the catechu. The bowels were relieved; the convalescence was speedy and perfect, without the usual sequela of anasarca.

These are two out of a number that I have so treated, some so young as eight or ten months; and with invariable success. Nor in a single instance has the opium produced narcotism, notwithstanding that there was often present in the urine a large amount of albumen. However, I must confess that if I met with a case of scarlatina in a child complicated with bronchitis or broncho-pneumonia, I should be very circumspect in prescribing opium.

There are other details of treatment that I fail not to attend to, such as linseed-meal poultices, and lotions for the ulcerated throat. I use equal parts of the muriatic tincture of steel and simple syrup, sponging with warm water the arms, face, and feet; but, above all things, disturbing the patient as little as possible.

With the permission of the Editor of the *Medical Times and Gazette*, I may, on some future occasion, give the *rationale* of my treatment.

4, Penton-street, Pentonville-road. Joseph Mulreany, M.D.

Case of Extracting Nineteen Teeth under Chloroform.

By Mr. A. Aaronson, L.R.C.S.E.

This operation, with the aid of the above agent, I successfully performed at my house on the 29th of June last. The patient was a lady, aged 24, residing at Newbury. The cause for the removal of the teeth was caries, as deep as the cementum, of nearly every tooth, causing severe neuralgic pains in the cold seasons. The time occupied in the extraction of the teeth and plugging the cavities after the removal of each tooth to suppress the hæmorrhage was thirty-five minutes. The chloroform was administered by Mr. V. Dukes, Surgeon. Of the upper jaw I extracted four molars, three bicuspids, and six front teeth, leaving one wisdom tooth. The patient had never had the fourth bicuspid, and the second wisdom tooth has not yet made its appearance. Of the lower I extracted four molars, one bicuspid, and one canine, leaving four front, one canine, and one bicuspid. Several of the teeth had been previously stopped. All of them were short, with long fangs; the front teeth, upper and lower, never touched each other, and the bite being very close at the back, the upper molars ground into those of the lower, like pestle and mortar. With the aid of astringents, the gums were well enough to have artificial teeth fixed on August 1, and the patient has returned to the country relieved of all pain and all the ills arising from defective teeth.

COMMUNICATIONS have been received from—

Mr. John K. Spender; Mr. Charles Vicary; Dr. G. R. Barnes; H. P.; Mr. T. Massey Harding; Enquirer; William Henderson; Mr. Dexter; University of London; Mr. D. B. Skey; Mr. F. Macdonnell; Mr. W. White; Dr. Rowands; Mr. J. Boughey; Dr. F. Row; Dr. John Whitmore; Investigator; Apothecaries' Hall; Mr. R. Oke Clark.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 19, 1865.

BIRTHS.

Births of Boys, 954; Girls, 1019; Total, 1973.
Average of 10 corresponding weeks, 1855-64, 1719·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	612	570	1182
Average of the ten years 1855-64	610·7	591·4	1202·1
Average corrected to increased population..	..	..	1322
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	3	3	2	..	5	6	12
North ..	618,210	8	..	4	1	7	11	16
Central ..	378,058	..	..	5	3	6	3	13
East ..	571,158	5	..	12	1	6	16	39
South ..	773,175	3	4	6	1	2	8	36
Total ..	2,803,989	19	7	29	6	26	44	116

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·624 in.
Mean temperature	60
Highest point of thermometer	73·2
Lowest point of thermometer	46·6
Mean dew-point temperature	53·0
General direction of wind	S.W. & W.
Whole amount of rain in the week	0·29 in.

APPOINTMENTS FOR THE WEEK.

August 26. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

28. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

29. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

30. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

31. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

September 1. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

ON THE

CHEMICAL CIRCULATION IN THE BODY.

DELIVERED AT THE

Royal Institution of Great Britain.

By HENRY BENCE JONES, M.A., M.D., F.R.S.,
Hon. Sec. R.I.

All our knowledge usually passes through three stages as it advances to perfection. First, a stage in which we think we know everything; then a stage in which we find we know nothing; and, finally, a stage in which we rapidly obtain those clear and connected ideas in which all sound knowledge consists.

As regards the absorbent system of animals and the mode of action of remedies, we have long been in the first or second stage, and this evening I hope to show you that there is reason for believing that in regard to these subjects we are about to enter on the third stage; for that, in addition to the circulation of the blood, there is the dawn of another or chemical circulation, dependent in part on the mechanical circulation, but carried on mostly by diffusion from the blood into the textures, and from the textures into the absorbents, which thus become necessary agents for performing those actions of oxidation and nutrition on which, in great part, animal life depends.

Mr. Huggins, in his discourse last week, showed us how the spectrum-analysis can determine the chemical composition and the physical constitution even of substances outside those circulating bodies that constitute our solar system. And as the nebulæ and fixed stars are beginning to be analysed, so in the microcosm of our own bodies substances that are outside the circulating system of the blood can (by the peculiar light they give when burnt) be analysed with such delicacy that elements can now be therein discovered which all other modes of analysis would entirely overlook.

The human body, in this discourse, may be regarded as consisting of four parts—a funnel, a circle, an envelope, and a drain.

The laws of diffusion modified by pressure determine the passage of all substances from the funnel into the circulation, from the circle into the envelope, and from the envelope or circle to the drains. To Mr. Graham we owe the investigation of the laws of diffusion of gases and liquids, and the division of substances into crystalloids and colloids. One or two experiments, and for them I am indebted to Mr. Ansell and to Mr. Graham, will make the meaning of these terms more clear to you. Inside and outside this porous cell there is at present atmospheric air. There is no passage of the outer air into the inside of the cell, nor of the inside air to the outside of the cell; but if hydrogen is put outside, being lighter than common air, it rapidly passes into the inside of the cell, whilst the heavier air inside more slowly passes out; and thus pressure is produced inside the cell, and the index shows how much pressure exists. So also with this india-rubber ball. When the gases inside and out differ, the lighter gas will pass rapidly in, and such an alteration of form will occur that a spring will be liberated and this bell will say that light gas has passed through the india-rubber ball. Mr. Ansell has invented this test for the explosive gas in coal mines, that it may ring its own alarm. In these beautiful illustrations of Mr. Anderson's the same excess of diffusion of the lighter over the heavier gas is shown more slowly. Originally over both jars the india-rubber was flat. But through this concave india-rubber the hydrogen has more rapidly passed out than the air has passed in; and through the convex rubber the hydrogen has more rapidly passed in than the atmospheric air has passed out.

So with these liquids, for which I am indebted to Mr. Graham. Here is a very diffusible crystalloid substance, acetate of rosaniline, or magenta; and in this other vessel there is a much less diffusible or colloid substance, cochineal. In half an hour the crystalloid will pass through the membrane, whilst the colloid will show no signs of passage.

Here is another semi-solid contrast. In the one jar there is bichromate of potash in gelatine above, with pure gelatine below; and in the other cochineal in gelatine above and pure gelatine below: the bichromate diffuses whilst the cochineal is unmoved.

The same laws of diffusion modified by pressure determine in the body the passage of substances from the funnel into the circulation, and from the circulation into the tissues or ducts, and from the tissues back through the absorbents to the circulation.

The circulation must not be regarded as the stem of a tree curled round on itself, but rather as a series of circles formed by each terminal branch-twig joining a terminal twig of the root. The enormous number of these terminal circles may be seen in any injected preparation of any part of the body. The whole substance seems to consist of these vessels alone. The walls of these vessels are of the finest membrane, through which diffusion takes place with the greatest rapidity into the tissues beyond the circulation. These tissues constitute the different organs of the body, nerves, muscles, glands, ligaments, bones, etc Each particle of each nerve, muscle, or gland is encompassed by blood-vessels on which its growth and its action depend; but there are some few spots in the body where blood-vessels would be dangerous to the function of the part. These parts may be called the fixed stars of our microcosm; they seem outside the circulating system which binds together the rest of the body.

The most numerous of these fixed stars are the cartilages of the joints; and at a far greater distance may be placed the most remarkable twin stars of our body, the crystalline lenses, which, without any circulation of their own, are separated from all circulation by an aqueous and glassy fluid, which themselves also have no circulation. The lenses then might well be thought to be altogether free from all the multitude of disturbing substances that enter through the funnel into the circulation of man. By this model, perhaps, you will best realise the distance of the lens from the circulation of the blood.

The lenses, the humours of the eye, and the cartilages of the joints thus constitute the parts of the envelope most distant from the vessels, whilst the proper tissues of the various organs of the body constitute the parts of the envelope most immediately touching the circulation. The absorbent system and the ducts of glands constitute the drains by which substances that have passed out of the circle into the envelope are taken up into the circulation again or pass out of the body.

It has long been known that bile would diffuse into every texture; that madder would diffuse into the bones and into the fœtus, and urate of soda into the joints; carbazotic or picric acid into the skin; mercury into the gums; lead into the gums and muscles, and silver into the skin; and it has long been known that multitudes of substances would run through the funnel into the circulation and out through the envelope into some of the drains. Ether, asparagus, turpentine, and many other such substances require no mention here.

It occurred to me that both in animals and in plants (a) the spectrum-analysis ought to determine with certainty where diffusing substances go to; how long they are in going out of the circle into the envelope; how long they stay in the envelope, and how quickly they cease to appear in the drain; and with Dr. Dupré's help a long investigation into the rate of passage of crystalloids into and out of the textures of the body was undertaken. The delicacy of the spectrum-analysis may be seen in this table:—

Chlorate of soda . .	$\frac{1}{193}$-millionth of a grain.
Carbonate of lithia . .	$\frac{1}{8}$,,
Chloride of strontium .	1 ,,
Chloride of barium . .	1 ,,
Chlorate of potass . .	$\frac{1}{6}$-thousandth of a grain.
Chloride of lithium . .	$\frac{1}{12}$-millionth of a grain.
Chloride of rubidium .	$\frac{1}{10}$-thousandth of a grain.
Chloride of cæsium . .	$\frac{1}{12\frac{1}{2}}$,,

Soda exists everywhere, and in everything we eat and drink, so there was no use in looking for soda in the circulation and envelope, for it was sure to be there.

Lithia exists in many vegetable and animal substances, according to the soil on which they grow or live. Here is a table of substances which we examined for lithia:—

In potatoes—seldom found.	In tea—slight traces.
apples—sometimes.	coffee—slight traces.
bread—traces.	ale—slight traces.
cabbage—distinctly.	porter—slight traces.
Rhine wines—always.	mutton—none.
French wines—distinctly.	beef—none.
sherry—distinctly.	milk—none.
port—distinctly.	

(a) Cress sown on paper, when one inch high, had the paper moistened with water containing a little chloride of lithium, in ten minutes and twelve minutes, the lithium was detected in the leaves.

It had already been found in sea water, kelp, spring water (sometimes), ashes of wood grown in the Odenwald, Russian and other potashes, tobacco, vine leaves and grapes, ashes of the produce of the fields in the Palatinate, milk of animals eating the produce, ash of human blood and muscle, meteoric stones, and all the drinking waters of London.

The spectrum of lithium is very characteristic and very perceptible, and some approximation to a quantitative determination may be arrived at by observing the amount of substance that requires to be burnt to obtain the reaction, and by the necessity, in some cases, for the removal of interfering substances previous to the combustion. Thus three degrees may readily be observed. The highest amount of lithia is present when each particle of the substance when introduced into the flame gives the lithia reaction; and a smaller amount of lithia is present when the whole of a lens or of an organ must be extracted with water to remove the lithia previous to the combustion; and the smallest trace is present when the substance has to be incinerated, the ash treated with sulphuric acid, the excess of acid driven off, the dry residue extracted with absolute alcohol, the alcohol evaporated and the dry residue tested. These three quantities may be designated as the slightest trace, a trace, and plenty.

As soon as experiments on man and animals showed that the infinitesimal quantities taken in with the food were rarely to be perceived in the envelope, experiments were made to determine how quickly the lithium diffused from the funnel into the blood circulation, and from the circulation into the envelope, and whether it was to be found in those distant parts of the envelope where no circulation existed, and especially in the lens of the eye.

The following table gives the experiments made when lithia in small quantity was poured into the funnel on the rate of its passage not only into the circulation, but out of the circulation into the envelope of a guinea pig.

The rate at which chloride of lithium passes into the textures through the stomach :—

1¼ grain	in 3 days	plenty found everywhere.	
3 ,,	15 minutes	everywhere except in the lens.	
,,	30 ,,	,,	,,
,,	30 ,,	,,	traces in the lens.
,,	30 ,,	,,	outer part of the lens.
,,	60 ,,	,,	,,
,,	60 ,,	,,	except in the lens.
,,	in 2½ hours	,,	and throughout the lens.
,,	4 ,,	,,	,,
,,	8 ,,	,,	,,
,,	24 ,,	,,	,,
,,	26 ,,	,,	,,
¼ ,,	5¼ ,,	,,	except in the lens.

It follows from these experiments that three grains of chloride of lithium given on an empty stomach may diffuse into the cartilage of the hip-joint and the aqueous humour of the eye in a quarter of an hour. In very young and very small pigs, the same quantity of lithium may in 30 or 32 minutes be found in the lens of the eye, but in an old pig in this time the lithium will have got no farther than the humours of the eye. If the stomach was empty when the chloride of lithium was taken, in one hour the lithium may be very evident in the outer part of the lens, and very faintly in the inner part; but if the stomach be full of food, the lithium does not in an hour reach the lens. Even in two hours and a half the lithium may be more marked in the outer than in the inner part of the lens. In four hours the lithium will be in every part of the lens, but it will still be more evident in the humours than in the lens. Even in eight hours the centre of the lens may show less than the outer part. The lithium will be found in as great quantity in the centre of the lens as in the outside after twenty-six hours.

When instead of being put in by the funnel, the lithia was injected into the skin: three grains of chloride of lithium in twenty-four minutes showed the lithium in the lens and in every texture; in ten minutes slightly in the lens, but plenty everywhere else; in four minutes no lithium was in the lens, but plenty in the aqueous humour of the eye, and in the bile; one and a half grain in five minutes showed no lithium in the lens, but plenty in the aqueous humour and in the bile.

Having thus shown that lithium will pass everywhere into the textures in between four and fifteen minutes, when injected into the circulation, and between fifteen minutes and twenty-six hours when taken in by the funnel, some experiments were made to determine after how many days the lithium ceased to be detected in the envelope after it had been taken. Usually three pigs were taken: to one no lithium was given, the second was killed in a few hours after a dose of lithium, and the third was given the same dose, and killed after many days.

The following table shows the rate at which chloride of lithium passes out of the textures :—

2 grs. in 6 hours gave plenty everywhere.	In 6 days gave no trace in the alcoholic extract of the kidneys, livers, or lenses.
,, ,,	,, ,, ,,
,, ,,	In 4 days gave none in the lens.
1 gr. in 5½ hours showed partly in the lens.	In 3 days gave faint traces in the lens.

It follows from these and other experiments that twice in six days and once in four days two grains of chloride of lithium, which in six hours gave lithium everywhere, in six days ceased to be detectable in the lens, and that even in three days the lithium is most probably diminishing in the lens.

Having thus gained a clear knowledge of the time it takes for a small quantity of lithia to pass in and out of the envelope of an animal, I proceeded, through the kindness of my friends Mr. Bowman and Mr. Critchett, to trace the passage of lithium into that part of the envelope which is most distant from the blood circulation in man. Lithia water is by no means an unpleasant drink, and a few minutes, or a few hours, or a few days before the operation for cataract, twenty grains of carbonate of lithia dissolved in water were taken.

No less than seven cataracts were previously examined with the greatest care to determine whether lithia was usually absent, and in only one instance was the very faintest trace of lithium detectable.

The following table shows the rate of passage of carbonate of lithia into and out of cataracts :—

20 grains of carbonate of lithia were taken

25 minutes	before the operation	—No trace of lithium was found in the cataract.
2½ hours	,,	—Lithium in the watery extract of the cataract.
3½ ,,	,,	—Lithium in each particle.
4 ,,	,,	,, ,,
4¼ ,,	,,	,, ,,
4½ ,,	,,	,, ,,
5 ,,	(old man) ,,	,, ,,
5 ,,	,,	,, ,,
7 ,,	,,	,, ,,
4 days	(spontaneous soft cataract, 25 to 30)	—Traces in alcoholic extract of ash.
7 ,,	,,	—In alcoholic extract not the slightest trace of lithium.
7 ,,	5 hours ,,	,, ,, ,,
7 ,,	,,	—Slightest trace in the alcoholic extract.

It follows from these experiments, that in the human body twenty grains of carbonate of lithia poured into the funnel in two and a half hours will have partly passed into every particle of the envelope and beyond the blood circulation even into the most distant parts, and in three and a half hours it will be more distinctly present in each particle of the lens.

In four days it will still be distinctly present in each particle of the lens.

In five days it will have begun most clearly to pass out of the lens, and in seven days scarcely the smallest trace will be detectable there. The most striking experiment was in the case of a young girl with two soft cataracts. She took twenty grains of carbonate of lithia, and in seven hours one lens was removed, and the smallest particle of the lens showed the presence of lithium. The other cataract was not removed for seven days after the first operation; then not the slightest trace of lithium could be found in the lens.

A long series of experiments on the passage of lithium out by a drain, after it had been taken in by the funnel, showed nearly the same fact—namely, that after a dose of twenty grains the lithium was not entirely thrown out of the body under six, seven, or eight days.

Thus, then, both in animals and man the same law obtains. A single dose of lithium in a few minutes passes through the circulation into all the ducts and into every particle of the body, and even into the parts most distant from the blood-

circulation.(b) There it remains for a much longer time than it took to get into the textures, probably for three or four days, varying with the quantity taken; then it diminishes, and finally, in six, seven, or eight days, the whole quantity is thrown out of the body.

In animals it is very difficult accurately to determine the time when a single dose is removed, for a portion passes out in the perspiration and gets into the hair, and the animal thence re-doses itself with the lithium which had already passed through the blood-circulation into the envelope and out by the skin drain, and this re-dosing may be continued over and over again, so that even thirty or forty days after a dose of three grains, some lithium may be detected in guinea pigs still passing out of the body.

Having thus traced the lithium in and out of the envelope, the question of far greater importance remains—What does the lithium or other alkali salt do whilst it is in the envelope? In other words—What is the action of alkalies in the system? What is the action of carbonated alkali at a temperature of 38° C. (100° F.) when oxygen at the same time is present, on 1st, organic acids; 2nd, nextral hydrocarbons; 3rd, fatty matter; and 4th, albuminous substances?

The most remarkable instance of the action of alkali when organic acid and oxygen are in contact is in the decomposition of pyrogallic acid. In this vessel I have oxygen and pyrogallic acid in contact, and no action takes place and none would take place if alkali were not added; but immediately on the addition of potass, action begins, the pyrogallic acid is unable to keep its composition, and is burnt by the oxygen aided by the alkali. More stable acids of lower composition are produced, and these combine with the alkali and liberate carbonic acid. If carbonated instead of caustic alkali be used, the action is not nearly so rapid or complete as with caustic alkali.

The best example of the destruction of a neutral hydrocarbon by oxygen aided by alkali is in the reduction of oxide of copper by sugar. The metallic oxide furnishes the oxygen, the alkali assists the formation of acid in the sugar, and draws it out of the sugar destroying the neutral compound.

In fatty matters the alkali splits the fat into fatty acid and glycerine, and forms a soap with the acid. Oil of bitter almonds exposed to common oxygen or ozonised oxygen absorbed in two hours two cubic centimetres of oxygen; with carbonate of soda it absorbed in the same time ·2,75 c.c. When mixed with an alcoholic solution of potash, and heated benzoic acid combines with the potash, and the whole contents of the tube solidify; the alkali causes the oxidation of the oil; and by extreme oxidation carbonic acid and water would be the final results.

The action of alkali and oxygen on albuminous substances at low or moderate temperatures, 100° Fahr., has not yet been studied. At high temperatures with alkali the entire decomposition of the substance with the production of carbonic acid and ammonia, and a multitude of less perfect products of oxidation have long been known; the same substances oxidised at a higher temperature without the presence of alkali give rise to fewer intermediate products, and to a greater amount of the ultimate products of oxidation, viz., water, carbonic acid, and ammonia, out of which the albumen was originally formed.

M. Béchamp stated that by the oxidation of albumen by manganic acid urea was produced, but this proved to be benzoic acid; and probably kreatin, uric acid, urea, and other products will not be obtained from albuminous substances until we follow the method of oxidation that occurs in the body—viz., a temperature of 38° C. (100° F.), a moderately strong solution of carbonate of soda and basic phosphate of soda, and the action of oxygen possibly in an ozonised state.

Von Gorup-Besanez (Liebig's *Annalen*, vol. cx., p. 86, and cxxv., p. 207) has traced the action of ozone at ordinary temperatures on a multitude of animal and vegetable substances, but of these my time allows me to mention only one or two striking examples.

Cane or grape sugar, when in contact with ozone, undergoes no change, but where grape sugar is exposed to oxone with potass, soda, or carbonate of soda, it is entirely oxidised, and carbonic and formic acids only result. When no alkali is present no action occurs. Cane sugar oxidises with alkali and ozone much slower than grape sugar.

Olein is quite inactive when exposed to ozone, but with potass or carbonate of soda the olein is immediately oxidised. The olein is saponified and the glycerine is oxidised into acrolein and ultimately into carbonic, formic, and propionic acids. The oleic acid is much more slowly oxidised into formic and carbonic acid.

Hence the action of alkalies out of the body on the different classes of substances of which we are built up is sufficiently clear. The alkali disturbs the equilibrium of the elements in the organic body by its affinity for acids. Aided by oxygen and heat, more or less complex acids are formed from the neutral substances, and if the action of the alkali is sufficiently continued, carbonic acid water and ammonia alone remain.

The progress of therapeutics probably depends on the application of our knowledge of the action out of the body of different medicines on the different chemical constituents of the body, to the explanation of the action of the same substances on the components of the textures in the body.

I have shown you how alkali out of the body promotes oxidation. The chemist can have no doubt that the same action takes place in each particle of the textures to which the alkali is carried. Thus, carbonate of lithia, soda, and potass, lime, magnesia, rubidium, cæsium, are indirectly oxidising agents, increasing chemical action in the different substances of which the textures are composed, according to the amount of the different alkalies that can diffuse into the textures, according to the different properties of the substances capable of oxidation that happen to be in the textures, and according to the amount and active state of the oxygen present and the amount of heat that assists the action, and according to the facilities for the removal of the products of the combustion.

Chloride of rubidium and cæsium we have proved to follow the same law as chloride of lithium, in that these substances pass into the crystalline lens, and can be detected there; but the evidence is much less distinct than in the case of lithium, so that the rate of the passage of these substances in and out of the textures cannot so easily be determined. Twenty grains of chloride of rubidium, and the same quantity of chloride of cæsium, were necessary to give traces of the spectrum reaction for these substances in the lenses of guinea pigs.

There can be no reasonable doubt that as alkalies pass in, so we shall prove that vegetable acids, if not stopped by the alkaline fluid that is contained in the circulation, will pass into every particle of the textures, and when there these acids must have exactly the reverse action to alkalines. By lessening the alkalescence of the tissues, vegetable acids must tend to stop the oxidising process.

As starch, sugar, and alcohol may be looked upon as becoming in the body vegetable acids, there is here a vast field for research; for there can be no doubt that the sugar and alcohol of our food pass at least as quickly as alkalies into the vascular and non-vascular textures of our bodies.

How far mineral acids can penetrate into the textures cannot be determined, and it may well be doubted if they reach the textures at all, although, by rendering the blood less alkaline, they must indirectly render the diffusing fluid in the textures less alkaline also.

Alkaloids we hope to detect diffusing into the textures in the same way, if not at the same rate, as alkalies. How they act on the different components of the textures of the body chemistry at present has not determined. The action of alkaloids on sugars, fatty matters, and albumen at first sight appears altogether unproved. There exists in the brain and nerves a substance discovered by Dr. Oscar Liebreich, and named by him protagon ($C_{116}H_{241}N_4O_2P$). It gives rise to neurin ($C_5H_{13}N$), glycerin-phosphoric acid and a fatty acid, when treated with alkali; and this substance, of which $\frac{1}{10000}$th forms a strong jelly with water, may be acted on by the alkaloid, and thus form a nerve substance, having very different physical and chemical properties from the protagon in its unaltered state.

Even the action of ammonia in the different tissues of the body is not yet made out. In the *Phil. Trans.*, part ii., 1851, p. 409, I have shown that in passing through the stomach into the blood, or when in the blood, ammonia is partially oxidised, and that the same oxidation happens when urea is taken, and probably when caffein and the alkaloids pass into the blood; but the action that occurs as soon as ammonia, urea, or alkaloids come into contact with the different substances in the different textures, and the rate at which these alkaloids are ultimately oxidised in the textures, has yet to be determined. The first effect of alkaloids is to increase chemical action; but the resulting chemical combinations that take place, and the alterations in the textures that are produced by ammonia,

(b) When seven grains of carbonate of lithia were given eight hours before delivery, the lithium was detected in each particle of the umbilical cord.

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urea, and alkaloids are at present undetermined. Moreover, the alterations these substances occasion in the products of decomposition of the tissues, whilst being themselves finally decomposed and removed from the body, are still entirely unknown.

Judging from the action of alkalies, there can be little doubt that alkaloids in a few minutes diffuse into every texture, and act according to their powers on the different substances with which they come into contact. If our means of analysis were sufficient, they would be found probably for three or four or more days in the textures, generally much longer than the symptoms, which depend upon contrast, would lead us to expect.

Lastly, we have proved that some salts of the metals diffuse like chloride of lithium into every texture of the body. Three grains of sulphate of thallium we have followed in twenty-two hours into the crystalline lens, and into the cartilages, the nerves, the liver, and kidneys. It may be doubted, perhaps, whether thallium is a metal; but the same fact we have also determined to be true of sulphate of silver by a very delicate galvanic arrangement.

In twelve days a grain and a quarter of sulphate of silver was given to a guinea pig. The ashes of the liver, kidney, and stomach showed silver fairly. The ash of the bile showed it rather less distinctly. The ash of the lenses showed only very slight traces of silver, but silver was there. The ash of the brain showed no silver.

And here, again, a vast field for inquiry is opened. What is the action of the metallic salts on the water, salts, hydrocarbons, fats, albuminous substances of which each tissue is built up? How do the metallic salts influence the oxidation and nutrition going on in the textures? The power of the salts of silver, lead, and mercury, etc., to form insoluble or soluble compounds with albumen out of the body seems to indicate the action of these substances on the albuminous matter in the body. A compound with the albumen may be formed which may check the action of the organ, or the metal may be reduced or form a sulphuret, as with silver salts, and may be deposited in the textures, and there remain, rendering the organ useless, as with lead salts; or the metallic salt may set up a more active chemical change in the albuminous textures or substances with which it is brought into direct contact; and this chemical action may rise to that degree which is known as inflammation; and the salts of mercury may be taken as examples of substances possessing this action.

From this view of the rapid passage of crystalloid substances into the vascular and non-vascular textures of our bodies, there arises a feeling of surprise that, under such constantly varying conditions, the different functions of the different parts can be carried on. There is, however, from these experiments, but little room to doubt that substances like water, alcohol, salt, and sugar, assisted by the mechanical circulation of the blood, can in a few minutes pass by diffusion into each particle of our textures; and if in them, these substances must take part in the changes of matter and force that are proceeding there, according to the amount of substance that enters in, according to the chemical properties that the substance possesses, and according to the conditions and times during which the action proceeds.

Thus, this circulation of diffusion rises even to an equal if not to a greater importance than that other more mechanical circulation of the blood, which indeed, in two out of the four grand divisions of animals, is almost absent, and during the early weeks of our own fœtal life is entirely wanting; and in this chemical circulation we recognise a link between the lowest vegetable and the highest animal creation, since this diffusion is a necessary condition on which the chemical actions in both kingdoms of nature depend.

To sum up, then, I have tried to show you that there are good grounds for believing that there exists within us, in addition to the mechanical or animal circulation of the blood, another, and a greater and a more strictly chemical circulation, closely resembling, if not identical with, that which obtains in the lower divisions of animals and in vegetables. A circulation in which substances continually pass from the outside of the body into the blood, and through the blood into the textures, and from the textures either into the ducts, by which they again pass back into the blood, or are thrown out of the body; or into the absorbents, by which they are again taken back into the blood, again to pass from it into the textures.

This chemical circulation leads directly to two most important inquiries:—First, whether substances that diffuse into this larger circulation act as they would do out of the body under somewhat similar circumstances upon the different substances with which they come into contact in the different textures, either promoting the formation of new compounds, or giving rise to decompositions in the substances that are present in the tissues.

And, secondly, whether the chemical force which may have been latent for ages in the mineral and vegetable substances that can enter by our vegetable and mineral food and medicine into this larger circulation may be so given out in the textures as to increase or diminish those actions of oxidation, motion, sensation, and growth which almost, although not altogether, constitute that assemblage of correlated actions which we sum up in two words—Animal Life.

ORIGINAL COMMUNICATIONS.

CASE OF

EPILEPSY, FREQUENTLY ACCOMPANIED WITH INSANITY, CURED CHIEFLY BY MEANS OF ICE.

By JOHN CHAPMAN, M.D., M.R.C.P.

The following are the particulars of the case which was mentioned as "Case 1" in my communication to this journal on July 18, 1863:—

May 16, 1863.—C. T., aged 42. Had fits in childhood, but they left him. Is not known to have had any afterwards until 1854. In that year, while undressing, he fell down, and struck the back of his head. He vomited all the following night, and the next morning had his first fit, which lasted about half an hour. He recovered his senses completely, but kept his bed by the Doctor's order three or four days. In April, 1856, he had another fit: it occurred in the night, and was preceded and followed by vomiting, which lasted altogether about two days. Then he became insane, and was violent about four days: he was placed in an asylum, where he remained about three weeks, and then resumed his work. About a year afterwards he again had a fit worse than those before: twelve leeches were applied to the anus, and benefited him; he went to sleep, slept calmly all night, and in three days was able to go out. Some months afterwards he had two more fits, and since that time his attacks have continually recurred, a month's interval never having been experienced. In January, 1861, immediately after having had several fits, he became "raving mad," and was taken to Guy's Hospital, where he is said to have had inflammation of the brain. He staid there a fortnight; was afterwards an out-patient of this and two other metropolitan Hospitals, attending each of them many months in succession. He has, however, during the last five years, never passed a month without a fit. His attacks have gradually increased in frequency: during the last twelve months he has had, on an average, three fits daily. [The foregoing statement was made to me by his wife, a very respectable, intelligent woman(a).]

(a) The following is the patient's account of the early period of his illness. The discrepancy between it and his wife's account is an instructive illustration, of the kind familiar to every Physician, of the difficulty which he encounters when endeavouring to obtain a reliable history of a patient's malady, especially if the nervous system be affected:—C. T., aged 42; had fits in childhood, but they left him, and did not recur till 1854, when he was working night and day to complete the execution of an order for work within a specified time. He thinks the great strain put on his mind and body, together with his neglect to take food at regular hours, brought on the first attack, which occurred when undressing for bed. He continued unconscious or insane during four or five days, having fits, with violent convulsions, at intervals meanwhile. After recovering his consciousness, the fits became gradually less in frequency and severity, and in a few months his health was completely restored. He resumed his work, but, after continuing at it about nine months, again fell ill;—"felt," he says, "the head giving way again; the appetite falling off; became very irritable because losing strength; displeased with everything, self included." A second series of epileptic fits, with insanity, more prolonged than before ensued. After being for a short time in a private asylum, he again recovered, again resumed work, and, after being employed about five months in a responsible position, was again disabled by an attack much worse than either of those before. Referring to this occasion, he says:—"A blood-skin came over my eyes; I bit my tongue; had convulsions; had to be held in bed; had cramps in all my limbs; was black in the face; and, as my wife said, I was horrible to look upon. I had three or four fits a-day." In the course of a few weeks he again recovered, and went to work; nine months afterwards he had another attack, but less severe; and in three months more another, seemingl most severe of all, when he was again placed in an asylum, "where," he says, "I was put into the padded room like a dog for more than twelve

Besides his fits, he has curious visions of animals of abnormal forms, of boys destroyed by machinery, etc. Has dreams of the same kind. He often has a sensation in the eyes as of a glowing electric light, which, changing, assumes various colours; often, too, he sees men working in the flame. Has much headache, the forehead being "blazing hot" each morning; generally when he does sleep, sleeps very heavily, and frequently lies awake. His dreams are so horrible and distressing that he is afraid to go to sleep. His memory is very greatly impaired: when going from one room to another to fetch anything, often forgets what he intended to fetch; and any instructions given him by his wife or others when he goes of an errand he is always obliged to write down. Not infrequently, and without first having a fit, he loses his consciousness for short periods. During such times, he is said to talk more or less incoherently, and often to appropriate small objects within his reach. His eyes are bloodshot every morning, and have a mist before them; they are also habitually lachrymose. Has suffered from piles; ten days ago passed blood from the bowels, which are often constipated. Passes urine with difficulty; often it merely dribbles away: he has insufficient expulsive force. His hands and feet are always cold and clammy: gloves and socks, however thick, will not enable him to keep them warm.

I ordered ice to be applied along the whole spine during two hours four times in each twenty-four hours, one bag being applied at bedtime, one being used during the night, and the other two during the day.

26th.—Has had no fit since the ice was first applied. The headache has ceased; the sleep is greatly improved, and is much more refreshing; the appetite is also much improved, and the patient looks much better. His hands and feet are becoming warm. Pulse 84; tongue clean; bowels "nicely open;" urine still expelled with difficulty. To continue the ice as before, and to take acid. sulph. dilut., ♏xii.; quinine disulph., gr. ss., b.d.

29th.—Has not used ice either yesterday or to-day, being unable to buy any, and having already pawned his coat. Had a "bad night" last night, and this morning while walking he had a slight wave of vertigo; but has had no fit since the 16th inst. I saw when he entered my room he did not look so well as he did on the 26th. He looked just as if he had had no sleep last night. I applied ice along the back of his neck and between the shoulders. Immediately he began, he said, to see more clearly, and shortly afterwards asked me if I did not see a change for the better in his face, which, indeed, became plainly visible while I was writing this note. He says his memory is wonderfully improved, and that, excepting last night, he has slept "splendidly." Pulse 80. The discharge of blood from the bowels has not recurred. They are now slightly constipated. To continue the ice and medicine as previously prescribed, and to keep the bowels open by castor oil.

June 2.—Since 29th ult. has used ice, and taken the medicine as ordered. Has had no fit. Sleep and appetite continue "first-rate." Does not think he has had any dreams during the last three nights, and has had no hallucinations in the day time. His forehead is now cool, and his eyes are no longer either bloodshot or obscured by "the mist before them" when he rises in the morning. They have not even been watery during the last two days. "My feet," he says, "are very warm now." Pulse steady, 84. Continue the ice as before, and take quinæ disulph. gr. jss., acid sulph. dilut., ♏vii. before dinner daily.

10th.—Still no fit; feels quite well; is delighted with the improvement in his memory; can now expel his urine with natural force, and in full continuous stream; bowels constipated three days; took castor oil on the 8th inst., when they were freely opened. To use two bags of ice during each night as before, but only one in the day time, and to let that one be wrapped in flannel.

12th.—On the night of the 10th he tried the experiment of going to bed without the ice-bag, but could not get to sleep, and was very restless, although very weary. He went to bed at 9.30 p.m., and continued awake till after 12, when he resumed the ice-bag, and went to sleep comfortably forthwith. He says he can tell the state his brain is in by the appearance of the candle-flame, which, before using the ice, always seemed to him, as it does now at times, as if surrounded by a large, luminous, coloured haze, the flame itself being like a red mist. If his brain is in an excited state, this phenomenon is still observable; but on using the ice it disappears: the candle assumes its true character, and then he becomes capable of refreshing rest and sleep.

18th.—While standing talking to me, and seeming quite well, he became silent for a moment, and then began talking incoherently, saying, among other things—"Yes, I can take the flowers for my brother." His face became pale, and his hands quite cold, and, after I had placed him on a sofa, he turned a parcel, which he held in his hand, round and round, looking at it in a vacant unmeaning way. I, at once, applied cold water to the back of his neck, then eau de Cologne—blowing upon it to produce rapid evaporation: he was thus not only kept from becoming worse, but actually recovered a little; meanwhile I procured ice, the application of which speedily and completely restored him. His hands during his restoration became quite warm again. After recovering he was surprised to find some metal crests which did not belong to him in his pocket; these, which he must have appropriated while at a saddler's shop, whither he had been on an errand, he begged me to restore. I sent him home with a bag of ice along his spine, requesting him to continue the treatment last ordered.

July 10.—Still no fit since the first day I prescribed for him. Sleeps well, and continues well in all respects. Each bag of ice to be now enclosed in thick flannel.

13th.—No fit yet. Having been reading all day (Sunday), and having been without ice all the afternoon by way of experiment, he found, about five o'clock, that the words became unclear. He continued reading, when the words began to blend with each other, and then having got a candle to read by, he found the flame surrounded with a halo which gradually increased. About 8.30 p.m. he went out for a walk with his wife, when he observed the lamps looked fiery red, and as if surrounded by a haze of the same colour. On returning home and observing the candle he saw as far as the light extended a generally diffused red haze. He felt no pain, but great nervousness and excitability, and, as he says, would "soon have quarrelled with any one." He "then felt it time to stop," and therefore put on an ice-bag. After doing so he lay watching the candle-flame, which gradually assumed its natural appearance—completely so in about 45 minutes. He then fell asleep, slept soundly all night, and feels and looks quite well this morning. He ate half a pound of beef-steak on Saturday: he dared not have done such a thing, he says, before I began to treat him. To use only two bags of ice daily—one at night and one each morning.

August 17.—This patient continued to improve in health and strength so decidedly that early in this month I expressed the opinion that he might resume regular work, provided it were light, and spoke to a gentleman on his behalf, explaining that he was not fit for any employment needing great strength, either bodily or mental. With this understanding he was offered employment; but I suppose the managers at the works were either not informed of the circumstances or ignored them, for my patient was forthwith set to assist in loading a barge! His poverty had prevented him from living well before going to work, and having no means before receiving his wages of procuring adequately substantial food during his first week of work, he was unequal to the labour demanded of him. After a few days of employment, depressed and expecting his discharge, he fell down in a fit on his way to work. His bowels had been constipated during the previous week. The fit occurred August 10, three months within six days from the date when he had his last fit, and when my treatment of him began. I ordered him to take a saline aperient mixture, and to resume the use of ice—four bags each 24 hours.

September 8.—Reports himself as feeling well in all respects. Sleeps well. Thinks he is getting stouter. Began on the 3rd inst. to use two bags of ice only, enclosed in flannel.

October 17.—About a fortnight ago had considerable hæmorrhage per rectum, and now complains of prolapsus ani and piles. During the 14th and 15th inst. had four severe fits. He says "It's excitement that's done it." I asked him what excitement. He replied, "Well, I was greatly chagrined by being charged with being drunk at a friend's house last

hours, without light. It drove me downright mad; yet I was sensible when the fits were not on. My wife brought me out, took me into the country, and I got clear of the fits, except in cases of excitement." After again working for about seven months, he quarrelled with the book-keeper of the establishment where he was employed, and, having had some spirits-and-water the same day, was much excited, and fell in a fit in the street, and bit his tongue "half off." His Medical attendant thought him suffering from delirium tremens, and sent him to Guy's Hospital. There, he says, he was strapped in bed, but, notwithstanding the disbelief of the "House Surgeon," he "heard and understood all they said" until he fell asleep. He adds:—"The medicine Dr. Rees prescribed for me was iodide of potass and sarsaparilla, which I have always taken when not under a Medical man." Some time afterwards he was a patient at St. Bartholomew's Hospital; "there," he says, "they gave me large doses of belladonna."

Saturday." He looks worn and ill. His head aches, but is quite cool. Pulse 120, very feeble. ℞. Liq. ammon. acet. ʒj.; mag. sulph. gr. xx.; ammon. sesquicarb. gr. iii.; aquæ ad ʒj., bis. die. To use three bags of ice as before.

19th, 4 p.m.—On leaving me after his last visit he reached home "in a queer state," became insane, and continued so about 24 hours. Is now sane again. Has lost much blood to-day per rectum. ℞. Acidi sulphurici diluti ♏ x., bis. die. Continue the ice as last ordered.

Shortly after this date he and his wife went to Birmingham, on a visit to some friends. He wrote to me in March, 1864, reporting himself well, and that he had had no fit since leaving London; and again July 19, as follows:—"I am happy to state that my health has been more than miraculous since I have been down here. I have been engaged as manager and traveller with a firm in the —— trade, but am sorry to state that they were irretrievable lost before I went to them, and have been obliged to stop. My wife is working for the most fashionable house in Birmingham, and has her work at home. I am very miserable mentally for want of active employment, and feel confident that I should never have the slightest touch of epilepsy again were my mind in a channel of activity. . . I have put your treatment to the severest tests, and you would be surprised to see me, as I never looked better in my life."

I did not answer this letter until February, 1865, when I wrote for a further report of his health. My note was returned by the Post Office, the envelope having upon it the words "gone away;" so that I have, I regret to say, lost all trace of my patient. If he should ever read this report he will no doubt write to me again.

Somerset-street, Portman-square.

ON THE

COMPLICATIONS OF INTERNAL HÆMORRHOIDS AND THEIR TREATMENT.

By W. ALLINGHAM, F.R.C.S.

Surgeon to the Great Northern Hospital. Assistant-Surgeon to St. Mark's Hospital for Diseases of the Rectum.

In my previous paper I considered the diagnosis of the more common complications of hæmorrhoids; it is now my intention to say a few words upon the rarer forms of complication, and then to enter somewhat fully into the question of treatment.

The complications I named as frequent in cases of internal piles were,—fissure, small and painful ulcer, fistula of various kinds, and stricture with or without ulceration; those which I now desire to mention as less commonly met with are,—impaction of fœces, procidentia of a part of the circumference of the rectum, and malignant disease.

Impaction is by no means an uncommon disorder, particularly in women, and there may be more or less of a venous hæmorrhoidal condition of the parts, but usually it is the fœcal accumulation that the patients suffer from, and not from the hæmorrhoids. Nevertheless, cases have occurred in which an operation for hæmorrhoids has been performed with impaction to a greater or less extent existing, to the manifest detriment of the patient, for this state of the rectum and colon is not incompatible with a tolerably regular, though scanty, action of the bowels. Therefore, I would say, be very sure that the intestinal canal of a patient on whom you are going to operate for piles be well cleared out; if you have reason to suspect that constipation has existed for any time, let aperients be administered every night, and stimulating enemata in the morning, for several days prior to the operation.

It is remarkable how much better patients do when the portal system has been thoroughly unloaded by acting freely upon the bowels; and unless there be some care exercised in this particular you may have a great deal of trouble with your patient after the operation. I am inclined to think that in those cases where the healing process does not go on kindly, a loaded colon and congested portal system is very often the cause.

I was requested some ime ago, by a Professional friend, to see a lady upon whom he had operated for a slight case of hæmorrhoids, and in whom unhealthy ulceration had followed the ligature of two piles, and the removal of some superfluous skin. Previous to the operation, she was not in bad health, and might reasonably have been expected to do well. I inquired as to how her bowels had been relieved before the operation, and from the account given I was not satisfied that they had been thoroughly cleared; moreover, although the bowels had acted since the operation, they had done so but scantily, and when the patient assumed the erect posture, she experienced great inclination to go to stool, and abortive straining on doing so. On making an examination I found the rectum blocked up by hardened fœces. Breaking up the mass with a small scoop, and the free use of enemata, followed by brisk aperients, cleared her bowel of really a large quantity of fœculent matter, and within a week the ulceration had nearly healed.

Procidentia of the rectum is undoubtedly a rare complication, for by this I do not mean that prolapse of the lower part of the rectum which is so commonly associated with hæmorrhoids, but an invagination or descent of the upper part through the lower. The distinction can be readily perceived by a practised eye; the hard slippery tumour forming the pile presenting a very different appearance from the soft velvety-looking piece of intestine which protrudes with it. Moreover, there is a sulcus between the intestine and the skin, which is not the case in ordinary prolapsus. Most usually it is one or other side of the rectum, and not either the anterior or posterior portion, which descends. Of this peculiarity I have seen several well-marked examples.

The portion prolapsed often comes from high up in the rectum, which I have verified when a ligature has been applied by feeling the surface, from which the part tied had separated, as high as the finger could reach. I believe the best treatment is to apply a ligature, but I must admit that the prognosis is not very satisfactory, relapse being frequent.

Malignant disease of the rectum is unhappily by no means a rare disease, but, as far as my experience goes, it is so, when conjoined with hæmorrhoids. I have, however, observed some few cases in which the symptoms were so obscure that had not the precautionary introduction of the finger been practised, as I have in my former paper recommended, the case would have been diagnosed as piles only, and an operation performed, to the great disadvantage of the patient. In the treatment of fissure with hæmorrhoids, I know of no plan likely to be successful except that of making a free incision through the base of the fissure, so as to divide the sphincter, if not quite through, nearly so; after this the piles can be readily drawn down and ligatured. It is not advisable to attempt to tie the piles before dividing the fissure, for two reasons: the first is, that there is frequently so much spasm and hypertrophy of the sphincter when fissure has long existed that the operation upon the hæmorrhoids would be attended with extra pain and difficulty; and in the second place the disturbed position of the parts after ligature would render it very difficult to discover the exact site of the fissure. When fissure exists, without hæmorrhoids, in its early stage no operation is required for its cure; in a more advanced state a comparatively slight incision may be sufficient, but when there is hypertrophy of the sphincter ani and the tissues are thickened and indurated by repeated attacks of inflammation and abortive attempts at healing, a free incision through the floor of the fissure, and sufficiently deep to set the sphincter at rest, is the only sure method of treatment. I have several times seen a too timid incision unsuccessful, but I have never met with a failure after a bold cut carried right through the length of the fissure; and, in addition, I believe the free incision heals quite as quickly as the small one, and is not one whit more painful to the patient.

It may be observed that I have made no mention of any other mode of operating upon hæmorrhoids than by the ligature; this has not been with the intention of ignoring the value of nitric acid in properly selected cases, or the operation recently so highly lauded by Mr. Henry Smith in his lectures at the Medical Society, viz., the clamp, excision, and the actual cautery. I have myself operated on twelve patients after the manner recommended by Mr. Cusack, and advocated by Mr. Smith, and I shall continue to do so in favourable cases; but thus far I cannot say that I have been very pleased with the result, or seen any of the great advantages held out by Mr. Smith.

Let us examine for a moment Mr. Smith's statement as to the superiority of the cautery over the ligature. He says:—"It is not possible that tetanus or pyæmia, the two most formidable results of the ligature, can occur after this operation." Allow me to observe that on this point Mr. Smith gives very little evidence; the few cases operated by him and others can

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form no satisfactory standard of comparison with the results of the ligature.

From 1763 operations upon hæmorrhoids with the ligature performed at St. Mark's Hospital, five cases of tetanus resulted. It is remarkable that four of these occurred in the spring of 1858 (two in March and two in April), a year in which I find tetanus was very much more frequent than usual in other Hospitals. From 1858 to the present time there has been no case of tetanus, and rather over 800 operations for hæmorrhoids have been performed. Although Mr. Smith asserts that it is not possible for tetanus to follow his operation, I cannot myself see why it should not; in fact, I think most Surgeons would bear me out that a burn has been a frequent cause of tetanus. In the year 1857 I removed a very vascular tumour from the entrance of the vagina of a young woman. The hæmorrhage was arrested by the actual cautery; no ligature was used; tetanus supervened in five days.

With regard to pyæmia resulting from the ligaturing of hæmorrhoids, I will again refer to the statistics of St. Mark's Hospital, which show that no case of pyæmia after the operation has ever occurred in that institution.

And now as to the final advantage claimed by Mr. Smith—viz., "That patients are not half the time in bed, and the convalescence is much more rapid."

This, I am willing to admit, would be a great superiority over the ligature if it could be safely guaranteed; but it is in this particular that I have been most disappointed, for in none of the twelve cases I have operated upon with the clamp and cautery was the convalescence materially shortened.

After the ligature, I keep my patients lying down until it separates, which usually takes place on the sixth or seventh day. They then get up; but I interdict any active exertion, and recommend the recumbent posture for a few days longer, or until the wounds are nearly healed. I am quite aware that patients might get about much earlier, but I think there would be danger in doing so; and I should anticipate as the probable result chronic ulceration, possibly ending in more or less stricture. I operated some time ago upon a gentleman who had bad hæmorrhoids, to which I applied five ligatures, and, through an unexpected turn of business, he was obliged to get up on the fourth day after the operation and go to town, where he remained standing and sitting for some hours (as he assured me) with less discomfort than he had frequently experienced before the operation. The case did none the worse for it, but I thought it a very dangerous experiment, which I should not advise any one to repeat.

Now let me ask, what is the condition of the rectum of patients operated upon by the clamp and cautery at the end of five or six days? From a careful examination of my patients, both by the finger and the speculum, I can assert that they have more or less extensive wounds where the piles have been excised and the slough produced by the cautery has separated. I do not for one moment doubt that they could resume their usual avocations, but I submit that it would not be sound Surgery to allow them to do so. Active exertion and the erect posture maintained for any length of time so soon after the operation is very inimical to cicatrization, for the veins of the rectum in these cases are dilated, and, moreover, they are destitute of valves, so that the sore much resembles that condition called varicose, and, therefore, I believe the recumbent position is most advantageous. This point I have frequently seen exemplified in simple ulcer of the rectum, which has resisted all kinds of treatment as long as the patient went about, but has rapidly healed with a little opiate injection when the horizontal position has been maintained for a week or two.

I cannot help believing that if this attempt to save time after the operation by excision and the cautery be persevered in, it will prove disastrous to many patients. One of my cases after that operation got about on the fourth day, and then for three consecutive days lost as much as a quarter of a pint of arterial blood on going to stool, and this was checked by confining him to his bed again for a week.

In cases of hæmorrhoids complicated by fistula the sinus should be laid open, and at the same operation the hæmorrhoids ligatured. Even if the fistula be a very severe one, I should prefer doing the operation all at once. Of course, the time of recovery is delayed, but in this respect also a saving is effected in the end. If the fistula be divided and the hæmorrhoids left to a future operation, they come down more, and are a constant source of annoyance to the patient and irritation to the wound, which may thus be prevented from healing.

I saw a case of this kind some time ago, in which the fistula remained unhealed four months after the operation. I think in these difficult cases it is advisable, not only to slit up the sinus, but to make a tolerably free incision through the floor of it, so as to divide any fibres of the sphincter that may be beneath the fistula, as well as the indurated tissues which usually form its base. The incision, also, should, I am of opinion, be carried beyond the external orifice of the fistula into the healthy tissues, by which means you may avoid a collection of matter, which burrows under the integument, and gives trouble, and possibly may necessitate another incision.

I must here enter a protest against too much dressing and the use of ointments in these cases; a little dry cotton wool inserted gently between the edges of the wound is all that is required. I am sure I have many times seen fistulæ remain unhealed in consequence of the interference of the Surgeon, who had daily put lint smeared with a stimulating ointment to the bottom of the wound. In cases where severe ulceration and stricture co-exists with hæmorrhoids, only palliative measures can be adopted. The use of sedative injections, the occasional introduction of a bougie, rest in the horizontal position, and the careful regulation of the bowels may do an immense deal, in some cases even effect a cure; but, failing that, the patient may be made very comfortable, and life, which was previously a burden, be rendered quite endurable. Any operation upon the piles must, as in the case I related in my last paper, only aggravate the already deplorable condition of the patient.

36, Finsbury-square.

CASE OF

TRUE LEPROSY, OR ELEPHANTIASIS GRÆCORUM.

By W. E. C. NOURSE, F.R.C.S.

The patient in this case was a woman, aged 52, who was born in Sussex, had lived many years in Brighton, and had never been out of England. She was a charwoman, married, with five children, all healthy. She had soft tubercles on the ears, forehead, and eyebrows, giving to the face a peculiar frowning aspect. Tubercles reddish, slightly tender. On the left arm, at the bend of the elbow, was a cicatrix, where former tubercles had disappeared. No visible affection of eyes, tongue, or throat. Voice hoarse. Appetite good. Complained of constant sleepiness, which overcame her if she sat down only for five minutes.

History.—Was born at Steyning. Her father was a labouring man. He had altogether seven children. None of them were affected with any skin disease, nor were either parent, nor any relation as far as she knew. She lived pretty well as a child, went to service early, and was married at 19 and came to Brighton. Her husband was a papermaker. He neglected his business, and she had to maintain the family by her own work for many years, over-exerting herself, and living badly.

Soon after 40 years of age she was troubled with redness of the face, which she called "erysipelas." At 45 a swelling formed on the right leg, remained about six months, and disappeared without breaking. She had also a small swelling in the right eyebrow, which remained for some years. At 46 her health became bad, she was weak, ailing, and suffered from nausea, and spots came out on her face and arms. These spots soon disappeared of themselves without treatment. At 47 the swelling in the right eyebrow broke; the sore after a time healed, and left a broad whitish cicatrix. She stated that she had had several crops of tubercles since that described; that just at their first coming out she felt giddiness, faintness, nausea, weakness, and languor; and that when the spots began to die off, which they generally did after four or six weeks, a feeling of great relief was experienced, and her health improved. The spots were tender, with a sensation between smarting and itching.

At 48 years of age the swelling in the leg reappeared, and in some months broke, leaving an ulcer. The ulcer after a while healed under strapping. About the same time she had another eruption of soft reddish tubercles on the face and forehead. At 49 she had another eruption of tubercles, larger and more marked, on the face, forehead, and left shoulder. At 50 years of age, after an attack of bronchitis, another eruption appeared. And at 51 the eruption recurred three times within the year. She has been lost sight of for the last two years.

Remarks.—The circumstances of this case confirm the view usually taken of the causes of leprosy. Hard work, beyond

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the person's strength, poor living, and the marine atmosphere (a condition seldom absent in the history of the leper), after a number of years resulted in symptoms indicating a changed and deteriorated condition of the mass of the blood. This being the *fons et origo mali* in leprosy, it appears of small importance to treat the eruptions, ulcers, etc., which from time to time occur, except to relieve distress or prevent injury; whereas a long-continued course of treatment calculated to add healthy material to the blood, and to improve its quality, promises the best chance of recovery from this difficult malady. The slow progress of the disease is shown in the nine or ten years' history of this case which has been obtained; at the same time the gradual increase in the clearness and frequency of the symptoms will be observed. Several of the attacks of tuberculous spots were treated with iodide of potassium in bitter infusion, but the duration of the attacks seemed to be scarcely shortened thereby.

11, Marlborough-place, Brighton.

SUICIDAL CUT-THROAT, WITH OBSERVATIONS.

By BAMLET W. SWITZER, F.R.C.S.I.,
Assistant-Surgeon, Bengal Army.

Suicidal wounds of the throat are often very fatal; not so much on account of the position in which the cut itself takes place, as from the dreadful deliberation with which either the maniac or the determined suicide proceeds to execute his design. There must be a strong concentration of the will fixed on the attainment of the wished-for result—oblivion,—to enable a man in his senses to saw his throat across with a blunt carving-knife; and although the untaught suicide selects, as a rule, the least dangerous site for the wound, the amount of injury consecutive to the attempt, or the appalling extent of the laceration itself, very frequently results in death. Fortunately, the suicide always throws his head well back for the fatal stroke, and thereby often saves his life. If he cuts above the os hyoides, the knife goes into the mouth and wounds the base of the tongue, cutting no important vessel; but the usual place is the thyro-hyoid space. And here there is plenty of room to avoid both the mouth and great vessels, and yet proceed back to the spine. The case below recorded was one of these, and occurred in a native of India. Before relating it, however, I may be excused if I describe very briefly the appearance and habits of the class he belonged to, so as to show what a village Hindoo is like, and the kind of life he leads. The contrast between the daily life of this Asiatic and that of a European, as exemplified in a native of Great Britain, will be readily drawn and appreciated by the reader.

The Hindoo of Upper Bengal and the North-West Provinces is of middle height, say 5 feet 9 inches, very erect, except in age, spare of limb, and, unless in the case of wealthy, indolent men, never fat. He is what an Army Surgeon would call a well-made man, though with a tendency to small development in the calf. This, however, does not indicate weakness, as any one will say who has been carried by palki dâk a distance of sixty miles on end by sixteen men. Their hair is generally cropped short, which gives a kind of convict look to the countenance at first, until one becomes habituated to it; their features are well marked, eyes bright and black, conjunctivæ tinged brown, alæ of the nostril moveable, and countenance very expressive when talking freely amongst themselves. I should guess the average weight at about 9 stone 6 pounds. The skin is of a light brown or tawny tinge; the head is freely exposed without any covering in the mid-day sun of May and June, and the only covering worn on the body is a dhotee, or cotton waist cloth, rolled five or six times round the loins and hips and brought from behind forward under the perineum to the front. Their daily life in a village is simplicity itself: sheltered in a mud hut roofed with a bamboo trellis and grass, the ground their floor, the floor their bed, a cotton or, in cold weather, a woollen cloth stretched over them from head to foot—for the native of India, high and low, always covers his head to sleep. His wife and three or four children reside with him in the single room, and if he is well to do the two bullocks also that plough his land. His daily food consists of one meal, generally eaten at night, in which he consumes about 2 lbs. of coarse wheaten flour, made with water into unleavened dough, lumps of which are clapped between the hands into cakes about six inches in diameter and one-eighth of an inch thick. He makes and cooks these himself by heating them through (for the baking can be called little else); with this he eats a little boiled vegetable and a chilli or two, washing it down with water. If he is faring sumptuously, about one to two ounces of rancid, clarified butter, called "ghi" is added. He satisfies hunger at other times by a little parched grain, bathes at least once a day, sleeps whenever he can, smokes his hookah, chews his pawn and betel, fights occasionally, lies and cheats always, is very litigious, salaams to the *sahib*, *log*., and swears by his caste.

This horrible caste, the drawback and bugbear of the country, interferes with the Surgeon as with every one else, making it often a hard task to pilot the human barque safely between the Scylla of prejudice on the one hand, and the Charybdis of death on the other. A Brahmin would prefer death or unlimited suffering from a loathsome disease to what he considers the defilement of entering an Hospital, where his prejudices must necessarily be slightly interfered with.

Amongst all high-caste Hindoos the strongest feeling exists against applying for aid to Europeans or taking the "Kafir's" medicine. Sometimes you can get them to take the drugs by putting the constituent tinctures and salts into a bottle in their presence and permitting them to add the water; for this water is the principal means of defilement. A Brahmin would rather die of thirst than drink from the vessel a European has just used; and natives will sometimes die by dozens from cholera, refusing all aid tendered from such a source. In some places vaccination is strenuously opposed, from the childish idea that Seetla, the deity who presides over small-pox, is about to become incarnate, and that vaccinators are searching for this incarnation, to be known by milk appearing in the wound instead of blood. The high-caste Hindoo religiously abstains from all meat, except goat and a few kinds of game; and even these are used by no means frequently. With the Mussulman it is a religious tenet also that he should not use intoxicating liquors. Where, therefore, a generous diet in the one case, and alcoholic stimulants in the other, is required, recourse must be had to calling these medicine, and disguising them in every way to prevent recognition. With a race whose ideas are so primitive, it is often a difficult matter to come in contact without giving offence, and nice management is constantly required if the Surgeon wishes to keep his Dispensary popular, without which popularity it would be useless.

Poorun, a Hindoo, aged 35, a tall, spare man, was sent to the Futtehpore Dispensary on May 1, he having attempted suicide by cutting his throat two days previously. Being a villager, and at a distance from the station, he could not arrive earlier. His throat was bound round with a thick cloth, which had become hard from saturation with blood; he was breathing with great difficulty, his eyes sunk, and pulse very slow and weak. The history of the case was this:—His brother having occasion to go to another village, he put this man in charge of some property in his house. While the brother was away, thieves came at night, bound Poorun, and carried off the property. When the brother returned and heard of his loss, he roundly abused Poorun, and charged him with having connived with the thieves, whereupon the fool went into an outhouse, sat down, and with a *hussia*, a kind of blunt sickle used for cutting maize, he commenced a most determined attempt at suicide, sawing his neck back and forward on the blade and hacking his throat in a horrible manner, only ceasing when he fainted from loss of blood. He was discovered shortly after in this plight, and a long cloth being wound round his neck he was put on a small native charpoy, and sent into the station. He travelled thus a day and two nights, exposed part of the time to the blaze of an Indian April sun. I removed the cloth from his neck by cutting it in pieces, and this with some trepidation, for it was evident a large quantity of blood had been lost. All appliances, however, were at hand to deligate a vessel should it spout. No hæmorrhage, however, took place, and I proceeded to clean the wound. The mere wiping the surface removed a large quantity of clotted blood and muco-purulent matter, which was almost suffocating him; and he had two or three hearty coughs, which brought up a large accumulation of mucus from the bronchi. The wound was five inches in length, each angle coming under the angles of the lower jaw, situated in the thyro-hyoid space, immediately above the pomum Adami, cutting through the membrane, the stalk of the epiglottis, slicing off the upper part of both alæ of the thyroid cartilage,

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the two arytænoid cartilages, and, proceeding backwards, the anterior wall of the pharynx was laid open, the sides cut, and the upper and lower portions thus formed were held together only by a strip of the posterior wall, about half an inch in breadth, lying on the centre of the spine. A gap was thus presented in the throat, into which a good-sized orange would readily fit. The os hyoides was drawn up by the muscles attached to it and the superior constrictor; the lower part had sunk down, apparently from want of support. No cut vessels were visible, and, of course, I did not search for them. The man had had no food for forty hours, nor even a drink of water, and this, with the thermometer at 105° in the shade, was no trifling privation. Everything he attempted to swallow came through the wound, and produced violent paroxysms of cough. He complained of no pain in the chest, but there was good deal of bronchial râles and expectoration of frothy mucus through the wound. He made signs of intense thirst, and pointed to water most pitifully. His bowels had not been opened since the wound was inflicted. I at once introduced the flexible tube of Reid's stomach-pump through the mouth, my finger in the wound, making it hit the lower end of the severed œsophagus, when it readily glided on into the stomach. This produced most troublesome and painful attempts to vomit. After a short time I gave a few ounces of water, which had scarcely reached the stomach before it was ejected with violence through the wound. I then waited for fifteen minutes, and again tried a little water with ʒss. spts. amm. ar. and gtt. ij. acid hydrocyanici. This was retained, and after having his mouth washed out with water he seemed relieved. His breathing now was quite free, through the wound, and by affirmative and negative signs he expressed himself as having no pain, and only suffering from thirst. It was perfectly useless to attempt bringing the wound together in any other way than by position; and even that he could ill bear, from its interfering with respiration. No sutures nor straps of plaster were used. His head was only brought forward by pillows, and a shield of net put over the wound. He remained quiet all day, and at 6 p.m. only complained of great thirst; no appetite; bowels not open. I was compelled to give a large turpentine and assafœtida injection, as I feared any medicine by the stomach-pump would bring a recurrence of the vomiting. I may mention that injections per anum are looked upon with extreme disgust by all natives, and can only be used or, indeed, tolerated in cases of absolute necessity. The next day (May 2) he was reported as having passed a very restless night, dozing, and being waked up by violent paroxysms of cough. His pulse was 80. No pain, but cough troublesome. The injection passed without bringing away any fœcal matter. This was his fourth day without any food. The flexible tube was again passed into the stomach, and after a short time to allow its tolerance, a strong purgative draught of sulph. magnesia and infus. sennæ was given and retained. By 6 p.m. his bowels were opened freely three times. Simultaneously he immediately began to look out for food, and seemed alive to the fact of his semi-starvation. He now took plenty of strong beef-tea by the stomach-pump, and for the time was satisfied.

May 3.—He slept well, but wanted food the moment he awoke. He was so ravenous I never could satisfy him, although I gave him a quart of beef-tea, containing the essence of two pounds of meat made, in my own kitchen, every morning and evening. The wound is healing nicely from the edges, and the discharge trifling.

He continued as well as possible up to May 9, when I thought the introduction of the stomach-pump could be dispensed with. Luxuriant granulations were sprouting throughout the whole wound. I directed him to fill his lungs well with air, and then by plugging up the wound with wet lint he managed to swallow all his beef-tea without much trouble. After this he never required the stomach-pump. Watching him at his breakfast a day or two after, I noticed he merely put the cloth outside the wound; and on examining the larynx I found a beautiful protector provided by nature. The superior vocal chords had, to all appearance, become hypertrophied, and in the act of deglutition approached each other so as to obliterate the opening into the trachea—in fact, forming an artificial epiglottis. I watched this with a good deal of interest for some days, until the filling up of the wound by granulation prevented any further inspection. The wound healed altogether by granulation from the bottom, and I have no further daily notes of his case after May 14.

On the 24th he was discharged quite well, no fistula remaining, and no difficulty in swallowing or breathing. I saw him last on the following July 9, when all the motions of his head were perfect, and he was inconvenienced in no way whatever except by loss of voice. This he said was daily improving. A few points in this case are worth a passing notice. It is, of course, an exceptional one; out of five others it was the only one in which the food pipe was laid open, and in three of them the air pipe was not opened. The pain of the cold steel generally abates the suicide's ardour, except mania or despair nerves his arm. This man told me it was extreme passion and rage at being falsely accused that made him do it, and he said he felt no pain. The anger soon passed away, and after it came extreme disgust at his foolishness, and a great desire to recover. He was most carefully and sedulously attended by his brother, who blamed himself for being the cause. I have no doubt that he knew well he was getting beef soup, and thereby breaking his caste, but he knew it was necessary to his recovery, and as I brought it in a black bottle and called it medicine, he did not object. Without this plentiful nourishment, I am sure he would not have recovered; no amount of nutritious enemata could have satisfied his empty stomach, or kept down his appetite. I would always, therefore, in such a case use the stomach-pump for feeding; it in no way retarded the healing of the wound, but I believe acted beneficially by keeping the gullet straight, preventing stricture, and acting like a splint. When I had learnt by experience to wait for a little after introducing the tube before giving anything, I was not troubled by its causing emesis. I attribute a good deal of this man's freedom from any severe chest complication to the heat of the atmosphere he was breathing. All the doors of the Dispensary were open day and night, but the temperature never fell below 80° F., and often was as high as 105°. The zealous attention of his brother often relieved the distressing cough by the timely removal of the mucus as it reached the wound by a small tent of sponge on a stick. I would entirely condemn the use of sutures in any case where the air-passage is opened; indeed, I am quite sure the patient would not tolerate them, even in slight wounds of the throat; they produce great irritation, and if put in of sufficient tightness to draw the lips together, they rapidly cut out. Judiciously placed pillows and the use of a night-cap bandage will be always sufficient to keep the parts in situ. This man insisted upon having a full opening for air, and would allow no bandages or pillows which would interfere with it. I feared this might cause great deformity, but it did not. The cicatrix in July was nowhere more than three-quarters of an inch broad, for it contracted greatly and left a ledge in the throat formed by the superior surface of the thyroid cartilage. No dysphagia or dyspnœa resulting was more than I hoped after so extensive an injury.

Jessore, Bengal.

INFLUENCE OF CALOMEL UPON DENTITION.

By Dr. JULES CHAMPOUILLON.

Calomel, so precious in the treatment of infantine diseases, gave me, three years ago, a result which I did not seek, but which struck me, on account of the advantages to be derived from its use in cases of difficult dentition. Two months ago a case of the same kind again presented itself, and this time, observer, watchful, and warned, I was able to follow the action of the medicine step by step.

First Observation.—On September 17, 1862, the wife of a policeman brings me, at the Hospital of Tlemcen, Algeria, her little daughter, suffering from an abscess in the anterior chamber of the right eye, consequent upon a blow received twelve days previously. The little patient, 11 months old, is of good constitution; she suffers but little from the eye. For the purpose of obtaining the reabsorption of the matter, I prescribe calomel, divided according to Law's system. Forty-eight hours after administering the first dose the abscess has diminished, but the child slobbers, and the submaxillary ganglions are painful and somewhat tumefied, especially on the left. I wish to ascertain the state of the mouth. The mother then informs me that her child on the day of her admission into the Hospital only had the lower median incisors, and that subsequently, that very morning, the two upper incisors had appeared. The gums are hot, red, and swollen. I continue the calomel, limiting myself, however, to a packet morning

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and evening. Two days later (the 22nd) the two lateral lower incisors have pierced the gum; the evening of the same day the left lateral incisor of the upper jaw shows itself in its turn. I then cease the calomel, for which I substitute a little chlorate of potash, notwithstanding the entreatics of the mother, who begs me to continue means "for so easily cutting teeth." The morning of the 23rd the upper left eye tooth has pierced the gum; the abscess of the eye has diminished one half. On the 29th the child quits the Hospital, her mother alleging business. Eight days afterwards I again saw the little patient. Her eye was quite in the same state; her gums were still red, but no other tooth had appeared. Thus, in four days, six teeth made eruption.

Notwithstanding the idea of coincidence—which, for the first two teeth, I admit willingly—it seems to me difficult entirely to deprive the calomel of all participation in an evolution so rapid. The irregularity of the eruption, and, above all, its tendency towards one side, strengthens this opinion. Doubtless, the delay in the appearance of the teeth created conditions favourable to the evolution. I know, also that the salivation ensued with a rapidity not usual with children; but may it not be ascribed to the fractional dose of the remedy? In refusing to continue the calomel, I was not unmindful of the danger there would have been in evolving germs not having as yet attained maturity, even if it could be done. Of course, for a simple delay without accidents I should not advise the use of calomel sufficient to affect the gums; but, in cases of difficult dentition, I should demand of mercurial salt rather than of any other medicine an action which might also produce some benefit in another point of view. Verily, the medication is known. However, I cannot but think that in cases of serious accidents, of dangerous complications owing to difficult dentition, the administration of calomel actively pursued—more actively than is generally done—would produce a swelling and softening of the gums, which, by favouring the dental eruption, would counteract those accidents so rapid in their progress with children.

Second Observation.—On May 17, 1865, a mother brought me her child, 12 months old, having the right cornea clouded by extravasations of recent date. I examine the mouth. Of the two lower median incisors, one is through, the other ready to come through; the rest of the line of sockets does not announce a near evolution; no pain; no submaxillary swelling. The remedy is first administered on the 17th. On the 19th the child has taken twenty packets, containing altogether two grains of calomel. There has been no diarrhœa, but there is salivation. The gums are rather red and softened; not much ganglionary congestion. I cease the treatment on account of the state of the mouth and of the amelioration of the eye. That day the upper median incisors show themselves; then, the morrow (the 20th), the upper lateral incisors; at length, on the 22nd, a lower lateral incisor, on which side I did not note. Thus, five teeth have appeared in four days.

Certainly, cases of spontaneous evolution as rapid as those cited are to be found. But it would be, at least, very curious that this rapidity should coincide with the four days' use of calomel, to cease so soon after, although the group cut remained incomplete and not symmetrical.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CLINICAL REMARKS ON CASES OF APHTHÆ OF THE MOUTH AND THROAT, WITH SICKNESS AND DIARRHŒA, IN ADULTS.

(Under the care of Dr. WILKS.)

Dr. Wilks, on visiting a woman in his wards who was suffering from an aphthous condition of mouth and throat, with sickness and diarrhœa, stated that he had seen during the last few months several cases which were so much alike in their general features, that he considered them deserving of a distinct name—or, at least of a recognition which should place them in a special position by themselves. He was anxious to know whether such cases were common, and had been met with by other Medical men. The malady of which he spoke appeared one in which the whole alimentary canal was affected, as far as one could judge of the throat by the eye, and of the stomach and intestines by the sickness and diarrhœa. Dr. Wilks has favoured us with the following notes of some of his cases:—

One of the earliest and most severe cases which I witnessed was that of a young man in consultation with Dr. Waterworth, of the New Kent-road. I found the patient sitting up in bed dreadfully ill, making ineffectual attempts either to hawk up tenacious secretion from his throat or to swallow it. It was evident that his great trouble was in his throat; this was with difficulty examined, as its extreme irritability produced a constant dread of vomiting. The whole mucous membrane was of a deep red colour, covered with white specks, patches, and tenacious mucus; indeed, it was in a state which might be called follicular stomatitis, or even thrush—using the term in its most general sense. There was also considerable extension of the malady down the bronchial tubes, as evidenced by the râles and the tenacious expectoration. He had already got much thinner, and his pulse was very rapid and feeble. He had constant sickness and diarrhœa. It should be said also that the secretion from the mouth was very fœtid. If an examination of the throat had not shown an absence of false membrane, the case in other respects might have been regarded as one of diphtheria, judging from the extreme illness of the patient. Supporting remedies were evidently indicated, but they were taken with much trouble. He remained very ill for about two weeks, and then gradually recovered, but has scarcely regained his strength at the present time.

Another case was the daughter of a Surgical instrument maker living at Lewisham. She was suddenly taken ill with severe febrile symptoms, and soon became affected with a very bad mouth and throat resembling the aphthous condition seen in children. She also had constant sickness and frequent diarrhœa; the skin was hot, and the pulse very quick and thready. After a few days the urgent symptoms passed off, but great prostration remained for a long time, and the disposition to sickness and diarrhœa continued for some weeks. She is now in a very precarious state.

A third case, somewhat resembling these, I saw with Dr. Butler, of Woolwich; the onset of the case was marked by delirium; but here the bronchitis was more severe, and the patient died in a very few days.

Another fatal case, with similar symptoms, I attended at Camberwell, with Mr. Lacey, but here the young man had been very dissipated, and had much mental depression, so that his previous condition may have had much to do with the result. The matter expectorated in this case was so offensive that the house was scarcely bearable, and suggested gangrene of the lungs, but of this there were no physical signs.

A lady at Croydon, after having a severe illness of a similar character to those mentioned above, suffered some time with stomatitis and bronchitis, and then gradually recovered.

I have within the last few days seen a sixth case at Rotherhithe for the second time. A young woman was taken suddenly ill with rigors, and in a few days was in an extremely critical condition. She had the same follicular stomatitis as in the other cases, the mucous membrane being of a deep red colour, and covered with white spots and patches of secretiou. It was so painful that she could scarcely swallow; at the same time there was very frequent vomiting and much diarrhœa. After being very depressed for some days, and giving her friends and the Medical man much anxiety about the result, she slowly began to improve.

If one had witnessed but a single instance of this kind, the disease might have been attributed to some special exciting or individual causes; but when half-a-dozen cases of a malady come before the same Practitioner, and present the same symptoms, he cannot but regard them as examples of a particular type of disease. I believe, therefore, that I am witnessing a malady which cannot be referred to any one name in the category of disease. It has points of affinity with diphtheria; and, indeed, if the latter term can be used in a larger sense than that which implies the presence of a membrane, it is possible that very similar causes may be in operation for the production of the two diseases. I have used, as a conventional expression, the term "gastro-enterite" on the supposition that the whole mucous membrane of the alimentary canal was in a state of morbid action. This French expression I have never before adopted except in the case of children, in whom it is a convenient one; and, in speaking of children, I think I cannot do better than explain the form of

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malady to which I wish to draw attention than by saying it almost exactly resembles that which Medical men are in the habit of witnessing in infants, but transferred to adults. I refer to the very common cases of infants who from error in diet or unknown causes, rapidly fall away in flesh, have vomiting, purging, and an aphthous state of mouth. In such cases, the nurse's opinion that the thrush has gone "through them" is not altogether erroneous, for I have seen the stomach and intestines show evident signs of morbid action, and the œsophagus covered with an adherent white secretion like that of the mouth, and corresponding very closely to a plate given in Cruvelhier's "Morbid Anatomy" under the head "Muguet."

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(Continued from page 118.)

Case 9.—Ovarian Cyst, never Tapped—Ovariotomy—Pelvic Abscess Tapped per Vaginum—Recovery.

A married woman, 41 years of age, applied to Mr. Wells on June 16, suffering from ovarian disease. She had been married fifteen years, and was the mother of four children, the youngest of whom was 3 years old. She had miscarried a year before the birth of her youngest child.

She was of dark complexion, wiry looking, but little emaciated. The temperature was normal; there was no œdema nor varicose veins. The breasts were very flaccid. The abdomen was filled with a fluctuating tumour, which reached as high as two inches below the sternum. The abdominal parietes were rather thick, were deeply marked with lineæ albicantes, but contained no varicose veins. No crepitus was to be heard or felt, nor was there any bruit distinguishable. The girth at the umbilical level was 39 inches, the distance from the umbilicus to the ensiform cartilage 8 inches, to the pubic symphisis 9½ inches, and to either ilium 10⅛ inches. There were no adhesions to be made out. Both loins were dull on percussion. The uterus was central, and moved freely. The tumour was not to be felt per vaginam. The catamenia had continued regular since the 17th year; they had last appeared a week previously. There was no history of excess nor deficiency of menstrual discharge, but leucorrhœa was constant. The urine was normal. There were no bladder symptoms, although these had at one time been so troublesome as to necessitate an abdominal belt. The other organs were perfectly healthy.

There was no well-marked hereditary disposition to disease, although consumption had carried off the patient's father. The patient had always been strong, except eight years previously when she was laid up with rheumatic fever. Four years before she applied to Mr. Wells she thought she became pregnant. The abdomen increased in size with about the same rapidity as a pregnant uterus; but at the end of nine months the patient, instead of being confined, was told by Dr. Cholmely that she had an ovarian tumour. For two years the size of the tumour was stationary, but then it again increased, and was still increasing, and the patient was easily fatigued and was very anxious to get rid of her burden.

Mr. Wells's diagnosis was—"Ovarian cyst, free but flaccid. No pelvic attachments." Owing to the flaccidity of the cyst and the thickness of the abdominal parietes, he did not feel certain as to the presence or absence of adhesions; but the history was against them. He put before the patient the relative merits of tapping and ovariotomy, and advised her to take time for consideration. The result was that she was admitted to the Hospital for ovariotomy on July 16, 1865, and Mr. Wells performed the operation on the 19th, Dr. Gordon, of Dublin, and Dr. Vedeler, of Christiana, being among the visitors.

A 5-inch incision was carried downwards from midway between the umbilicus and the pubic symphisis. There were no adhesions. The cyst was tapped, emptied of some greenish fluid, and withdrawn. The pedicle sprang from the left side of the womb. It was as thick as two fingers, and two to three inches long. It was secured in a medium sized clamp, and, this not quite stopping the oozing, the pedicle was transfixed beneath the clamp and tied doubly, the ends of the ligature being fixed to the clamp, and the whole kept outside without causing any traction. The uterus was large. The right ovary was healthy, but contained two or three large Graafian follicles ready to burst and the scar of one recently burst. The wound was closed with deep and superficial silk sutures.

The patient rallied well, and required three doses of laudanum. She passed a good night. Next morning the pulse was 104; it rose to 112, and at night was 116. Early on the second morning uterine epistaxis came on, and at 10 a.m. the pulse was only 96. Mr. Wells removed three of the stitches which threatened to cut, and next morning removed the rest of them. On the eighth day the clamp was found loose in the dressing. The general condition was excellent. A little pus oozed from two of the stitch points. The sloughing end of the pedicle could scarcely be seen at the lower angle of the womb. The patient passed a restless night, and on the morning of the ninth day was not quite so well. This was explained by a small collection of pus in the track of the lowest suture. Some hard fœces which were felt in the rectum were washed out. During the next six days, the condition improved, although there was a good deal of purulent discharge from the wound. The bowels acted daily, but the tongue was red, and there were free perspirations at night. This state continued with little variation till the nineteenth day, when Mr. Wells found her looking ill. She had lost her appetite, and was suffering from mucous diarrhœa. The wound was healed. Examining by the vagina, he felt a tense, projecting swelling behind the uterus; and, guiding a trochar by one finger in the vagina and another in the rectum, he passed it through the posterior wall of the vagina, and evacuated three ounces of pus which was not fœtid. An elastic catheter was passed through the canula, and the canula having been withdrawn, the catheter was fixed in order to drain the abscess. The patient at once began to improve.

Next day, the catheter being choked by thick pus, Mr. Wells adapted a syringe to it, and drew out two ounces of fœtid pus. A good deal had oozed away during the night. On the following day more pus was removed by the syringe, and on the next (the twenty-second day after operation) the catheter was found loose in the vagina. There was no discharge, and, as the patient felt quite well, Mr. Wells did not replace the catheter, although there was some soft, putty-like swelling in the recto-vaginal septum. During the next week this disappeared, the patient became quite convalescent, and left the Hospital on August 15, four weeks after operation. She went to the sea-side, and has since been heard of as quite well.

With regard to the occurrence of pelvic abscess in this case, Mr. Wells remarked that, owing to the crowding of the Hospital, he had to change the ward in which this patient was on the seventh day after operation, and again on the ninth; that on the seventh, eighth, and ninth she was in a small ward with two other patients, and for several days after the ninth in a ward with another patient in whom peritonitis came on after ovariotomy. Mr. Wells said he believed both the women suffered from the want of a separate room. He had long insisted upon the necessity of keeping every patient after ovariotomy for several days in a separate room; but it was not always possible to obtain such accommodation in Hospital practice.

Case 10.—Ovarian Cyst, containing Seventy-five Pints of Fluid—Four Tappings—Ovariotomy—Peritonitis—Death on the Ninth Day.

In June last Mr. Crowther, of Rotherham, wrote to Mr. Wells, asking for the admission of a patient whom he (Mr. Crowther) believed to be a fit subject for ovariotomy, and she was admitted early in July. She was 55 years of age, had been married thirty-one years, and had nine children, the youngest being 16 years old. She had never miscarried. She was thin, but wiry, and was of dark complexion. The temperature of the surface was normal, the veins in the legs were slightly varicose, and the feet swelled occasionally after long standing. The breasts were flaccid; the mammary areolæ not injected. The abdomen was occupied by a tumour, which, filling the hypogastrium, reached upwards to within three inches of the ensiform process. Fluctuation was very distinct, but the impression given to the hand was that of a very flaccid cyst half full of watery fluid. Little secondary cysts, none larger than small apples, were easily to be isolated between the finger and thumb. The uterus was rather high, but freely moveable; the cervix showed traces of past labours. No tumour was to be felt per vaginam. The catamenia, which had commenced at the age of 14, had

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no human being is utterly destitute—been awakened by the teachings of religion.

Dr. Bucknill, whilst he throws any suspicion of insanity in the case to the winds, yet thinks "that owing to the peculiarities of her constitution it is probable that under prolonged solitary confinement she would become insane." He goes on to say that "the validity of this opinion is of importance now that the sentence of death has been commuted to penal servitude for life; for no one could desire that the punishment of the criminal should be so carried out as to cause danger of a further and greater punishment not contemplated by law." We are quite ready to concede to Dr. Bucknill that Miss Constance Kent's history shows that she has "a peculiarity of disposition" which seems to us, however, to be peculiar only in strength of will and depravity; but that, because her early girlhood was blackened by a great crime, conspicuous for the coolness, determination, and circumspection with which it was executed, she is more likely to go mad than other criminals, we do not see. We sincerely hope that the accounts we have heard of Constance Kent's penitence may be true, but we should be sorry to see her let loose on society on the ground that insanity might be produced by prolonged confinement. There is really but one party to be considered in the matter. Public safety and public justice require that such criminals as Miss Kent should not only be punished, but restrained from committing further crimes. Although in the course of their punishment insanity should arise, the infliction of a just sentence is not to be suspended or relaxed on such a possibility. We may also remind Dr. Bucknill that penal servitude and solitary confinement for life are by no means one and the same thing.

ROUGH NOTES ON SYPHILIS.—No. VI.

THE MERCURIAL TREATMENT.

If the writer gently stepped into the stream of controversy, and gave his body to the prevailing tide, it is very likely he would find himself landed among those who condemn such a treatment altogether. With Dr. Drysdale's book menacing him, and warning us against the mineral as against an evil spirit more potent for harm than that old enemy, syphilis itself; with Professor Boëck in the field, too, armed with a weapon of such power as the process of syphilisation is said to be, one may well have misgivings in writing on the mercurial treatment of syphilis. Still, the writer feels that, however much the present tendency may be to restrict the use of mercury, it is not yet doomed to a perpetual banishment. This agent has suffered, perhaps, as much from the exaggerated encomiums of its friends as from the onslaughts of its enemies.

Mercury does not *prevent* the subsequent progress of the disease.(a) It occasionally postpones the appearance of certain manifestations. The writer thinks that it often modifies and disturbs the ordinary evolution of the symptoms. The secondary manifestations may not be so marked or so severe, but the anæmia and impairment of health may be quite as evident as if no mercurial treatment had been pursued.

His own experience is, that mercury is the only agent (although it often fails in this) which exerts any action over the absorption and dissipation of indurations, and that a chancre will sometimes heal rapidly after its use, when it has been unaffected by other remedies. It appears to him that we are bound to try to prevent a patient's going about with a disease, the secretions of which are unquestionably capable of giving the like to another. In the primary manifestations, the greater his experience becomes, however, the more does he temporise, the more does he postpone the use of mercury, and administer it tentatively.

The indications to be followed are drawn from the character and state of the disease, and the appearance and history of the subject of it.

1. In all *doubtful* cases it is withheld; in *mixed* cases also, or where any suppuration of the groin ensues, whether as part of another and conjoined disease (soft sores or gonorrhœa), or as an accidental complication of the infecting sore.

2. The condition and indolence of the chancre, etc. Where the induration is moderate in chancre and glands, and shows a tendency to be dissipated in time by other remedies, or, at any rate, when the induration ceases to increase, the writer defers the use of mercury until the form and nature of the "secondaries" manifest themselves.

3. In no case where sloughing appears, or rapid and unhealthy ulcerative action ensues in the indurated parts, does he use it, or continue it if already commenced. There are, however, indolent forms of ulceration which are benefited by the local application of calomel vapour, and when these are present, the remedy is used tentatively.

These cases *generally* denote a severe form of the subsequent manifestations—whether the unhealthy action arises from the idiosyncracy of the patient, the specific action of the virus, or the improper use of mercury. The sloughing or ulceration is often limited to the immediate neighbourhood of the "ball" of induration; but in some very rare cases the primary lesion undoubtedly commences with phagedena, or sloughing, without any preliminary induration. These complications, however, are neither so common, nor do they generally spread so much in the true syphilitic sore as in the local soft affection. It follows, therefore, that unless the induration of the chancre be considerable in amount, dense in quality, and chronic in character the writer does not use mercury.

Considerations drawn from the individual:—

1. In all cases we examine into a man's aspect, strength, temperament, past and present Medical history, and modify the treatment—and the administration of the mineral or not—accordingly.

And here the writer desires to speak, with as much emphasis as he can, of the impression left on his mind from a close observation of the aspect and health of the subjects of syphilitic disease.

The appearance of these patients is eminently suggestive of the blood-impoverishing nature of the complaint; and this appearance often begins to be evidenced, within a month or five weeks from the date of the primary lesion, in the chloro-anæmic aspect of the patient. As the disease progresses, the muscular debility and emaciation become more apparent; but the pallor is replaced by muddiness or sallowness of complexion, and the state of the hair, lymphatic glands, throat, mucous membranes, and skin generally afford sufficient indications of the cause and nature of the cachectic aspect.

In the employment of mercury too much attention cannot be given to

HYGIENE.

1. The patient should be warmly clad, live upon a good but plain diet, take a fair amount of exercise in the open air, use warm baths occasionally, and avoid stimulants unless specially indicated.

2. It is neither necessary nor desirable to depress the system for the cure of syphilis. The disease, in itself, tends directly to induce a chloro-anæmic state, and it too often happens that the sufferers from it are the subjects of some debilitating conditions—congenital or acquired. In all cases it is essential to elevate the general health to a normal standard, and we endeavour to modify our treatment so as to meet the exigencies of the case. As in other diseases, individual cases will almost always present a physiognomy of their own.

(a) The rare instances to the contrary cannot be relied upon, for some secondary phenomena may have appeared, though not observed. The negative evidence is as nothing when contrasted with the amount of positive proof to the contrary. If the chancre be situated upon the external skin of the penis, or at a part where it can be cut out, it is well to do so, particularly if the lesion is not indurated, and the inguinal glands or the dorsal lymphatics of the penis are unaffected. We have obviously no means of determining at an early date whether a given lesion be of the infecting or non-infecting type. As the progress of the latter can be arrested by caustics, and as the destruction of the former at the earliest stages *may* prevent or modify the subsequent manifestations, the rule of destroying all the earlier lesions is a good one.

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Not only is there no reason against, but every reason for, giving steel, quinine, vegetable bitters, or cod-liver oil, as circumstances require, at the same time that we apply a specific remedy. Of late we have been in the habit of using some of the above in the treatment of all cases, and we generally advise our convalescents to take a run to the seaside. Sometimes, there is little desire on the part of the patient to further the Surgeon's efforts. The convalescent from syphilis no sooner leaves Hospital, than he plunges into all kinds of dissipation again, and all is undone, what it has taken so much care and attention to accomplish.

For the primary and consecutive stages of syphilis, when mercury is used, it is applied by us through the skin—by mercurial inunction or the moist calomel vapour bath.

In the primary stages we generally endeavour to procure absorption of the mineral through the diseased parts—chancre and glands—blistering them first or not.

Some of the worst cases are those in which the system becomes speedily affected with mercury, and a rapid ulcerative action sets in about the induration of the chancre.

A rapid mercurial effect seems almost invariably to act injuriously; whether this results from the idiosyncrasy of the patient, or the plan of using the mineral.

If the patient's strength seems to be at all impaired during the mercurial course, we allow him a good meat diet, with steel or some preparation of quinine, etc. A combination of nitro-muriatic acid, calumba, and the muriated tincture of iron is a capital one.

We invariably attempt to affect the system very slowly, and remit for a time, or diminish the amount of the mineral used, as soon as that effect has been obtained. So far from endeavouring to induce salivation, we try to avert it; in fact, the syphilitic manifestations very often disappear without there being any evidence of its physiological action, and we always aim at affecting the disease, and not the system.

We never employ mercury for the lengthened periods mentioned by some authors—M. Ricord among them; but we think that some evidence of its physiological action is required, in many cases, to ensure its full therapeutic influence.

Constitutional Manifestations.—It is for the so-called constitutional manifestations that the use of mercury has been attended with such *marked* benefit, according to our observation and experience. These have left a strong impression on the mind that, with all its drawbacks, there is no other remedy to compare with mercury for the treatment of syphilis. Still, the writer does not think that its exhibition is at all essential to all cases, and it certainly is not alike beneficial in all stages and forms.

For the earlier and slighter manifestations—such as the roseoloid and erythematous eruptions, with slight congestion of the throat, slight degree of anæmia, and when the induration in chancre or cicatrix is small, and the engorgement of the cervical glands trifling, we may abstain from mercury, and watch the process, particularly if the exanthem be a diffused mottling only, and slight febrile symptoms—of a mild remittent type—attend its appearance.

In the case of soldiers, who are not so anxious to be promised a permanent cure, and whose subsequent history must be well known to the Medical officers, the writer would be inclined to delay the use of mercury until he found the disease intractable from frequent relapses, or its manifestations became more severe or chronic.

The scaly and chronic papular (lichenous) syphilides, with iritis or not, and connected with a syphilitic cachexia, are the cases which yield most readily to the endermic use of mercury; and the best and most permanent cures, within the writer's own experience, have been in these kind of cases. Syphilitic disease of the testicle, again, is best treated by mercury.

He has witnessed *very many times* remarkable recoveries by mercury, where the disease has been of long standing and the patient has been subjected to all other kinds of remedies beforehand. Some of these patients are married and have healthy offspring.

For the cutaneous syphilides of the pustular, ecthymathous, and rupial forms (whether they appear as late secondary, or, more commonly, as tertiary phenomena), his experience is in accord with the general belief, viz., that mercury is prejudicial, although not invariably so. At any rate, in these cases, and in those manifestations accompanied by cachectic states of the system, he employs mercury with extreme caution.

For the severer types of the disease affecting very cachectic subjects, the results obtained by mercury or iodide of potass are often very unsatisfactory, leaving the patient, perhaps, without the external manifestations, but still uncured of the disease and prone to relapses. In many cases the syphilitic is conjoined with some other constitutional taint—hereditary or acquired—and mercury may be inapplicable for various reasons.

The writer's experience leads him to think much more highly of large doses (gr. x.—xxx.) of iodide of potass. in the tertiary manifestations, and in the symptoms referable to syphilitic disease of internal organs, than of mercury. He should not venture upon its use in such cases until after other remedies had failed.

The writer may here mention a statement which was once made to him by an Army Surgeon, and it is this:—"Some years ago, the soldiers of his regiment always credited the secondary manifestations to the mercury used, and they were very unwilling to take it. They compared notes one with another, and found that 'secondaries' more frequently followed the mercurial treatment, because it was, in fact, commonly restricted to the truly infecting form. Now he always tells the men whether they will have subsequent symptoms or not, and they are perfectly familiar with the main characteristics of the true syphilitic sore, and no longer ascribe every subsequent manifestation to the mercury used."

THE WEEK.

THE EPIDEMIC OF CRIME.—THE HOLBORN MURDERS—THE ROAD MURDER.

THE daily papers have lately been recording the particulars of from one to six murders a day. If Mr. Buckle's doctrine of the equal averages of crime in different periods—allowance being made for the increase of population—be true, such an outbreak as the present ought to have been preceded, or to be followed, by a perfect calm in the moral atmosphere—a complete cessation from outrage. We, however, have no belief in averages of morality, or percentages of vice. We see that crimes of the darkest character—murder, suicide, and infanticide—are on the increase in this country, and we must look at home to find the causes. We believe that one of the principal of these is the publicity which the cheap press of the day gives to every crime wheresoever committed. Man is so imitative an animal, and so strangely prone to evil, that the very reading or hearing of an act of violence may suggest the temptation to its committal. Formerly a great crime was known but to a few—the persons immediately connected with the criminal and his victim, and the frequenters of prisons and assize courts. Now a crime committed in Gateshead or Glasgow is studied and criticised in every court, alley, and public-house in London, and in every farmhouse and cottage in the country to which a weekly paper penetrates. We look upon this as a great evil. Men and women are bad enough naturally, without examples and suggestions to evil being supplied to them as their chief intellectual food. The education given to the poor is good enough to furnish them the means of imbibing the poison, but it is not good enough to enable them to resist it. A low secular education, with but little moral and religious training, and a penny newspaper press which panders to the love of the horrible, are an excellent receipt for popular demoralisation.

The coroner's jury have returned a verdict of guilty against

the man Southey, or Forward, for the murder of the three children in Red Lion-street, Holborn, whilst he awaits at Sandwich his trial for the murder of his wife and daughter at Ramsgate. His written confession and the evidence given as to his identity were sufficient to warrant the Holborn jury in their verdict; but had no such evidence been procurable, it is not improbable that there might have been a miscarriage of justice. Before the conclusion of the London inquiry the coroner at Ramsgate had finished his inquest and committed the prisoner to gaol on a charge of murder. No power but an Act of Parliament could order his removal from thence, and if the identification of the prisoner by the London jury had depended upon his being produced before them, the course of justice might at least have been impeded. The proper course would have been for the Ramsgate Coroner to have adjourned his inquest until the man had been examined in London. Whilst on this subject, we would express our warm approval, which we believe must be shared by every one who has read the evidence, of the manner in which the Medico-legal investigation was carried out in the case of the three children by Professor Harley, of University College. We are glad his evidence met with a due appreciation, for, in recording their verdict, the jury thanked the Coroner "for affording them the opportunity of hearing such able Medical testimony as was brought before them."

We have received an appeal from a committee of gentlemen at Isleworth in behalf of the nursemaid in Mr. Kent's family, Elizabeth Gough, who was subjected to such cruel suspicion at the time of the murder at Road. We hope that the public, especially that large section who believed the poor girl guilty, will now come forward and make her some compensation for the five years of trial she has undergone. Mr. Horatio G. Day, M.R.C.S., of Isleworth, is treasurer to the committee, of which Mr. J. W. Stapleton, Surgeon, of Trowbridge, is a member.

FROM ABROAD.—OVARIOTOMY IN FRANCE—L'HOMME SAUVAGE DU VAR—THE PARIS SOCIETY FOR THE PROTECTION OF INFANTS.

If ovariotomy does not gain a firm footing in France it will be no fault of M. Kœberlé, who is continually adding to his number of successful cases. In a note accompanying a new memoir which he has just presented to the Academie des Sciences, he says:—"Between May, 1864, and June, 1865, I have performed six new operations, four of which have been attended with success. Three of the latter presented very grave complications, and two of the number underwent extirpation of both ovaries. One of the two fatal results was induced by septicæmia consequent on the escape of the ligature from one of the two ovaries, which were simultaneously removed. The other patient had a multilocular cyst 40 kilogrammes in weight complicated with a very considerable œdema of the walls of the abdomen, which proved the occasional cause of death. In my eighteen operations, then, I have had thirteen recoveries and five deaths. Ovariotomy is an operation of common occurrence in England, where MM. Wells, Keith, Clay, etc., have obtained magnificent results from its very extensive employment; while with ourselves it is still systematically rejected, patients suffering from ovarian cysts being generally submitted to treatment of no utility, to punctures as dangerous, if not more so, than ovariotomy. The fortunate results which I have obtained prove that ovariotomy may be practised with success in France as well as in England, and that this operation, performed under favourable conditions, and before the disease of the patient has become too aggravated, is infinitely less fatal than it has been represented to be."

The Academy receives this kind of communication much more complacently than it did some time since, when M. Velpeau brought forward his celebrated explanation of the success of the operation in the superior hardiness and endurance of the "chair Anglaise," and treated with ridicule the idea of the refined and susceptible "Francaise" ever surviving such mutilation. We need not say much, however, for never did operation meet with more opponents than did this in our own country; and it is a notable instance of what individual perseverance may do in forcing benefits on unwilling recipients. On the present occasion, one of the most celebrated *savants* of the Academy, M. Thénard, gave a graphic and almost dramatic account of the results, marvellous in their rapidity and completeness, which were presented in the case of one of M. Kœberlé's patients, who happened to be a relative of his own.

It is surprising what trifling matters will sometimes engage the attention of so grave a body as the Academy of Medicine. We now find it—as a relief, we suppose, to a most prolix discussion on the best mode of performing thoracentesis—listening to a grave report, by M. Cerise, upon the mental peculiarities of an eccentric vagabond, who chooses to live in a wood, and term himself "l'homme sauvage du Var." History is raked up in vain for specimens of true wild men, and the sickly vagaries and speculations of Rousseau are thought still worth adverting to; and then some of the peculiarities of this new wild man are dwelt upon, and his mental condition is lucidly described as "an exceptional mental type, oscillating between insanity, utopia, and eccentricity." Laurent, as he is called, is 39 years of age, and has led a solitary life for six years, and, of all wild men, he is surely the most respectable, fully participating in the advantages of the present century; for we find that he reads letters which are sent to him, that he is scrupulous in "fulfilling his electoral duty, in order to choose him who may render the world happy;" and, in fine, that "this savage is a man who has sought and found his happiness in the practice of an utopia, termed by himself 'the life of nature,'—a modest and remarkable example of the power of an idea over the organism." We have a shrewd suspicion that there are greater *bêtes* in this world than the "sauvage du Var."

By the exertions of its honorary secretary, Dr. Alex. Mayer, the Paris Society for the Protection of Infants seems fairly set afloat. It will be supported entirely by voluntary subscriptions; and any of our readers who may wish to assist in the experiment about to be tried may forward contributions to Noirot's Library, 13, Rue des Saints Pères. The following is a statement of the objects of the Society:—1, to preserve infants of a tender age from the danger of consigning them to nurses at a distance, over whom the parents can exercise no effectual surveillance; and 2, to put into practice all those hygienic resources suitable to the physical development of children before submitting them to mental culture. The Society will avail itself to this end of all means approved of by experience, but it at present desires especially to encourage the foundation, through the agency of private enterprise, of *maternal colonies* in the vicinity of the great towns of France, in which selected nurses shall be maintained, to distribute prizes to those nurses who best fulfil their duties, to propagate the methods of physical education the best suited to strengthen body and mind, and to publish a *bulletin* in which all matters bearing upon the objects of the Society will be treated. The Society is to be composed of persons of both sexes, ladies being eligible for all offices. Members residing within the limits of the Department of the Seine will pay a subscription of ten francs annually, while those who live beyond this limit will pay six francs.

OVARIOTOMY IN ITALY.—*L'Imparziale*, of Florence, observes that, "until quite lately, ovariotomy has not found partizans in Italy; and performed, as far as we are aware, but once, it was then followed by death. We are, therefore, glad to be able to announce that this formidable operation has just been executed with complete success by Professor Giovanni Bezzi, head of the Modena Surgical Clinic."

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THE MEDICAL TIMES & GAZETTE SPECIAL REPORT ON THE EPIDEMIC OF CHOLERA: WITH A PRACTICAL HISTORY OF THE DISEASE.

CHAPTER I.

Summary of the Present Epidemic.

We have not been hasty in this Journal in taking up what, in all conversations and in all societies, is now called the subject of the day—Cholera. It was, we felt, correct that we, having some authority on a matter purely Medical, should wait until there was reason, and safe reason, for making a definite sign. The disease, as first announced by our daily contemporaries, might, after all, be an endemic visitation so common in the East; it might turn out to be exaggerated in description, or even to be unintentionally misrepresented; indeed, certain of the first accounts of the epidemic were so vague that it was impossible to rely on them as scientific records, least of all to accept them as prophetical of danger to England. Watching thus the course of events almost silently, anxious to speak on the one hand, and determined to be guiltless of exciting panic on the other hand, we have held back utterance until we find that a time has come when to be silent longer would be equivalent to neglect. We have determined, therefore, now to take up the discussion of the choleraic epidemic in full, aiming to supply such information as is strictly reliable relative to the present epidemic, culling from the experience of the past every fact that shall throw light on the origin, the course, the prevention, and the treatment of the malady, and endeavouring to make a history that shall be useful as a reference for the future.

Origin of Present Outbreak.—*The theory of the pilgrim origin of the disease—Indian experiences: Cholera among the pilgrims of Juggernaut—The pilgrim festival of Kurban Bäiram at Mecca in the present year—Similar origin of the disease in armies.*

The present epidemic, in respect to its origin, presents nothing new in the history of cholera. It connects itself once again, or at least it seems to connect itself, with the aggregation under unfavourable circumstances of immense multitudes of unclean men. A holy pilgrimage of the true Mahometan type on this occasion seems to have been the centre from which the disease has radiated. Some of our contemporaries have conceived that such origin is unique, and various hypotheses have been raised on this supposed new fact. Fortunately for labourers in science, they have no occasion to trouble themselves with speculations of a novel kind resting on the Mussulman pilgrimage and its results. The fact has been observed before, perhaps in regard to Mussulman pilgrims, and certainly in respect to the worshippers of Juggernaut. In the year 1858 the native Medical subordinate of the Madras Medical establishment, Dr. W. Vencataswamy Naidoo, published a special letter bearing upon the causes which gave rise to cholera amongst the pilgrims of Juggernaut. In that very interesting communication, the more valuable as coming from a native of India, the author describes the sort and quality of the food upon which the pilgrims subsist. He states that these foods are prepared exclusively by the priests in the temples, and he describes the mode of preparation. The description is almost loathsome; the food is acrid, oily, and often putrid, the drink sour, and the price of food and drink excessive. "Pilgrims," he says, "thus fed, undergoing every fatigue and toil of long journeys with privation of food and rest, arrive at their tabernacle half starved or much exhausted, and have a small enclosed room pointed out by the pundahs for the accommodation of twenty or thirty persons; as soon as they have their baggage secured, they repair to the temple, washing themselves in different stinking ponds, and wearing wet or silk clothes (as an undefiled dress), visit the image, eat the various sorts of food with eagerness, taking no notice whatever of its condition, taste, or quality, under a well-impressed idea that such observation would be an act of blasphemy, drink a jumboo-full of very sour, rancid tyre, and feel themselves refreshed and very much satisfied for the first day; but from the second or third day the causes of diarrhœa, or of cholera—viz., sudden transition from heat to cold, aliment of indigestible character, acrid food or acid drinks, oily and putrid substances, and want of free ventilation and drainage—soon operate upon the supposed repenters of sin.

The streets and houses are impregnated with noxious exhalations emanated from the decomposition of the excrementitious and urinous deposits with which the streets and alleys, fields and plains, are filled during the assemblage of people in great numbers, as well as from the dead bodies thrown out in the fields and in the towns.

Cholera having thus originated, great alarm and despair are produced among the pilgrims, and the fright and despondency on one hand, and their longings for home, relations, or friends on the other, act conjointly as depressing agents, rendering their system more favourable to the action of the causes of cholera. The ravages made by this disease annually are very lamentable, and most pitiable is it to observe the annual scene at Juggernaut resulting from deaths in vast numbers, making children motherless or fatherless, or altogether orphans, women as widows, men as widowers, and afflicting others with the loss of brothers, sisters, and friends."

The earliest reliable description of the present epidemic of cholera came to us by one of Reuter's telegrams, copied from the *Triester Zeitung* of June 26 of the present year. Previously, that which had come to us was mere rumour; but here there was something definite. Cholera was reported as prevailing at Alexandria to a considerable extent, the disease being fatal in the majority of cases. We know now pretty surely that the telegraphic report was true, and that the first case of cholera in Alexandria appeared on May 11, in the north western suburb, near the railway-station. This suburb is one of the lowest in the place, and is inhabited by upwards of 20,000 of the lowest class of Arabs, Greeks, and Maltese. It is worthy of remark that the epidemic appeared to radiate from one provisional case. In the first two or three days from 3 to 4 persons succumbed, then from 8 to 10; in the beginning of June 30 deaths were reported in one day; on the 17th, 61; and on the 25th, 183. At this time the sanitary condition of the town was infamous; and the water supply, derived from the Nile canal, was said to be charged in its course with decomposing matter derived from the carcases of 700 animals lying in the canal.

While all accounts appear to point out that the disease radiated in Alexandria from what we have called a provisional case, the evidence does not seem in favour of the view that the disorder had its origin spontaneously in the town. On the contrary, the evidence since elicited shows that the disorder was imported from Mecca, and that it actually was developed at the festival of the *Kurban Bäiram*. This festival extends from the first to the twentieth day of May, and as many as 700,000 pilgrims gather together in Mecca and on the hill of Arafat hard by. Arafat, to the eye of the Mussulman, is full of romance of the most tender kind, it being the spot where the first and most ancient of lovers—none other than the venerable Adam and Eve—met and, we supposed, embraced after they had been separated 200 years for their primæval sin. The Mahometan pilgrim considers all his previous labours incomplete, whatever he may have done, until he has ascended the hill and celebrated his pilgrimage

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there; indeed, he is not entitled to the name of pilgrim until after this auspicious event.

Seven hundred thousand pilgrims, then, met at this holy place in the first part of May of the present year. They came badly clothed, badly fed, many exhausted, and all fanatically ecstatic. To them death had no terrors and this common earth no future. To die was to enter Paradise the earlier; the transition from life to death a mere dream, the prevention of death a curse rather than a blessing, and pain even an ecstacy. In years past this vast multitude has never assembled without being subjected to the ravages of some disease. How could such a catastrophe be avoided? They come together unprepared for all the exigencies and necessities of life. They have no encampment worthy of consideration, no sufficiency of food, no sufficiency of water, no latrine, no drain, no one ready or willing to bury their dead, no fixed object that can be called mundane. Into such a host as this cast a speck of disease producing matter that will reproduce disease, and the passively unwholesome living mass becomes actively poisonous. Stripped of its robes of flesh, it may enter Paradise pure; on earth it is a damnable heaving heap of pestiferous rot. Unfortunately, too, it is a moveable pest, for of the hundreds of thousands attacked few after all reach the goal they long for. Despite fanatical hope, the majority remain tied to the earth, and these, when the great celebration is over, dragging vast miles homeward as immortalised *Haji*, before whom common mortals must uncover, carry with them the germs of disease, and disseminate it wherever they go.

Sometimes the diseases thus generated are comparatively harmless; this year the great malady was what the Turkish Government chooses to call cholerina,—in plain terms, true cholera. The accounts that reach us state that the terrible drama made no extraordinary impression upon the pilgrims, and that Medical aid for them there was none.

We have referred at some length to this origin of the present epidemic, because the narrative goes to show that the disease in question may, under extreme conditions, have what is called a spontaneous origin. It is not to be imagined, however, that the malady sprung up in any one individual by some perverse act of the economy without external aid, or through some unknown atmospheric condition equally mysterious. Not at all; there was formed unquestionably, if not imported, a poison derived from the decomposing excreta of that multitude, which, imbibed by one or more, went on progressing until the epidemic was established.

Quite independently of pilgrimages, the same series of events have occurred among other bodies of men. In his report of the sickness and mortality in the French army during the campaign in Turkey and the Crimea in 1854 and 1856, Dr. Milroy describes very clearly an origin of choleraic attacks under circumstances extremely similar. Thus, immediately after the battle of the Alma, owing, it is believed, to the armies halting for two days on the field where hundreds of putrid carcases of horses were scattered about, and the surface of the ground was polluted with ordure from its occupation by the Russians, cholera, which had previously been in abeyance, increased with great rapidity, the troops being greatly fatigued, the food indifferent, and the water scanty.

To return to the present epidemic, from Alexandria it seems to have spread to Cairo. On July 5 it was announced that 118 deaths were due to the disease, 107 of them being children, while in Cairo the epidemic was stationary. On the 12th the deaths in Alexandria had fallen to 55 in the day, and the disease was declining in Cairo and the surrounding villages.

It is worthy of remark that during the course of the epidemic in Alexandria, the city was visited by a violent wind storm from the south called a "chamsin." This wind began to blow on June 24, and continued until July 6. It is said to be extremely oppressive in its character, and it was believed to intensify the epidemic. Thus, on the first day after the occurrence of this wind the mortality rose from 183 to 193, on the next day to 208, and on the next to 214; then it began to fall day by day as follows,—from 214 to 209, from 209 to 197, and from 197 to 196; then there was a sudden rise to 228, with a fall next day to 176, and on the following day to 118; rising once more—viz., on June 6, to 132, and on the following day, being the last of the wind, to 142. The reader will see from these figures that, however striking the view might appear to an Alexandrian that this depressing south wind has to do with the fluctuations of the disease, it is not a view which is very tenable. It is an almost common error into which people who live on the site of an epidemic fall, to connect any and every atmospheric phenomenon with the prevailing disorder. Too often, however, such supposed connexion is mythical; and that it was mythical in the present instance is, we think, proved not only by the figures, but by the further intelligence which the telegraphic despatch of July 8 brought to us. Sufficient was stated to indicate that causes essentially local were at work to account for all that was observed, independently of this particular southern wind. It was found that the disease made little way in the European portions of the town, and that the better class Europeans escaped almost altogether. The malady spread amongst the Arabs, who dwelt, we are told, in dwellings of the most loathsome character, which were shared equally by man and beast. At the same time, the food of these people was deficient in quantity and bad in quality; while, owing to the excessive heat and the low state of the river Nile, the water they had to drink was actually putrid. These terrible evils were greatly exaggerated by personal uncleanliness and by superstitious indifference to disease and even to death. Lastly, the independent nature of the disease, apart from the idea of the south wind, is proved by the circumstance that the disorder, attacking scarcely at all the European portions of the town, spread with great rapidity in the native village of the Delta and in the towns of Tanta, Dhamanhur, Mansura, and Zagazie. Of course, the south wind would affect all alike, European and native; but the one class escaped while the other suffered.

For some days it was hoped that the disease was localised at Alexandria and Cairo, but on June 15, or, according to some reports, on the 12th, a few cases occurred at Ancona. Ancona is a sea-port of the Papal States, situated on the Gulf of Venice. It is, and has been for a long time past, the port of the Southern States at which the largest trade is carried on. It is the centre of a province containing 267,122 inhabitants, and itself contains nearly 40,000 inhabitants. Of late years its commercial relations have considerably increased, especially in reference to the exportation of corn. The town itself possesses a fine harbour, and the neighbourhood is usually considered healthy. But the streets of Ancona generally are narrow and close, like those of all towns possessing a great antiquity (and Ancona was a place of importance in the time of Trajan), while the drainage is inefficient.

We have not as yet been able to ascertain how the town is supplied with water; but as all the Italian towns are much alike in this respect, and as no important reform in the water supply has been inaugurated in the Papal States, it is a fair inference that the water is as indifferent as the other hygienic requirements.

From Alexandria, then across the Mediterranean Sea, and up the Gulf of Venice, letting alone Navarino, the Ionian Islands, and Corfu, on the east; and Malta, Syracuse, Reggio, and Cotrone, with many other towns on the west coast, the plague lands at Ancona. Presuming that it started from Mecca; it travelled in a line nearly due north-west between the 20th and 40th deg. north lat. and the 15th to the 40th east long. The question is, Did it travel at all, or were these four spots—Mecca, Cairo, Alexandria, and Ancona—spontaneously affected at nearly the same time with the one disorder? We think the evidence points indubitably to propagation of the disease by

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contagion in the line named. Given an epidemic of the disease amongst the pilgrims of Mecca, the next places of all others most likely to suffer would be Cairo and Alexandria. The disease at Alexandria, the town in the Papal States most exposed would be Ancona, the intercommunication being most perfect. But the epidemic did not confine itself to one line of march. Within two or three days before it was decidedly fixed in Ancona it appeared also in Constantinople, forty-three fatal cases having occurred in that city on July 13. The disorder, thus taking Alexandria as its base, continued a north-westerly course, inclining, however, much more to the north, and leaving Sicily, the Grecian Archipelago, and, indeed, all the ports lying between Constantinople on the east and Ancona on the west, untouched. This, again, is the course we might expect the epidemic to take, granting that the method of propagation was by intercommunication. On this point, in so far as Constantinople is concerned, we are not left in doubt. The disease was brought from Egypt by a frigate loaded with stores, and charged with the infection. Dr. Dickson, of the English Embassy, reported on July 8 that the cholera had appeared outside the walls of the Naval Hospital, "where it was introduced from Egypt by the *Moubir Sourour*." Thence it passed into the Hospital, and on the 12th of the month thirty fatal cases in all had occurred. From the Hospital it spread into the city, and there established, for its temporary reign, it remains up to the present hour.

By these degrees the epidemic became active at three great centres: *at Alexandria*, commanding the whole of the Mediterranean Sea, from Tripoli on the east to Barcelona on the west; *at Ancona*, commanding the Gulf of Venice; *at Constantinople*, commanding the Black Sea. From these centres it has spread again to the points commanded by two of them. It has touched Gibraltar and the little island of Candia from Alexandria; and now from Constantinople it is reported as moving round the shores of the Black Sea, being at Varna on the western and at Trebizond on the south-eastern coast.

So far the limits of the present epidemic are marked out; they extend no further. The disease has in no single case taken an overland route, but has travelled from coast town to coast town as it has been carried. In this history there is nothing new, but everything that is old and, we had almost said, established. Least of all is there anything capricious about the disorder, as some of our unscientific contemporaries are fond to say. Cholera follows the sower of it, as does wheat or other grain; and like wheat or other grain it must be carried on from shore to shore, and being carried must, even when landed and distributed, find a field prepared for it, otherwise it will not grow.

To conclude for this week, the current epidemic tells us, as every preceding epidemic has told us, three demonstrable facts—viz., that for cholera to be diffused over the earth it must have three factors for its cultivation—

1. A centre of pollution for its cradle.
2. A ship for its transport.
3. A number of cities and towns properly prepared for its reception and development.

THE ACTIVE CONSTITUENTS OF ERGOT.—Mr. Wenzell, a chemist, states that he has succeeded in isolating from ergot two vegetable nitrogenised alkaloids, which he terms respectively "ecbolina" and "ergotina." He calculates that half-a-grain of ecbolina produces the same effects as half-a-drachm of the ergot—judging from comparative experiments performed upon himself. It induces a specific action on the spinal column and muscular system, which leaves behind a great amount of debility. Ergotina seems to be less active than its congener, and induces some cerebral excitement. It has been used in several cases of uterine hæmorrhage with satisfactory results, but from the distressing nausea and vomiting, with intense headache, it gave rise to, its employment had to be suspended.—*American Journal Med. Science.*

EXAMINATION AT THE

CLOSE OF THE TENTH SESSION OF THE ARMY MEDICAL SCHOOL, ROYAL VICTORIA HOSPITAL, NETLEY,

BETWEEN JULY 31 AND AUGUST 5, 1865.

A.—WRITTEN QUESTIONS (three hours allowed for each paper).

I. Military Hygiene—Professor E. A. Parkes, M.D., F.R.S. (Monday, July 31.)

1. What amount of sickness does a regiment on home service usually furnish? Supposing this sickness to be in excess, and to be in the form principally of dyspeptic and diarrhœal complaints, with occasional cases of typhoid fever, and that you attribute this to something wrong in the barracks, what points would you particularly investigate, and how would you investigate them?

2. What has been the Medical history of the white troops serving in Jamaica? Supposing the diseases which formerly caused mortality to return, what preventive measures would you adopt?

3. What are the weights carried by the British Infantry soldier? How may these affect his health? What amount of daily exercise ought a healthy adult of the soldier's age to do, and what is the extreme amount of work which he may be called upon to do? What amount and kind of food would you give? (*a*) Under ordinary circumstances? (*b*) When men are undergoing excessive fatigue, as in war?

II. Pathology—Prof. W. Aitken, M.D. (Tuesday, August 1.)

1. Give an account of the appearances seen on examination of the body after death in cases of acute dysentery, and describe how the characters and extent of the lesions may be modified by the influence of certain dietetic causes of ill-health (cachexia). State the place which dysentery holds in the classification of diseases you are directed to follow in the Army Medical Regulations.

2. Describe the anatomical characters of amyloid degeneration, as you have seen this degeneration in the kidney, the liver, and the intestines. Give the composition of the test solution used to determine the presence of the degeneration.

3. Describe the prominent lesions seen at the post-mortem examination of ———, who died July 12, 1865, and whose body was examined on the following day. He had completed ten years of service, and had served in Malta one year, in Bengal eight years, and the remaining period in England. He had suffered from ophthalmia at Malta, from erysipelas and remittent fever in Bengal, followed by ulcers on the legs, for which he was invalided, after suffering from them for five years. These ulcers occasionally healed up.

He was admitted into this Hospital on June 27, 1865, with open ulcers on the lower extremities, and on July 2 (the fifth day after admission) he was seized with shivering. Two days after this shivering he complained of pain on micturition, and great pains referred to the perineum. He passed his urine with difficulty. There was no history of stricture. The urine passed was turbid, and contained both pus and albumen. The symptoms during the termination of the case indicated septicæmia, with evidence of an abscess in the region of the neck of the bladder. The case terminated fatally on July 12, ten days after the shivering.

The points requiring your attention are as follows:—What were the nature and condition of the ulcers? What the condition of the femoral veins; of each kidney; of the bladder and surrounding parts; and of the lungs and pulmonary vessels? And lastly, give an account of the pathology of the case, the probable immediate cause of death, and connect the lesions seen in post-mortem examination with the indication of disease during life.

III. Military Surgery—Prof. T. Longmore, Deputy-Inspector-General (Wednesday, August 2).

1. You are required to record in your Case Book a full report of the case of an invalided soldier who has recovered from a gun-shot wound of the chest. To what circumstances in the history of the case, and to what physical observations of the patient before you, would you chiefly direct your inquiries with a view to determine what the true nature of the injury has been—whether a non-penetrating or penetrating wound of the cavity, and, if the latter, whether accompanied or unaccompanied with a wound of the lung?

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2. Describe and explain the different conditions of vision which follow the use of atropine when employed so as to produce paralysis of the accommodatory function, according as the eyes thus acted upon are emmetropic, myopic, or hypermetropic.

3. To what causes may pyæmia be usually traced when it occurs in field Hospitals, and what precautions should be taken to prevent its occurrence?

IV. Military Medicine—Prof. W. C. Maclean, M.D., Deputy-Inspector-General (August 3).

1. Give the best sketch you can of the influence of military life on the health of the British soldier in India, drawing your illustrations from what you have observed in the Royal Victoria Hospital and gathered from your studies here.

2. Describe the different conditions under which insolation has been observed in India, and the causes which, in addition to heat, seem to produce it. Give (*a*) the best preventive, and (*b*) the best curative treatment.

B.—Practical Examination (Friday and Saturday, August 4 and 5, 1865).

I. and II. Military Surgery and Military Medicine.

Make an examination of the case of ——. You are required to write, concisely, a history of the case, your diagnosis, prognosis, the probable effects of treatment and the influence of the disease or injury on the man's fitness for service as a soldier. Twenty minutes allowed for the examination, half-an-hour for the description. Written notes may be taken.

III. Hygiene (three hours allowed each day).

1st day. Chemical and microscopic examination of water.

2nd day. (1) Chemical examination of adulterated beer; (2) Microscopic examination of adulterated milk.

IV. Pathology (three hours allowed).

1. Describe the morbid specimens numbered respectively, I., II., III., IV., and V., and in your description embrace the following points:—(*a*) Name the part shown; (*b*) Describe exactly the lesions which it exhibits; (*c*) Describe how the lesions have originated, and name the diseases of which they are significant, and the period or stage of the disease which had been arrived at; and (*d*) Connect your account of the condition of the parts with the probable phenomena during life.

2. Examine microscopically the portion of organ given you; name the organ of which it is a part, and give an account of its morbid condition.

3. Demonstrate the urinary tubules with their contained functional cells, and leave the preparation properly displayed under the microscope.

REVIEWS.

The Natural History of the Human Teeth. In two parts. By John Hunter, F.R.S.; with notes by Francis C. Webb, M.D., F.L.S., Physician to the Great Northern Hospital, etc., and Robert T. Hulme, M.R.C.S., F.L.S., Lecturer on Dental Surgery at the Metropolitan School of Science, etc. London: Hardwicke. 1865. Pp. 253.

There is no more striking proof of John Hunter's immense superiority as an observer and Practitioner than that it is found worth while to reprint his works, and to annotate them, not as being of historical interest, but as serving for a text upon which commentators may profitably dilate.

The present edition of "Hunter on the Teeth" originally appeared in the *Dental Review*.

Dr. Webb's notes to the first or purely theoretical part of the treatise are very full, and although not professing to bring forward much original matter, they are valuable as bringing the reader up to the level of our present knowledge of matters of scientific interest connected with the teeth.

Mr. Hulme's comments on Hunter's practice are in themselves very interesting; but they cannot be considered as forming a guide to dental Surgery, an object which, he tells us, he had not in view.

To our mind the most interesting portions of Hunter's practical treatise is that in which he recommends transplantation of teeth. We are aware that this operation has been rejected by the pundits of modern dentistry, but as physiologists we admire the success which occasionally crowned Hunter's efforts.

It is to us one of the most striking examples of the enthusiasm which animated Hunter that he should persevere after repeated failure, and at length succeed in causing a human tooth to take root in the comb of a cock, and finally, by successful injection, show that the bloodvessels of the cock had become continuous with those of the tooth.

A Critical Inquiry Regarding Superfœtation, with Cases. By George Lindsay Bonner, M.D., Cupar Fife. Edinburgh. Pp. 21.

In this ingenious little pamphlet Dr. Bonnar attempts, by the following syllogism, to prove the possibility of superfœtation:

An ovum must have been impregnated for 180 days or more before it can be born alive with a chance of being reared.

The Honourable Cecil Crosbie Gordon was born (according to Burke and Debrett) 127 days after the birth of his sister. Both the Hon. Cecil and his sister were reared. It follows that the ovum from which sprang the Hon. Cecil must have been impregnated while his elder sister was still in utero; that, in fact, the Honourable Cecil is an instance of superfœtation.

Dr. Bonnar, however, by no means confines himself to this individual instance. He contends that if it be shown that a child be born and reared within a period of 194 days from the birth of its predecessor, that child is an instance of superfœtation. His reason for this statement is that it cannot be supposed that impregnation should take place until fourteen days after previous parturition.

Now, the peerage gives numerous examples of children who have succeeded each other with a less interval than 194 days. We doubt, however, whether the dates given by the peerage are to be relied upon; they are certainly not sufficiently accurate to form a basis for a scientific inquiry.

We are inclined to doubt Dr. Bonnar's dictum as to the impossibility of impregnation until fourteen days have elapsed from a preceding parturition.

We believe that horse-breeders are of opinion that mares are most susceptible of impregnation nine days after foaling.

The question is interesting, and has, to our knowledge, never been thoroughly investigated, although possibly it may one day prove very important in a Medico-legal point of view.

Opinions and Statistics on the Immediate Treatment of Stricture of the Urethra by the Employment of the "Stricture Dilator." By Barnard Holt, F.R.C.S., Senior Surgeon to the Westminster Hospital, etc. London. 1865. Pp. 56. 8vo.

This pamphlet is the natural sequel of a very warm discussion which was lately carried on in the pages of a contemporary. Mr. Holt was called upon to vindicate his operation, and he now responds to the call by publishing forty-two letters from some of the most distinguished Surgeons of the day, in which they give the results of their treatment of stricture by Mr. Holt's plan, and almost unanimously pronounce in its favour. Out of the 742 cases of which there is record, there were only 11 deaths, giving a mortality of 1·35 per cent. This result of itself is sufficiently satisfactory when we consider the very serious disease for which the operation is required, but when we come to analyse the fatal cases we find that in certainly more than a third of them death was not dependent on the operation, but on some other cause. "In no single instance was there infiltration of urine, and in all the cases where post-mortems were carefully conducted the urethra at the seat of stricture was found only slightly inflamed."—P. 54.

Mr. Holt lays down some directions for the right performance of his operation:—

"Be certain that the dilator has not deviated from the normal channel, and if any doubt exists, examine by the rectum, and ascertain whether the instrument has passed fairly through the neck of the bladder: if there is still doubt, do not operate without the handle is perfectly straight and flat, with regard to the mesian line, and that the urine escapes through the perforated stilet. When satisfied that the instrument is fairly introduced, push the chosen tube upon the perforated wire quickly to the end, and then remove the dilator by partly withdrawing the tube; thus you prevent the mucous membrane being pinched between the blades of the instrument. A catheter one size less than the tube should now be passed to remove the urine, and which should for the first three or four times be evacuated by a catheter. By adopting this plan of after-treatment I have succeeded in preventing rigors, by not

allowing the urine to come in contact with the recent wound until it has become coated with lymph."

With regard to the ultimate success of the instrumental dilatation, more lengthened experience has only confirmed Mr. Holt in his hopeful anticipations. He tells us—"Where the after-treatment has been faithfully carried out, the same sized instrument has always been maintained. When the cases have been entirely neglected, the stricture has to a certain extent recurred; but in even these, the urethra allowed itself by the gradual enlargement of the dilator, to be at once increased to the full size, and if the patient is then careful he may afterwards remain well."

Egypt: Chapters from a Lady's Biography. Second Edition. London: W. Tweedie. 1865. 8vo. Pp. 73.

We sat down one evening to read this pamphlet, expecting to find a lady's reminiscences of a voyage up the Nile, with here and there a little outburst of enthusiasm about the pyramids, or the mummies, or the cataracts, and perchance a grain or two of information as to climate, which might be useful to us in our Professional capacity.

We were greatly deceived. There is not a word about material Egypt in the whole book; but the authoress conceives that metaphorically we are still in the House of Bondage, and she longs to aid us to escape.

Very recently we noticed a literary production in which perfect peace and happiness were promised to mankind, provided they would use the Turkish bath, eat one meal per diem, and walk about in primitive nudity. Now, the same blessings are promised if only the first two provisions are complied with. An authoress could scarcely insist upon the last.

The theme seems rather a strange one for a lady to select; but she gives a very satisfactory reason for her choice. It appears that she was what she herself calls a 74-gun ship, a female Banting, one of those magnificent and stately dowagers who impose without effort, but whose powers of locomotion are so limited, that, like Captain Kearney's friend, they require to be "butted" from behind.

One would have supposed that at present, while the Banting mania is still little past its zenith, an adipose patient would have put herself under the *régime* of the great upholsterer; but whether from having been an eye-witness of some of the evils of excessive training, or from an objection to tread upon a path which has lately become very much beaten, or from a penchant to hydropathy, our authoress chose to consult hydropathic Physicians, and after having rescued herself from the clutches of one who proved "a Physician of no value," she had the good fortune to discover a pearl of great price in the shape of a youthful hydropathic, who, like Miss Perkins, resided on Paddington-green.

This water Galen prescribed baths and exercise, and succeeded in reducing the lady's size not a little and in giving her back a feeling of health. The sudden change appears to have been too much for her. Perhaps a good deal of oily matter was absorbed from the region of the brain, and lightheadedness resulted. She is led into expressions as follows (p. 40):—"Doctors and Hospitals are great obstacles to the progress of temperance and a true sanitary and sanatory reform. Thousands are continually initiated by them in habits of intemperance. . . . Misled by these sowers of tares, the Doctors, and probably under the inevitably depressing influence of drugs, they yield to the seduction, and rapidly sink to perdition."

The remedy for all this is hydropathy, and (singularly enough for a lady who quotes Latin and Greek) under the head hydropathy is comprised the treatment by hot air—in other words, the Turkish bath. There exists, she tells us, one favoured spot on this earth where the Turkish bath has had a fair trial, and where the result has surpassed expectation.

"When drivers and horses return wet and tired they get a bath and come out rested and refreshed, and free from risk of cold." Drunkenness is scarcely known. "The happy domestic animals have their own bath. These unaffected creatures (like myself unbiassed in their advocacy of one of other system of therapeutics by any worldly interests) testify unmistakably their approbation of the bath. The lame horse enjoys his palatable medicine, and walks away with supple limbs; the sick dog, carried in the first place into the bath, on returning a second time leaps out of the vehicle in which he is brought to the palace, and runs off barking for admission at the door of the bath."—P. 42.

The picture is almost too affecting. Add to it that the climate is of the mildest and most genial, and that the proprietor is himself "a lodestar," and we can imagine the eager interest with which the name of this terrestrial paradise is demanded. It is very appropriative and suggestive. It is *Blarney*.

In Cork, too, much has been done, but the moral effect of the bath is not yet complete, for the lady superintendent finds it necessary to issue a circular, begging "Ireland's young legion of honour" not to steal the soap.

We should not have given so extended a notice of the book before us had there not been some good in it. It is cleverly, although somewhat pedantically, written, and it enforces a principle which cannot at the present be too strongly insisted upon—that parents should attend more to the physical well-being of their children, and take care that moral pollution has not a physical cause. We cannot conclude better than by an extract with whose tone we cordially concur:—

"It is bad to neglect a boy's physical education, and still worse to neglect a girl's. It is very late in the day, when a girl growing up looks pale and ill, to begin to think of remedies. The remedy for all this, and a vast amount of cruel suffering in after life, for which poor mother Eve gets more than her share of blame, should commence with a child's existence. There is a condition of the muscular system, at once supple and firm, which to obtain is a worthy object of ambition. This condition, in its perfection, can only be the result of good physical training continued for generations. It gives a light and easy carriage, and to the face the power of expression, and may be almost said to be a woman's best fortune. Rigid and lumbering, and, like a bad glove, easily damaged, without it she cannot be charming or graceful in ordinary life, or safe in her peculiar exigencies."—P. 47.

PROGRESS OF MEDICAL SCIENCE.

Selections from Foreign Journals.

ON ILL-SMELLING FEET.

By Professor HEBRA.

In this affection, while the rest of the body shows no unusual amount of transpiration, the feet (and sometimes the hands also) exhibit an extraordinary amount of sweating, accompanied by a most unpleasant odour. In former times this excessive secretion was looked upon as an advantageous circumstance, freeing the blood of a certain amount of "acrimony" which might have given rise to disease; while various affections, the origin of which was obscure, were attributed to its suppression. For this reason, so far from seeking to suppress this secretion, it was sought to encourage it, and to recall it when it had disappeared. That it can be safely and effectually treated, however, the Professor is convinced from the results derived from his numerous cases.

First, a few words on the appearance of the parts. The feet and hands of these persons feel remarkably cold, without they themselves being conscious of a deficiency of warmth. In slight degrees of the affection the points of the fingers and toes are alone cold, but in worse cases the whole palm of the hand and sole of the foot, the back of the hand and foot also not being warm, although they do not present that icy moisture felt on the other parts. On looking closely the parts affected are found to be of an intense bluish-red colour, numerous small, shining droplets of sweat appearing at their surface. Moreover, the epidermis of the toes themselves, from long maceration in the secretion, presents a white, wrinkled appearance, like that produced by long continued maceration in warm water. In exaggerated cases portions of this macerated epidermis separate, leaving excoriated surfaces, which greatly impede locomotion. With these conditions becomes produced the intolerably fœtid smell which renders the person a nuisance to all around him.

Finding that there really was no effectual remedy known for this distressing condition, Professor Hebra determined to do his best to investigate the nature of the anomaly in secretion, and to discover the means of relieving it. The first question he put to himself was, whether the smell was inherent to or derived from some condition external to the economy, and he soon came to the conclusion in favour of the latter view. In repeated instances the shoes and stockings of persons suffering from stinking feet were taken away from them,

and the feet carefully cleaned with soap and water by means of a nail brush. They were then put to bed, warmly covered up, and freely supplied with warm and diaphoretic drinks until a free transpiration was secured. The feet were carefully enveloped in gutta-percha paper, or other waterproof material, so as to prevent the passage of the sweat. The sweat of the entire body, though having its acid odour, did not manifest anything of the stinking character; but when the waterproof coverings of the feet were left unchanged the penetrating stink was gradually produced until it predominated. The shoes, which had been kept away from these persons, retained for weeks the filthy odour. The expression "stinking foot-sweat" is, in fact, an incorrect one, the proper one being "stinking shoes produced by an excessive production of sweat." The influence of stout, thick shoes as a proximate cause of the odour is seen in the facts that copious sweating of the hands is not attended by ill smell, evaporation not being impeded, and that persons going barefoot and women who wear thin shoes are seldom liable to it.

The indications for treatment are leaving off the shoes which have induced the stink, and the application of means which have been found by experience capable of diminishing the excessive secretion. In slight cases it suffices to dust the insides of the stockings with some simple powder—such as lycopododum, alum, or even common flour. If this simple means fail, the following may be employed with certainty of success:—Some diachylon is to be gently melted over a fire, and then an equal weight of linseed oil is to be added, so as to form a homogenous ointment. This is to be spread on linen, in which the foot, having been thoroughly washed and dried, is to be completely and exactly enveloped. Where the toes come into contact, shreds of lint covered with the ointment are to be interposed. So wrapped up, the foot is to be covered with a stocking and a light shoe, well open at the instep. At the end of twelve hours the application is to be removed, and the foot is to be well rubbed by means of a dry towel or one of the powders mentioned before, but neither washed nor bathed. It is then to be covered up with the ointment again. This procedure will be required to be repeated, according to the intensity of the evil, during eight or ten days, but the patient meanwhile is enabled to go about his ordinary occupations. After this time the ointment is to be left off, but friction by means of pulverulent substances is to be continued a while longer, and the ordinary shoes worn. After some days, brownish-yellow portions of epidermis, about half a line in thickness, separate from the affected parts, leaving a white, clean, healthy epidermis behind. It is only after this separation has taken place that washing the feet or the use of a foot-bath is to be allowed; and for some time afterwards the pulverulent substances should still be rubbed into the foot. In this way, at the end of from fourteen to twenty-one days, the foot-sweating either disappears for ever, or, at least, for one or more years. In quite exceptional cases, to secure this end, a repetition of the above procedure for a second time is required; but then it is invariably successful. Professor Hebra has, during fifteen years, employed in several hundred cases this with success, and without the least attendant disadvantage.—*Allgem. Wiener Med. Zeitung.*

[M. Stanislas Martin (*Bull. de Therap.*, t. lxv., p. 143) observes that some of the applications employed for removing this disgusting infirmity are not always harmless, the arrest of transpiration having in some cases been followed by neuralgia, disturbance of the digestive organs, etc. The diffusion of the abominable stink may be effectually prevented by placing a sole containing a layer of powdered charcoal either between the foot and the stocking, or between the latter and the shoe. A paste, composed of forty parts of powdered charcoal, forty of water, and fifteen of gum, should be thickly spread over a piece of filtering-paper, flannel, felt, etc., stretched over a board or pasteboard. The paste is then covered over with another piece of paper, which is to be smoothed with the hand so as to remove all asperities. The whole is submitted to compression during an hour, after when the water is to be allowed to evaporate. When quite dry, the sole may be cut out of the required size. Being so cheaply made, these soles can be changed once or twice a-day, if required.]

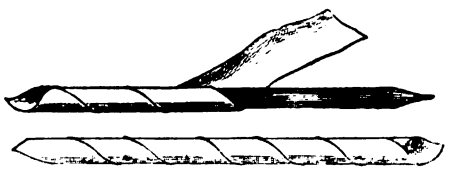
MEDICATED CIGARETTES.

By W. E. BOWMAN, M.D.

CIGARETTES may be made of almost any variety of thick paper, but that kind should be selected that on burning yields a smoke most easily inhaled. I have always employed the heavy paper used for copy book covers (olive pressings); thick blotting paper, however, makes a good cigarette, but the regular filtering paper does not answer, as its smoke is dense and suffocating.

First, cut the paper into strips about seven inches long and an inch and a-quarter wide, and next ascertain exactly how much fluid it requires to saturate twenty-five of these pieces. This is readily done by soaking them in an exactly measured ounce of water, when on withdrawal it will be found that about five fluid drachms of the liquid have been imbibed. This will give the key to the strength you are to make the solutions.

Next saturate the slips with the remedy, and when nearly dry gum or paste one border of each, and roll it round a pencil, as shown in the following woodcut; afterwards withdraw the pencil, and the cigarette is made:—



Arsenical Cigarettes.—Boil twenty-five grains of arsenious acid (the lump broken up is purest) in a Florence flask with four ounces of water, down to the quantity required to saturate 100 slips of the paper previous to rolling. They will then contain a quarter of a grain each. If you have not the usual apparatus, hang the flask above some live coals by means of a wire.

Mercurial Cigarettes.—Dissolve three drachms of red precipitate in three drachms of nitric acid, and add enough water to make up the quantity requisite to saturate 100 slips of paper. They will contain about three grains of the nitrate of mercury.

Nitre Cigarettes.—Dip the paper in a saturated solution of the nitrate of potash before rolling.

Balsamic Cigarettes are made by giving the dried nitre cigarettes a coating of tincture of benzoin.

In the *British Medical Journal*, Dr. Nevins, of the Royal Infirmary School of Medicine, Liverpool, speaks highly of these cigarettes in a number of cases.

Aphonia.—A patient who could not speak above a whisper for over a year, probably due to a thickened condition of the chordæ vocales, as she had no pain or constitutional symptoms, used the mercurial cigarettes for a month, and perfectly recovered.

Offensive Discharges from the Nostrils, with a sense of uneasiness in the frontal sinuses, was quite cured in about a month with the mercurial cigarettes. The patient held his nose after taking a mouthful of the smoke, and then forced it into his nostrils in the manner practised by accomplished smokers.

Polypus in the Nose.—A patient who had been twice operated upon for polypus, is now able to keep the disposition to form fresh polypi in check by smoking the mercurial cigarette in the same manner, when he feels that uneasiness which warns him of the danger of its recurrence.

Deafness.—When dependent upon an obstructed Eustachian tube, he finds the nitre cigarettes, made with brown paper, most successful, and that the smoke forced into the tympanum from the throat gradually restores the sense of hearing. The circumstance which first let him to adopt this method was hearing a deaf person on one occasion remark that when he was sneezing the day before he heard perfectly; the violent effort appeared for the moment to have dilated the Eustachian tube, and hearing was the result. He says that in a deafness of seven years' standing he had benefited a patient more by this treatment than by any other.

Phthisis.—Trousseau long ago recommended a puff or two of an arsenical cigarette twice or three times a-day in phthisis.

When the attention of the Profession has been duly aroused to this subject, there will doubtless be found many other affections in which medicated cigarettes may be advantageously employed, as in syphilitic ulcerations of the throat, eczema, offensive breath, obstruction of the lachrymal duct, diphtheria, etc., etc.—*Canada Lancet.*

EXCERPTA MINORA.

Conjunctivitis in Mania.—M. Berthier states that he has observed in cases of mania a form of conjunctivitis not noticed

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by writers on insanity. At first there is a redness of the eyes resembling that in persons who have slept little or wept much; and this, usually accompanied by moisture or lachrymation, in the end becomes a true erythema, which invades the entire conjunctiva at the time of the paroxysm, and disappears when this subsides. If these paroxysms are frequently renewed the phlogosis gains deeper hold, and gives rise to blepharitis, epithelial dryness, pulverulence of the ciliary edge, and falling of the eyelashes. This affection exhibits the peculiarity of resistance to all remedies, whatever these may be, still following the progress of the paroxysm and yielding only with it. Generally speaking it does not go beyond the stage of superficial vascularity. Since his attention has been called to it, M. Berthier has verified this affection in forty cases of chronic insanity in both sexes, most of these being examples of pure intermittent mania, and a few of melancholia with intercurrent excitement. He has never seen it in calm, continuous insanity. He, therefore, regards this as a form of ophthalmia peculiar to insanity, and dependent upon a specific congestion, and he thinks that the knowledge of its existence may be of use in deciding upon cases of supposed simulated mania.—*Gaz. des Hôp.*

Rupture of the Abdominal Parietes and Issue of a Living Child.—Dr. Geissler relates the following extraordinary case:—A woman was found in a stable trodden under foot by a bull, and at the point of death. The horn of the animal had passed under the edge of the ribs in the right hypochondrium, and had torn the parietes in nearly a transverse direction as far as the left side. The intestines were torn and extruded, and the upper part of the uterus was carried clean away, with the exception of a portion on the right side to which the placenta was still attached. The os uteri was closed. A full-timed, strong male child was in this way liberated uninjured from the womb, and screamed loudly. The funis was twisted several times round the neck, a piece of torn placenta remaining attached to it.—*Monats für Gebürt.*

Injection of Air into Foul Abscesses and Fistulæ.—Professor Roser states that there is no better means of treating an abscess, the contents of which have become foul and stinking, than by the frequent injection of air by means of an elastic catheter and syringe. The patient is to be instructed to repeat this injection sufficiently often to prevent any accumulation of pus; and this practice not only adds much to comfort by removing the nauseous smells, but also seems to greatly expedite the contraction and closure of the cavity of the abscess. It is of especial benefit in the treatment of the fistulous openings remaining after emphysema, and attended with such a disgusting smell. This is speedily removed by aid of the injections, and the healing of the fistula greatly promoted. This is often retarded for months, owing to the valvular condition of the track of the fistula preventing the free issue of the pus, which is secured by the daily passage of the catheter for the purpose of injecting the air.—*Archiv. der Hielkende.*

Persulphate of Iron in Hæmorrhoids.—Assistant-Surgeon Cartwright strongly recommends an ointment of persulphate of iron (3ss.—3j. ad oz.) in hæmorrhoids, especially when these are ulcerated, or when the constitution has become debilitated by diarrhœa or excessive fatigue.—*American Journal Med. Science.*

Ptyalism of the Insane.—M. Berthier, of the Bourg Asylum, concludes a memoir upon this subject in these terms:—Chronic ptyalism of the insane depends (1). Upon atony of the *primæ viæ*, and this should be combated by a substantial regimen; (2). Hallucinatory sensations, requiring moral agents in their treatment; and (3). Excessive general excitement, for which the sedatives and antispasmodics suitable to the mania are indicated. Of all these the last is the most obstinate, because it is inherent in the principal disease. The two first are easily treated with the aid of time.—*Gaz. des Hôp.*

Castor Oil Pills.—The following is a convenient mode of administering this disagreeable substance:—Emulsify 15 parts of castor oil with 8 of gum Arabic and 15 of water, and then add gradually 15 parts of flour. Divide the mixture into pills and leave them exposed to the atmosphere, when the water will soon evaporate. The purgative action may be increased by substituting magnesia for flour.—*Journal de Chimie Méd.*

Poisoning by Strychnia.—Dr. Wilson relates a remarkable case of this kind in which a young man took, it was supposed, forty grains of strychnia, though it is not stated how the quantity was ascertained, and yet recovered so as to be able, fifteen hours after swallowing the poison, to leave the hotel by an omnibus for the railway. It is conjectured that some coffee which he took after the poison, and the fact of his having taken the latter in bread, which was soon vomited up, had much to do with his recovery. The convulsions were of a very terrific character, with very short remissions. The remedies employed were tannin and opium.—*American Journal Med. Science.*

Case of Highly Acute Tetanus with Post-mortem increase of Temperature.—Dr. Van Duul, of Arnheim, relates the case of a man, aged 23, who came under his care on account of a lacerated wound of the left little finger. This went on very well until the seventh day, when he was seized with symptoms of commencing tetanus, the animal temperature measuring 37C. (98·6° F.) and the wound assuming no unusual appearance. It was, however, more painful, and did not suppurate. In spite of the various remedies resorted to, the disease made rapid progress and death ensued within two days. The ulnar nerve was examined throughout its course without anything abnormal being found. On the evening of the first day the temperature arose to 39° (102·2°), and during the second day it vibrated between this and 40° (104°). It also remained very high, and even increased after death, the body remaining warm when the autopsy was performed nine hours afterwards.—*Archiv. der Heilkunde.*

Instrument for Irrigating the Pharynx in Children.—Everyone knows how difficult it is to get children, and even some adults, to gargle the throat; and under any circumstances the fluid usually does not reach the tonsils. Moreover, in various affections of the throat the patient has great difficulty in opening the mouth. To meet the difficulties arising in affections of the tonsil and various forms of angina, especially in children, M. Guersant has contrived an instrument which, made of aluminium bronze, is in fact a canula shaped like the handle of a spoon, twelve to fifteen centimetres in length. It is used as a depressor of the tongue, and has its extremity perforated with small holes. The other end is connected with an irrigator or a syringe. The tongue being depressed by it as by an ordinary spoon, the fluid is injected first gently into the mouth and then more forcibly, so as to constitute a true irrigation of the fauces and effect a thorough cleansing.—*Bull. de Thérapeutique.*

Solution of Venice Turpentine as a Dressing for Wounds.—Alluding to M. Nélaton's approval of camphorated spirit as a dressing for wounds in his wards, M. Kerner states that this has the disadvantage of being expensive and easily evaporable. He states that, being Surgeon to the Messrs. Dolfuss' factories at Mulhouse, where from 3000 to 4000 workpeople are employed, he has ample experience in treating all kinds of wounds, and finds the following a most valuable as well as a cheap application:—Venice turpentine, 2 lb. 8 oz. troy; bicarbonate of soda, 6½ drachms; water, 18 pints Imperial. This is to digest in a bath for six days, at a temperature not higher than 75° C., and then filter. It constitutes a highly soluble turpentine soap, which is very cheap, and evaporates slowly. The cicatrisation of even very large wounds under its use is wonderfully rapid, the secretion of pus being very slight, while there is an entire absence of fœtidity. A compress, consisting of eight folds of linen well soaked in the solution, is applied over the whole breadth of surface, and left on (covered with oiled silk) for twelve hours, being moistened by means of a sponge with some of the solution every four or five hours. Granulations speedily shoot forth, requiring to be touched with nitrate of silver; but the discharge is quite insignificant, so that none of the encumbering apparatus required when cerates are used need be resorted to. When the wound is accompanied with crushing or contusion, leading to the fear of much inflammation, it should be exposed to a jet of cold water for some days before employing the turpentine.—*Bull. de Thérapeutique.*

Is Placentitis a Reality?—M. Mattei thus concludes an investigation into this question:—1. Placentitis does exist in the acute condition, and in various degrees, from congestion, with commencing ramollissement to the formation of pus, which is exceedingly rare. The same degrees of hepatisation which exist in inflamed lung are found in the placenta. 2. When the inflammation is partial, and the child survives, the inflamed tissues usually remain impermeable to blood, and after a while fat is deposited in their contracted interstices, constituting the fibrous tissue of the English. 3. We must not confound with placentitis general or partial thickening of the membranes, cysts, decoloured clots of blood, and some other products of hæmorrhage. Placentar hæmorrhage and congestion are, however, intimately dependent on acute

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placentitis, while placentar adhesion is related with the ultimate results of placentitis. 4. Inflammation of the placenta, the symptoms of which, it is true, are often common to those of other diseases of the fœtus, membranes, or uterus is easily recognised after delivery; and as the affection has a great tendency to recur in subsequent pregnancies, it should be watched closely. Its prognosis is not so grave as it has been represented, if it be combated in time. 5. When there are symptoms of general plethora or well marked uterine congestion, and especially if there have been former attacks of placentitis, derivatives should be applied at the upper part of the body; and if the symptoms do not yield readily, repeated small bleedings should be resorted to, especially at the catamenial period, accompanied by general and local treatment suitable to the condition of the patient and the degree of phlogosis.—*Gaz. des Hôp.*

Treatment of Alopœcia.—M. Hardy lays down the following as the mode of treatment:—1. *Congenital Alopœcia* is above the resources of art; but general tonics, sulphurous baths, and local irritants may be tried. 2. *Idiopathic A.*—At a certain time of life the hair falls; but this period may be retarded by frictions with spirit of balm or rosemary, lotions of rum or brandy, and ointments composed of tannin or gallic acid, these last being especially indicated in individuals who transpire much by the head. Tincture of cantharides, castor oil with beef marrow, or spirit of ammonia are other of these means, the operation of which is aided by keeping the hair closely cut. 3. *Symptomatic A.*—In chloro-anæmia and in anæmia due to serious diseases or delivery, the general debility must be first combated by strengthening means, such as iron and quinine and suitable food, and then the defective viability of the hair follicles must be stimulated by irritant ointments or lotions consisting of alcohols, castor or croton oil, or gallic acid. The following is the ointment M. Hardy has found most useful:—Beef marrow, 60; castor oil, 30; gallic acid, 3; and tincture of rosemary, 5 parts. When the alopœcia is due to an affection of the scalp itself, stimulant ointments only increase the fall of the hair; and in this case we must not pay attention to the alopœcia itself, but pursue the treatment of the disease of the scalp, and when this is remedied the hairs will grow again. The same observation may be made with regard to alopœcia due to parasites. When alopœcia is persistent and becomes in some persons the source of diseases, we can only treat it by palliatives, such as caps or wigs, which are excellent prophylactics against coryza, bronchitis, and pains in the head.—*Gaz. des Hôp.*

GENERAL CORRESPONDENCE.

THE ADMINISTRATION OF CHLOROFORM IN CASES OF ENLARGED TONSILS.

LETTER FROM MR. WILLIAM J. SMITH.

[To the Editor of the Medical Times and Gazette.]

SIR,—Contrasted with the extraordinary experience of Dr. Kidd, who has "watched carefully over 10,000 cases of chloroform administration," my facilities for research are small indeed; but believing, as I do, that a less extensive field of observation may still be utilised, I presume to hope that the facts observed by me are neither less important nor less trustworthy because it has not fallen to my lot to watch carefully the administration of chloroform three times per diem during the last nine years.

Your correspondent believes, 1st, That enlarged tonsils "would make the administration of chloroform slow or imperfect." 2ndly, That deaths may result from operations on the tonsils under chloroform, in consequence of the connection existing between the cervical and cardiac nerves; whilst, 3rdly, He does not think that danger is likely to arise from the pressure of enlarged tonsils on the glottis during choloroform inhalation; and 4thly, He does not believe that "enlarged tonsils have much or anything to do with accidents from chloroform."

In reference to the opinion that the connexion of the cervical with the cardiac nerves is a source of danger, permit me to suggest that, as there is nothing peculiar in the nerves of the tonsils, the same danger will attach itself to the wounding of any part the nerves of which interlace with the cardiac, and, as the distribution of such nerves is somewhat extensive, the risk of death in several Surgical operations would be, were the theory in question correct, greater than experience has proved it. Moreover, such appears to me slightly at variance with the statement that "enlarged tonsils have not much or anything to do with accidents from chloroform." With the opinion that enlarged tonsils do not press on the glottis, and so occasion death during the administration of chloroform, I entirely concur.

Having thus reviewed the opinions of your correspondent on this subject, allow me, as some "obscurity" is said to prevail, to explain my views of the *modus operandi* of enlarged tonsils during the inhalation of chloroform.

Having noticed, first, that certain diseases, including some cases of enlarged tonsils, block up the nasal passages so as to render them unavailable for the purpose of respiration; and, secondly, that in some cases of insensibility (from chloroform and other causes), oral respiration is impossible in consequence of the closure of the mouth and the apposition of the tongue and palate, and having besides experimentally closed the nose in a comatose patient with the effect of finding that, in spite of the muscular respiratory effort, no air entered the chest, even when marked lividity had occurred, I have ventured to think that the coincidence of such conditions (viz., complete obstruction of the nose and mouth) would cause death, and I think, moreover, that such an opinion is scarcely more "conjectural" than that wounds of the tonsils may prove fatal during the inhalation of chloroform in consequence of the interlacings between the cardiac and cervical nerves.

Observe that my communication to your valuable journal is said to have been "puzzlesome as to the right meaning of the words asphyxia, apnœa, syncope, etc." Now, what is meant by the "et cætera" I am at a loss to understand. The term "syncope" I did not make use of; and in reference to the remaining two—viz., "apnœa" and "asphyxia," which we are kindly informed "are correctly, *quoad* chloroform, synonymous"—permit me to say, though it may be a matter of surprise to Dr. Kidd, that I have always regarded them as such—not only "*quoad* chloroform," but *quoad* everything else, and that in that sense I employed them.

We are also taught by Dr. Kidd that "death from chloroform is oftener of the nature of spasm of the glottis or over-narcotism of the respiratory muscles and diaphragm than, etc." By the latter phrase, "over-narcotism" is meant, I presume, paralysis, more or less complete, of the muscles in question. Is it not somewhat strange that the two commonest causes of death from chloroform should be of an entirely opposite nature—viz., paralysis and spasm?

We next learn—at least, the "experienced observer" (another name, I suppose, for any gentleman who has seen 10,000 cases) has learnt—"how safe chloroform is in midwifery practice because the diaphragm abdominal muscles (probably misprint for diaphragm *and* abdominal muscles) are acting with vigour in concert with the uterus." Now, perhaps through inexperience, I find it difficult to understand how even a vigorous action of the abdominal muscles and diaphragm can be a source of safety at the same time that "spasm of the glottis" is "the cardinal cause of death in chloroform administration."

In the cases of enlarged tonsils which have come under my observation deafness has occurred more frequently than in the same number of people not so affected; but, as I have elsewhere pointed out, the pathology of the condition varies in different instances, and the possibility of the two states not bearing to each the relation of cause and effect should ever be borne in mind.

As it is not generally supposed that the entire staff of an institution are responsible for the soundness of views of one of their number, I think it would have been in better taste if Dr. Kidd had referred to my observations as those of "one of the Surgeons of," rather than as those of "the Practitioners of," the Islington Dispensary.

Finally, will Dr. Kidd kindly inform us how many deaths have occurred amongst the 10,000 cases he has carefully watched? for, as the merits of any plan depend on its results, it is obvious that, if all these cases have been successful, the experience of even one individual will go very far towards settling which is the best mode of administering chloroform; and, under such circumstances, the Profession and myself will be under great obligation to Dr. Kidd if he will make us acquainted with that which he adopts.

I am, &c.

WILLIAM J. SMITH.

Finsbury-place South, August 30.

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CONFESSION OF CONSTANCE KENT.

THE following letter appeared in the *Times* of Monday, the 28th ult. :—

"Sir,—I am requested by Miss Constance Kent to communicate to you the following details of her crime, which she has confessed to Mr. Rodway, her solicitor, and to myself, and which she now desires to be made public.

"Constance Kent first gave an account of the circumstances of her crime to Mr. Rodway, and she afterwards acknowledged to me the correctness of that account when I recapitulated it to her. The explanation of her motive she gave to me when, with the permission of the Lord Chancellor, I examined her for the purpose of ascertaining whether there were any grounds for supposing that she was labouring under mental disease. Both Mr. Rodway and I are convinced of the truthfulness and good faith of what she said to us.

"Constance Kent says that the manner in which she committed her crime was as follows :—A few days before the murder she obtained possession of a razor from a green case in her father's wardrobe, and secreted it. This was the sole instrument which she used. She also secreted a candle with matches, by placing them in the corner of the closet in the garden, where the murder was committed. On the night of the murder she undressed herself and went to bed, because she expected that her sisters would visit her room. She lay awake watching until she thought that the household were all asleep ; and soon after midnight she left her bedroom and went downstairs, and opened the drawing-room door and window shutters. She then went up into the nursery, withdrew the blanket from between the sheet and the counterpane, and placed it on the side of the cot. She then took the child from his bed, and carried him downstairs through the drawing-room. She had on her night-dress, and in the drawing-room she put on her goloshes. Having the child in one arm, she raised the drawing-room window with the other hand, went round the house and into the closet, lighted the candle, and placed it on the seat of the closet, the child being wrapped in the blanket, and still sleeping ; and while the child was in this position she inflicted the wound in the throat. She says that she thought the blood would never come, and that the child was not killed, so she thrust the razor into its left side, and put the body, with the blanket round it, into the vault. The light burnt out. The piece of flannel which she had with her was torn from an old flannel garment placed in the waste bag, and which she had taken some time before and sewn it to use in washing herself. She went back into her bedroom, examined her dress, and found only two spots of blood on it. These she washed out in the basin, and threw the water, which was but little discoloured, into the footpan in which she had washed her feet over night. She took another of her nightdresses and got into bed. In the morning her nightdress had become dry where it had been washed. She folded it up and put it into the drawer. Her three nightdresses were examined by Mr. Foley, and she believes also by Mr. Parsons, the Medical attendant of the family. She thought the blood stains had been effectually washed out; but on holding the dress up to the light a day or two afterwards she found the stains were still visible. She secreted the dress, moving it from place to place, and she eventually burnt it in her own bedroom, and put the ashes or tinder into the kitchen grate. It was about five or six days after the child's death that she burnt the nightdress. On the Saturday morning, having cleaned the razor, she took an opportunity of replacing it unobserved in the case in the wardrobe. She abstracted her nightdress from the clothes basket when the housemaid went to fetch a glass of water. The stained garment found in the boiler-hole had no connexion whatever with the deed. As regards the motive of her crime, it seems that, although she entertained at one time a great regard for the present Mrs. Kent, yet if any remark was at any time made which in her opinion was disparaging to any member of the first family, she treasured it up, and determined to revenge it. She had no ill-will against the little boy, except as one of the children of her stepmother. She declared that both her father and her stepmother had always been kind to her personally, and the following is the copy of a letter which she addressed to Mr. Rodway on this point while in prison before her trial :—

"'Devizes, May 15.

"'Sir,—It has been stated that my feelings of revenge were excited in consequence of cruel treatment. This is entirely false. I have received the greatest kindness from both the persons accused of subjecting me to it. I have never had any ill will towards either of them on account of their behaviour to me, which has been very kind.

"'I shall feel obliged if you will make use of this statement in order that the public may be undeceived on this point.

"'I remain, Sir, yours truly,

"'CONSTANCE E. KENT.

"'To Mr. R. Rodway.'

"She told me that when the nursemaid was accused she had fully made up her mind to confess if the nurse had been convicted, and that she had also made up her mind to commit suicide if she was herself convicted. She said that she had felt herself under the influence of the Devil before she committed the murder, but that she did not believe, and had not believed, that the Devil had more to do with her crime than he had with any other wicked action. She had not said her prayers for a year before the murder, and not afterwards, until she came to reside at Brighton. She said that the circumstance which revived religious feelings in her mind was thinking about receiving sacrament when confirmed.

"An opinion has been expressed that the peculiarities evinced by Constance Kent between the ages of 12 and 17 may be attributed to the then transition period of her life. Moreover, the fact of her cutting off her hair, dressing herself in her brother's clothes, and leaving her home with the intention of going abroad, which occurred when she was only 13 years of age, indicated a peculiarity of disposition, and great determination of character, which foreboded that, for good or evil, her future life would be remarkable.

"This peculiar disposition, which led her to such singular and violent resolves of action, seemed also to colour and intensify her thoughts and feelings, and magnify into wrongs that were to be revenged any little family incidents or occurrences which provoked her displeasure.

"Although it became my duty to advise her counsel that she evinced no symptoms of insanity at the time of my examination, and that, so far as it was possible to ascertain the state of her mind at so remote a period, there was no evidence of it at the time of the murder, I am yet of opinion that, owing to the peculiarities of her constitution it is probable that under prolonged solitary confinement she would become insane.

"The validity of this opinion is of importance now that the sentence of death has been commuted to penal servitude for life, for no one could desire that the punishment of the criminal should be so carried out as to cause danger of a further and greater punishment not contemplated by the law.

"I have the honour to remain,

"Your very obedient servant,

"JOHN CHARLES BUCKNILL, M.D.

"Hilmorton Hall, near Rugby, August 24."

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, August 24, 1865 :—

William Thomas, Newhall-street, Birmingham; Olliver Thomas Duke, Guy's Hospital; Thomas John Colman, Pennywell-road, Bristol; James Barrett, Pierrepont-street, Bath; James Copland Worthington, Lowestoft; Arthur Henry Pitcher, Blackheath.

As an Assistant :—

James Fell, Preston.

The following gentleman also on the same day passed his First Examination :—

Arthur Charles Bush, Lansdown, Bath.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BARTER, CHARLES S., F.R.C.S. (exam.), has been appointed Surgeon to the Bath Western Dispensary.

BATT, EDWARD, M.D., has been appointed by the Commissioners in Lunacy Medical Superintendent of the Retreat Asylum, Clapham.

BROWN, D. DYCE, M.A., M.D., has been appointed Surgeon to the Aberdeen County Prison.

CURTIS, Mr. W., has been appointed Dispenser to the Royal Portsmouth Hospital.

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GILES, S., M.D., has been elected one of the Surgeons for the Deptford District, Royal Kent Dispensary.

HENDERSON, J., L.F.P.S. Glasg., has been elected one of the Surgeons for the Deptford District, Royal Kent Dispensary.

MACKENZIE, JOHN INGLEBY, M.B. Cantab., has been elected one of the Medical Officers of the Sidmouth Dispensary.

RYDER, J. F., M.R.C.S. Eng., has been elected one of the Surgeons for the Greenwich District, Royal Kent Dispensary.

STEEL, FREDERICK, M.D., has been elected Resident Surgical Officer to the General Hospital, Birmingham.

STURTON, H. W. S., M.R.C.S. Eng., has been elected Resident Medical Officer to the Royal Kent Dispensary.

STURTON, Mr. T., has been elected Dispenser to the Royal Kent Dispensary.

WHITWORTH, the Rev. WILLIAM ALLEN, M.A., has been appointed Professor of Mathematics and Natural Philosophy in Queen's College, Liverpool.

DEATHS.

DAVIES, THOMAS E., M.R.C.S. Eng., at Repton, near Burton-on-Trent, on August 15, aged 32.

KING, DAVID, sen., M.D. Edin., at Eltham, Kent, on August 23, aged 78.

SERJEANT, JAMES, M.R.C.S. Eng., at North Petherwin, Launceston, Cornwall, on August 21, aged 32, late Surgeon Royal Mail Steam Company's service.

TOMPSON, JOHN N., Surgeon, at Blackwood, Victoria, on June 16, late of Totnes, Devon.

WATSON, WILLIAM, M.D. Edin., at Lealie, Fifeshire, on August 20, aged 29.

WOLLASTON, ROBERT, M.R.C.P. Lond., at Naples, on August 22, aged 64, late of Stafford.

POOR-LAW MEDICAL SERVICE.

VACANCIES.

*** The area of each district is stated in acres. The population is computed according to the last census.

Ashbourne Union.—Mr. Marshall Holmes has resigned the Hartington District; area, 7198; population, 894; salary, £10 per annum.

City of London Union.—Dr. Sparke, District Medical Officer, has resigned; salary, £100 per annum.

Ecclesall Bierlow Union.—Mr. James Walker has resigned the Workhouse; salary, £90 per annum.

Stockton Union.—The Workhouse is vacant; salary, £60 per annum.

APPOINTMENTS.

Ashton-under-Lyne Union.—William Stanfield, M.D. St. And., L.R.C.P. Edin., M.R.C.S E., to the Eleventh District.

Banbury Union.—James Taylor, M.R.C.S.E., L.F.P. and S. Glasg., L.S.A., to the Hornton District.

Bury Union.—John B. Jameson, L.F.P. and S. Glasg., L.R.C.P. Edin., to the Heap District.

Dunmow Union.—William S. Wyman, M.D. St. And., M.R.C.S.E., L.S.A., to the Hatfield District.

Godstone Union.—Edmund E. Hooper, M.R.C.S.E., L.S.A., to the Caterham District. Robert G. Watts, M.D. St. And., M.R.C.S.E., L.S.A., L.M., to the Western District and the Workhouse.

Kingston Union.—Theodore Günther, L.R.C.P., to the Hampton Wick District until March 25, 1866.

Penistone Union.—Thomas Turton, L.S.A., to the Denby District until March 25, 1866.

Saddleworth Township.—John Hollinworth, M.R.C.S.E., L.S.A., to the Saddleworth District.

Upton-on-Severn Union.—Henry T. Marsh, M.R.C.S.E., L.S.A., to the First District and the Workhouse. James Fernie, M.R.C.S.E., L.S.A., to the Third District until June 24, 1866.

MEDICAL BENEVOLENT SOCIETY, BIRMINGHAM.—Election of officers at the annual meeting:—*President*—John Archer, Esq., F.R.C.S. Eng., Edgbaston, Birmingham. *Vice-Presidents*—Dr. Bodington, Sutton Coldfield; Thomas Hazlehart, Esq., Claverly; R. L. Baker, Esq., Moseley-road, Birmingham; W. C. Orford, Esq., Deritend, Birmingham.

ASIA MINOR.—Smyrna, August 5.—The hope as to the abatement of the cholera, which was generally entertained when I last wrote, has, unhappily, not been realised. The epidemic has, on the contrary, developed into more terrible proportions than ever, and Smyrna and the neighbouring villages are in a state of terror which is simply indescribable. Business of all kinds is suspended, and *sauve qui peut* the universal cry. The following official returns of the past week's mortality from the epidemic will best show the extent of the cause for this universal panic:—On July 29 the total reported was 42; on the 30th, 55; 56; on the 31st, 52; on August 1, 37; on the 2nd, 26; on the 3rd, 33; and yesterday, 38. Of this total of 284, the Greeks supplied the largest quota, their share being 111, whilst the Jews—previously the heaviest sufferers—only gave 63. The Turks stand next on the fatal roll, and after them Catholics and Armenians,—the latter only contributing 17 cases to the return. The Relief Committee, whose appointment I reported in my last, continues to function with great activity and usefulness. Daily, at noon, it distributes bread and soup to all-comers of the poor in the Fassola Square, in addition to its direct money help to the most necessitous at their own homes. So far, the action of the Committee deserves great praise; but the feeling is general that its special usefulness would have been greatly enhanced if the Committee itself had been differently constituted. Its Medical elements are especially unsatisfactory, consisting, as they do, only of two or three Practitioners, who are comparatively new comers, and consequently lack altogether the local experience essential to their full usefulness on such an occasion. However merely zealous, therefore, the Committee may be, its hold on the public confidence is greatly weakened by the absence from it of such names as those of Drs. Wood, Fabrizzi, Matheys, and Dracopoli,—all Physicians of the first rank, and all men of long experience of the climatic and other sanitary conditions of the place. It is due to two of these four gentlemen to make special mention of their really noble private action under the present circumstances. I refer to Dr. Wood and Dr. Matheys, whose exertions to relieve the suffering poor ever since the epidemic assumed alarming proportions, are the theme of universal praise. As one of our own countrymen, I feel especially proud of Mr. Wood's truly Christian heroism in this way. Wherever the disease has been worst amongst the poor—whether they have been Christians, Jews, or Turks—there has he been day and night, gratuitously ministering with a zeal which no fatigue or personal risk has abated for an hour—giving not merely his Professional help, but medicines, food, and money with a liberality which, so far as I have been able to hear of, has had no parallel in private charity since the epidemic broke out. His conduct in this way has done positive honour not merely to himself, but to our whole community.—*Levant Herald.*

THE ARMY MEDICAL DEPARTMENT.—The Director-General presents his compliments to the Editor of the *Medical Times and Gazette*, and begs to enclose a list of the candidates for commissions in H.M.'s British Medical service who were successful at the competitive examination in February last, and who have passed through a course at the Army Medical School, showing the combined results of the examination.—Army Medical Department, 6, Whitehall-yard, August 24, 1865:

Names.	Studied at	No. of marks.
V. Wearne	Cork and London	5602
R. Collins	Glasgow University	4080
F. O'Farrell	Galway and Dublin	3995
S. Robertson	Edinburgh	3979
W. R. G. Hinds	Dublin	3940
A. Lewis	Dublin	3937
R. E. Hogan	Dublin	3915
G. B. Sanders	Dublin	3910
G. Andrew	Dublin	3737
A. J. Belemore	Leeds	3728
W. F. Ruttledge	London	3683
F. Powell	London	3653
W. Robertson	Galway and Dublin	3635
G. Traynor	Dublin	3598
J. E. Fishbourne	Dublin	3563
R. F. Tobin	Dublin	3530
R. Jackson	Birmingham	3500
J. A. Campbell	London	3435
J. J. Haurahan	Galway and Dublin	3435
W. O. B. White	Dublin	3410
R. H. Carew	Dublin	3398
C. White	London	3343
A. J. Clapp	Dublin	3263
G. J. F. Evatt	Dublin	3252
T. R. King	Edinburgh	3200
J. Creed	Dublin	3149
A. W. Shedden	Edinburgh	3145
R. Keith	Aberdeen	3117
A. W. Bate	Dublin	3035
G. F. Churchill	Dublin	2965
T. A. Pickering	Dublin	2915
J. F. H. Richardson	London	2915
J. W. Purefoy	Dublin	2858
H. Waghorn	London	2770
W. Wakefield	Glasgow	2635
G. White	London	2532
G. R. O'Toole	Dublin	2525
J. C. Thorp	Dublin	2293

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NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

If Mr. E. Bradford will forward his MS. to our Office we shall be obliged.

If not suited to our columns, it shall be returned.

M. B. Lond.—We do not know of any work that will give the information.

J. S. B.. M.D.—In 1297 Dante enrolled himself in the Company of Physicians and Apothecaries, the Sesta of the Arti Maggiore, to enable him to take office under the Republic.

G. P. R.—Write to the Commissioners, Park-street, Westminster. The remuneration is by head-money, which varies from 7s. to 20s., according to length of services, with about £60 paid for return voyage. You will have to undergo an additional examination by Mr. Le Gros Clark, of St. Thomas's Hospital.

A Lecturer.—The vacancy in the Court of Examiners of the College of Surgeons, caused by the resignation of Mr. Hodgson, will not be filled up until October. It is generally expected that the choice of the Council will fall on Mr. Quain, of University College, which institution has not been represented at that Board since the time of Mr. Samuel Cooper, who filled the office of President just twenty years ago—viz., in 1845.

A Student of University College is answered in the above notice.

THE GRIFFIN TESTIMONIAL FUND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscriptions have been further received on behalf of the above fund:—J. W. Combe, Esq., Hurst-green, 2s. 6d.; Pleydell Carter, Esq., Gloucester, 10s. 6d. Amount previously announced, £124 16s. 9d.; received at *Lancet* office, £9 9s. I am, &c.

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate-without, August 29, 1865.

THE ASSUMPTION OF MEDICAL TITLES BY DENTISTS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I noticed a letter in your last impression from a Mr. Aaronson, who informs your readers that he removed nineteen teeth from a lady's mouth while she was under the influence of chloroform. Of the communication itself I do not propose to speak, but will leave the details in all their, apparently, wonderful and pleasant results to the enjoyment of the writer. But what I would ask Mr. Aaronson to consider is, the inexpediency, to call it nothing else, of his dubbing himself "L.R.C.S.E." I am sure, Sir, the great majority of licentiates in Dental Surgery of the Royal College of Surgeons of England do not desire to adopt the initials of the Medical Practitioner, and at the present time especially it is most imprudent to usurp a position which is untenable, because it is untrue. The letters Mr. Aaronson has claimed do not correctly indicate his Professional position, for no mention is made of those initials which point to the specialty he practises. The Dental Surgeon has every opportunity to obtain an honourable place among Professional gentlemen, if he can prove his title to it by his qualifications and his practice; and I am quite sure that to use more or less letters after one's name will never advance a dentist in the esteem either of his *confrères* or of his brethren in the Medical Profession. Much less will he appear in the opinion of all who know anything of the subject when he is not careful to use a title which is strictly correct. I enclose my name and address. I am, &c.

INCISOR.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Permit me, through the medium of your pages, to call the attention of my brother Licentiates in Dental Surgery to the fact that the use of the letters L.R.C.S.E. after their names—as they appeared at the head of a communication in your last number—is an assumption of the initials of a "Licentiate of the Royal College of Surgeons of Edinburgh."

There is no such designation as Licentiate of the Royal College of Surgeons (of England), and the holder of a diploma in Dental Surgery is now generally recognised by the initials L.D.S.—"Licentiate in Dental Surgery," a title warranted by precedent, to wit, the "Licentiate in Midwifery," and sanctioned by official custom (see report of the proceedings of the Medical Council). The letters R.C.S. may of course be added, if desired.

The Licentiates in Dental Surgery, as a body, are so sincerely anxious to avoid any undue assumption of Medical titles that it would be an injustice to them all to allow such an instance as the one referred to above to pass unnoticed. The following paragraph in reference to this subject appeared in the *British Journal of Dental Science*, of July last, *apropos* of some letters that appeared recently in the Medical papers:—

"We trust M.D. is mistaken in his assertion as to the assumption of the initials M.R.C.S. by gentlemen not entitled to them, and that he has only seen L.R.C.S. used, as we know is done in one or two cases; but this should be utterly repudiated by all Dental Licentiates, as it implies more than is correct. Curiously enough, a subsequent number of the *Lancet* contained another letter, which we have reprinted, signed James Mitchell, L.R.C.S.E. These initials were assumed by many to mean Licentiate of the Royal College of Surgeons of England, and were supposed to be the equivocal assumption of a Dental Licentiate, referred to above; but a reference to the Medical Directory shows that Mr. Mitchell is a Licentiate of the Royal College of Surgeons of Edinburgh.—Ed. *B. J. D. S.*" I am, &c.

CHARLES JAMES FOX.

27, Mortimer-street, Cavendish-square, W., Aug. 29, 1865.

COMMUNICATIONS have been received from—

Mr. JOHN RILEY; Dr. JAMES RUSSELL; Dr. F. R. CRUISE; Mr. THOMAS HOWKINS; Mr. B. W. RICHARDSON; Dr. W. PRATT; Mr. HENRY LOWNDES; Mr. JAMES C. GELL; Dr. R. HALDANE; ST. GEORGE'S HOSPITAL; ST. BARTHOLOMEW'S HOSPITAL; LONDON HOSPITAL; ST. THOMAS'S HOSPITAL; NAVY MEDICAL DEPARTMENT; UNIVERSITY OF OXFORD; THE DIRECTOR-GENERAL ARMY MEDICAL DEPARTMENT; Dr. SPITTA; APOTHECARIES' HALL; UNIVERSITY OF CAMBRIDGE; UNIVERSITY OF DURHAM; ROYAL COLLEGE OF SURGEONS OF ENGLAND; Mr. ALFRED ROBERTS; THE UNIVERSITY OF ST. ANDREWS; THE UNIVERSITY OF LONDON; Mr. HORATIO G. DAY; THE HON. SECRETARY OF THE MEDICAL BENEVOLENT SOCIETY, BIRMINGHAM; Mr. CLEMENT HAWKINS; INCISOR; Dr. ROBERT FOWLER; M.B. LOND.; Mr. E. BRADFORD; Mr. BARTER; SECRETARY QUEEN'S COLLEGE, LIVERPOOL; Mr. CHARLES J. FOX.

BOOKS RECEIVED.

The Why and the Wherefore of Cattle Diseases. By Wm. Reid. Pamphlet. Sixpence. Edinburgh: J. Menzies.

*** Whether the cattle plague of 1865 be imported or not, there can be no doubt of the injury and cruelty of the ordinary transport of cattle by rail and steam. It is to be hoped that the present calamity will open our eyes to our neglect of duty in this respect. Mr. Reid pungently asks, How would men stand such travelling? He is the inventor of a new and humane kind of truck.

The Journal of Mental Science. July, 1865. London: John Churchill and Sons.

*** Contains some good "original articles,"—viz., Statistics of Insanity of the Crichton Royal Institution, Dumfries, by Dr. H. G. Stewart; Artificial Insanity, chiefly in Relation to Mental Pathology, by Dr. D. H. Tuke (concluded from the April number of the Journal); and the Pathology of a Case of "General Paralysis," by Dr. G. M. Bacon, with a Report of the Microscopical Examination of the Brain, by Samuel Wilks, M.D.; Quarterly Reports on Foreign and on English Psychological Literature; and Reviews, of some of the recent Turkish-bath literature, of Brierre de Boismont's "Du Suicide et de la Folie Suicide," and of the Autobiography of the late Sir Benjamin C. Brodie. The reviewer of the "Manual of the Turkish Bath," etc., is, if possible, even more enthusiastic than Mr. Urquhart in his admiration for that "mode of cure and source of strength for men and animals." The Englishman's "tub" is a delusion and a snare, and is falsely called a bath; skins are only made *relatively clean* by common bathing; it is only "by the true bath of hot air and then of water that the skin is rendered *absolutely* clean." By it man is "renovated both in body and mind;" his skin is "properly educated," and the errors of nature and Providence are corrected. The reviewer quotes with approbation Dr. Millingen's statement that, in endeavouring to popularise the Turkish bath, "we are engaged in an attempt which, if successful, will confer, in an hygienic point of view, a service on our countrymen as eminent as the discovery that has immortalised the name of Jenner;" and he winds up with this beautiful outburst:—"Beyond the narrow limit of each good man's own fireside, we thought there was only one paradise in England, and that it was the Crystal Palace. There is another. It is the Hammam in Jermyn-street." That the Turkish bath does possess great powers for good, no one will deny; but it will need immense vitality to save it from its friends.

Medizinische Jahrbücher. Jahrgang. 1865.

*** A well conducted publication. The abstracts of papers, as might be expected, are chiefly from German sources, but important contributions to Medical science by British and French authors are not overlooked.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 26, 1865.

BIRTHS.

Births of Boys, 947; Girls, 969; Total, 1916.
Average of 10 corresponding weeks, 1855-64, 1704·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	585	550	1135
Average of the ten years 1855-64	588·5	584·2	1172·7
Average corrected to increased population..	..	..	1290
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	1	6	6	3	2	6	18
North ..	618,210	5	6	11	1	5	7	20
Central ..	378,058	1	2	6	..	2	5	16
East ..	571,158	1	..	14	..	9	11	18
South ..	773,175	1	11	10	3	12	11	43
Total ..	2,803,989	9	25	47	7	30	40	115

APPOINTMENTS FOR THE WEEK.

September 2. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

4. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

5. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

6. Wednesday

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

7. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

8. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

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SPECIALLY PREPARED BY

SAVORY & MOORE,

Chemists to the Queen, H.R.H. the Prince of Wales, and his Majesty the King of the Belgians.

SAVORY & MOORE'S FOOD FOR INFANTS. TRADE MARK.

This food contains the same ingredients and in the same proportions as recommended by BARON LIEBIG; but, owing to the mode of preparation, NO BOILING or STRAINING is required.—*Lancet, July* 29, 1865.

REPORT UPON SAVORY AND MOORE'S FOOD FOR INFANTS AND INVALIDS, BY DR. HASSALL.

"I have subjected the food prepared by Messrs. Savory and Moore to full examination and analysis, in both its uncooked and cooked conditions, and I find it to be eminently adapted for the food of infants and invalids, being highly nourishing, and, what is of the greatest consequence, of easy digestibility. It is essential that the instructions given for its preparation should be closely followed, the conversion of the starch into dextrine and glucose, whereby the food is rendered so much more digestible, depending upon the action of the diastase contained in the malt flour—one of the constituents of Liebig's food. The activity of this principle is destroyed at a temperature of about 150° Fahrenheit; it is, therefore, very necessary that the heat employed in the preparation of the food should never exceed that degree; indeed, it is best not to allow it to pass beyond 148° Fahrenheit, a temperature amply sufficient to break up the starch corpuscles, as may be readily seen on microscopic examination, and, therefore, to cook the food sufficiently without having recourse to boiling.

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"Author of 'Food and its Adulteration;' Senior Physician to the Royal Free Hospital."

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SYRUP of HYPOPHOSPHITE of LIME, and

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The Alkaline Lactates, first recommended by the illustrious Professor Magendie, have been recently introduced into Medical Practice by Professor Pétrequin. The services they daily render have secured for them the foremost rank among the medicines employed against Functional Derangements of the Digestive Organs. (See Dr. Pétrequin's Pamphlet on this subject.) May be had of all respectable Chemists, and of

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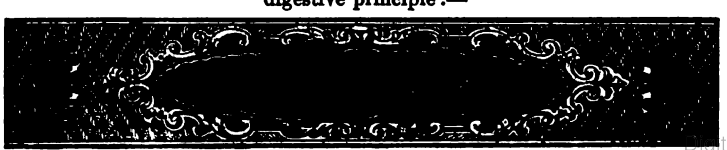

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ORIGINAL LECTURES.

AN INQUIRY INTO THE NATURE OF THE PHENOMENA WHICH CONSTITUTE "INFLAMMATION."

TWO LECTURES DELIVERED AT
The Royal College of Physicians.

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the College; Professor of Physiology and of General and Morbid Anatomy in King's College, London; Physician to King's College Hospital.

(Continued from page 198.)

Of Contagion.

The Degradation of Power in Cells.—Some may consider that many of the remarks which I have ventured to make very cursorily, with reference to the degradation of power in cells induced by altered conditions, are favourable to the doctrine that creatures of a lower type of organisation may result from an alteration of the conditions in which the higher animals live; but, as will have been noticed, I do not regard the masses of germinal matter which I suppose to be the *materies morbi*, as specific organisms at all. Not only pus corpuscles, but other cells in the organism have been wrongly termed *parasites*. They cannot be regarded as species, since they are but the degraded descendants of certain cells, the degradation of which has resulted from the unnatural conditions under which their existence and multiplication have been carried on. There may be continual degradation affecting the descendants of one of the higher cells without the production of one of the known lower types of organisation, and there may be continued advance affecting those of any particular species without the character of any other species being assumed. These points have an important bearing upon the interesting question of species, for if contagious diseases were due to special animal or vegetable organisms we should anticipate that every different disease would depend upon a different species of low vegetable or animal organism, and when a new type arose, we should have to assume the development of a new species. Upon the theory I have ventured to bring under your notice, however, not only is the propagation of the disease explained, but the different types assumed by the affections at different times, and the production from time to time of altogether new contagious diseases, are in a manner accounted for. It seems that degradation in power may result from an increased supply of pabulum only. Nor does this apply to cells alone, but to the entire organism—nay, even to the race. Make living too easy, remove to too great an extent the *restrictions* which are necessary to health and vigour, and the altered conditions, however some may envy them, will inevitably lead to the deterioration, if not to the destruction, of the organism.

Contagion—The Passage of Germinal or Living Matter from one Organism to Another.

Although the subject of *contagion* may seem to have little connection with inflammation, I find that the consideration of the properties of living pus leads me into the discussion of the nature of contagious diseases, and I shall therefore venture to offer some remarks upon this most interesting subject.

Of the Vitality of Pus.—The vitality of the germinal matter of pus is exceedingly great. Pus multiplies very rapidly, and certain forms may be carried from one living organism to another without being destroyed—without losing their vitality. It is most interesting to notice that the faster the pus grows the more varied the conditions under which its life may still be carried on. Certain conditions which would have destroyed the life of the germinal matter of an epithelial cell may not destroy that of a pus corpuscle; the pus corpuscle may indeed flourish under conditions which would render the existence of the germinal matter of a normal cell quite impossible; and this power of existing under various conditions seems to increase as the multiplication of the mass of the germinal matter of the pus corpuscle proceeds. The capacity for living and growing under a variety of different conditions may proceed to such an extent that germinal matter originating in the organism of an animal may grow and multiply in that of man, and *vice versâ*. And we know that certain contagious diseases originating in animals may pass to man, and it is not improbable that some of those emanating from the human subject may be communicated to animals.

As I have stated before, this power of living is so remarkable that the pus corpuscles, or portions of the pus corpuscles, may be transmitted though the air without loss of vitality. It is in this way may be explained, I think, certain phenomena known in connection with the propagation of purulent ophthalmia and other diseases in which pus is carried from one person to another. The pus corpuscles produced on the surface of the conjunctiva, or, rather, the minute offsets from them, may be transported through the air, or by clothes, etc., and, coming into actual contact with a conjunctiva properly prepared by morbid processes for the supply of nutrient matter to these corpuscles, they grow and multiply. In this way pus corpuscles, or portions of pus corpuscles, perhaps not the fifty thousandth or the hundred thousandth part of an inch in diameter, may be transferred from one organism to another. Allied facts may be observed with reference to the propagation of gonorrhœal pus; and I venture to infer that the poison of syphilis is really germinal matter, which passes in a living state from the infected to the sound organism, and grows and multiplies in it. Many of the highly important facts recently discovered by Prof. Boeck support this view.

Certain living particles which have directly descended from the living or germinal matter of the tissue or fluids of an unhealthy organism may be transmitted in a living state to a healthy organism, and, being there supplied with proper pabulum, grow and give rise to the production of new particles like themselves; and although the nutrient material may be somewhat different, yet they grow and multiply, as they are capable of living under a variety of different conditions. The action of vaccine lymph is, I think, due to the growth and multiplication in the vaccinated person of living particles which existed in the lymph taken from the vaccine vesicle. Nor is there good reason for denying the possibility of such living particles retaining their life when imperfectly dried, since we have the striking fact that many of the lower organisms retain their life although desiccation has been carried to a very considerable extent. We know that complete desiccation cannot occur without producing the death of any living particles; but comparative desiccation may actually occur, and the small amount of living matter remaining may be sufficient to induce the changes with which we are familiar.(a)

The Nature of the Poison of Contagious Fevers.—I think the above general views may be extended to fevers, which, I believe, are due to the passage from one body to another of living particles. These living particles consist of germinal matter, and have descended from the germinal matter of the organism itself. Many have attributed diseases of this class to the introduction into the body of a very low form of vegetable organism. But it is very doubtful if the growth and multiplication of vegetable germs can proceed in the circulating fluids of a living body without causing death in a very short time; for the conditions favourable to their existence and multiplication are incompatible with the life of the germinal matter of the higher tissues. The germination and multiplication of very low vegetable or animal organisms in man and the higher animals are an indication not only that the death of the tissue has taken place, but that it is passing into a state of decomposition. It is true that bacteria have been detected in the blood of patients during life, but hitherto only in cases shortly before death, at a time when the blood in which they grew and multiplied was no longer fit for nourishing the tissues, and was itself passing into decomposition. Millions of bacteria exist in the softened outer portions of the fibrinous clot of an aneurismal sac, and, therefore, in such close proximity to the blood, that it is almost certain that, from time to time, some pass into the current of the circulation; but if this were the case they would be destroyed or else so altered that they would cease to multiply. For, before multiplication could take place, changes must have occurred in the composition of the blood which would render it incapable of supporting the life of its owner.

Many of these contagious maladies have been regarded as different species of "foul air" diseases. They are commonly termed *zymotic* or *fermenting diseases;* but no one has shown that these poisons originate in air, or that they really are of vegetable origin. Nor is it probable that they are a species of animal—a sort of parasite, as some have supposed. Nor, there is good reason to believe, would such poisons have ever

(a) Many of the observations in the following paragraphs have been added since the lecture was delivered.

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arisen if man had known the exact conditions necessary to ensure a healthy state of existence. Man has produced these pests himself by establishing, without due care, artificial conditions of existence in which over-crowding, dirt, and terribly diminished supply of air play no unimportant part. Nor let us conclude too hastily that these are *necessary* visitations. The results of scientific observation and practical experience tend to show that such scourges are preventible. Not only so, but there is much to convince us that many of these diseases are not only fostered and propagated, but actually caused, in the first instance, by ignorance, obstinacy, and indolence in domestic management.

The above considerations seem to me to lead to the conclusion that the *materies morbi* concerned in the propagation of various contagious diseases is not a low form of animal or vegetable organism, but germinal matter which was originally derived from that which exists normally in the higher organisms. The living germinal matter forming the *materies morbi* of contagious diseases bears somewhat the same relation to the normal germinal matter of the blood, lymph or tissues, that a pus corpuscle does. Like pus, it results from the too rapid growth of the germinal matter. It is much to be regretted that the question cannot be definitely put to the test of experiment, but it will be admitted by all that the conditions which are favourable to the propagation of these contagious diseases are the very conditions which we should imagine would be favourable to the maintenance of the vitality of such masses of living matter as are supposed to be the active agents. If it were possible to produce this class of diseases in frogs or newts, I would almost undertake to make out the nature of the morbific agent as well as the changes which take place during the course of the disease; but as our observations are necessarily limited to man and the higher animals, in which minute investigation is remarkably difficult, much that I shall say will be but conjecture, although my conclusions are supported by many considerations.

It is not to be supposed that any one unacquainted with physiology would believe that a terrible and fatal malady could arise from the introduction into the body of a minute germ weighing less than the $\frac{1}{100,000}$th of a grain; but to those familiar with *vital* phenomena many facts will at once occur which afford considerable support to such a doctrine. The multiplication of bacteria and low animal and vegetable organisms, so very minute and transparent that they are scarcely visible even under a power magnifying 3000 diameters, —the subdivision of pus and mucus corpuscles which may be *seen* under the microscope,—not to mention the wonderful powers residing in the infinitesimal amount of matter constituting the spermatozoon, are facts which must at once destroy the validity of objections grounded upon the minuteness of the particles of living matter supposed to be the active agents.

The origin, formation, transmission, and effects of the different contagious poisons which affect man and animals will, no doubt indeed, be regarded as *mysterious* and *inexplicable* by those who support the dogma that living things, like lifeless ones, are influenced by physics and chemistry only. But those who study the phenomena of living beings from a more general point of view will see that these phenomena fall into the same category as many other actions and changes peculiar to living beings. By attentively studying effects we may reasonably hope to learn something of the nature of the forces concerned in their production; but if we adopt the arbitrary dictum that all the phenomena of living things are due to physical and chemical changes only, we shall not be likely to progress very far in such an inquiry as the present one.

The Vitality of the Poison of Contagious Diseases.—The fact of the poison of contagious diseases retaining its activity for some time after it has been detached from the organism in which it was produced is not, as would at first, perhaps, appear, opposed to the view that this poison is living germinal matter directly descended from normal germinal matter; for certain kinds even of normal germinal matter retain their vitality for some time after they have been removed from the organism in which they were produced. I have demonstrated that the cells of the liver and other epithelial cells retain their vitality after they have been transferred to a glass slide, and a piece of skin and some other tissues may be detached, and their temperature very much reduced, without destroying their life; for if they be replaced in their proper position they reabsorb nutrient material and again become an integral part of the organism from which they had been removed; proving that the masses of germinal matter retained their vitality during the whole time they were separated—or they may even be removed from one organism and made to grow upon another organism of the same kind. As is well known, parts of the body may be exposed to extreme cold for a considerable time, so that sensation is destroyed and the circulation stagnates, without the death of the germinal matter of the tissues taking place; and as is well known, the death of many textures of the body does not occur until many hours after the cessation of the heart's action and respiration.

But there is still a stronger argument. We have the positive fact that pus will live for a considerable time in urine, and therefore we are quite justified in assuming that other kinds of germinal matter allied to pus, and capable of living under a still greater variety of conditions than pus, would retain their vitality in urine, fæces, and other excretions, as numerous facts establish is the case with regard to some forms of contagious matter. As we have positive evidence that minute particles of pus may pass through the air, or remain on sponges, clothes, etc., for many hours without their vitality being destroyed, is it not reasonable to assume that the living matter of contagious diseases, supposing it to be allied to pus, should retain its vitality under the same or under yet more adverse conditions? Does not this view receive confirmation from our experience with regard to the conditions which are favourable to the propagation of contagious fevers? A warm, moist atmosphere, small close rooms, with curtains, carpets, and plenty of clothes, rags, etc., so arranged as to cause air to be pent up in confined spaces with very slow interchange,—are the circumstances which favour the spread of contagion; and a disposition to prevent currents of air from finding their way into every part or into any part of an apartment is a mental characteristic of many of those who are too often sufferers from the worst forms of contagious diseases; while has not experience taught us that the converse of all this almost certainly prevents the spread of contagion, destroys the active material, or renders its assaults perfectly harmless? And would not free change of air, washing, frequently shaking of clothes, extreme cold, dryness, or a very high temperature be likely to destroy the vitality of such particles of living matter as I suppose to be the active agents in the propagation of contagious disease?

It is not probable that the particles of germinal matter grow and multiply when removed from the living body. Multiplication could not take place as they are passing through the air; nor is it likely that their process could occur in particles attached to dry clothes. But the question whether such particles may grow and multiply in moist substances, as in excrementitious matters, remains open. It would be most interesting if pus or any allied form of germinal matter could be caused to multiply artificially, and the fact would doubtless excite much highly valuable speculation; but at present the experiments instituted for the purpose of determining this question have not afforded satisfactory results. No doubt multitudes of the germs of many contagious diseases are very frequently coming in contact with us; but, instead of multiplying at the expense of our nutrient juices, they die and become harmless. But, as is well known, there are conditions of the system which are favourable to the growth and multiplication of such disease-producing germs, and it is for us to ascertain exactly what these conditions are. There is much more hope that we may learn how men may be enabled to resist contagion or be protected from its influence, than that we shall ever be able either to extirpate the contagious poison or even to confine it within a certain area. Moreover, the circumstances adverted to in this paper render it almost certain that if every disease-producing germ in existence could be destroyed at once, new ones—perhaps not of quite the same nature as those now existing, but very closely allied to them—would be generated. Although a state of society in which such care would be taken of the public health as would entirely prevent the production of disease-producing germs is theoretically conceivable, it is practically impossible that such a state could be established in the present condition of the civilised world.

(To be continued.)

CASUALTIES.—A boy has been killed by a railway fog-signal. He exploded it; a bit entered his throat, and he bled to death. A man named Howard has died of hydrophobia in Westminster. A veterinary Surgeon has died from the bite of a fly. A tradesman, staying at Llandudno, has died from fright at an accident to a boat in which he was taking an excursion.

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ORIGINAL COMMUNICATIONS.

CASE OF EPILEPSY, WITH PAINFUL MENSTRUATION, TREATED SUCCESSFULLY BY MEANS OF ICE.

By JOHN CHAPMAN, M.D., M.R.C.P.

THE following are the particulars of the case which was mentioned as "Case II." in my communication to this journal, July 18, 1863:—

February 24, 1863.—H. M., a girl, aged 17, began to have fits between three and four years ago. They are of two kinds —*le grand, et le petit mal.* The great fits occur at intervals of one, two, and sometimes three months in the summer, but in the winter much more frequently, often twice a fortnight. They are of the usual epileptic type. The little fits generally occur about twice a-day, excepting during the first few days after that on which she has had a large one, and usually in the morning and evening. Each morning when getting out of bed, and trying to stand up, she becomes giddy and faint, her legs tremble beneath her, and she often falls backwards on the floor. The evening attacks are different: during them the room she is in seems to become alternately very small and very large; meanwhile she has violent singing in her ears; when the room appears of its real size again, the fit is over.

She suffers much from headache, is depressed, and melancholy. Complexion dusky and sallow; pupils very large; feet habitually very cold; hands generally so. Catamenia last only a day; they are preluded by general feverishness, pain, and heat in the head, and especially by violent pain in the region of the left ovary, which is tender on pressure, and increasingly so immediately before the patient is "unwell," and are accompanied by fearful cutting pains in the womb. She is also troubled with pain in the right mamma, which is larger than the left. Pulse 120.

She has been an out-patient at the Soho Hospital for Women during two years; then at the Middlesex Hospital upwards of a-year; and, finally, at the National Hospital for the Paralysed and Epileptic about nine months.

I ordered her to apply iced-water along the whole length of the spine during half an hour three times a-day, to wash all over every morning in cold water, to wear flannel drawers and armlets, to take abundant physical exercise, to take two pills containing belladonna and quinine twice a-day, and an aperient pill occasionally if the bowels should be confined.

April 14.—Has had no large fit. During the first week of treatment the little fits, together with the singing in the ears, lessened and became less frequent, and before a fortnight had elapsed they ceased altogether. The patient feels and looks immensely better. Tongue clean; bowels regular; pulse 84. Treatment as before.

May 12.—No fit, great or small. She has been steadily improving. The catamenia continued the last time nearly a week, and were neither preluded nor accompanied by pain; the tenderness and pain of the left ovary, as well as of the right mamma, are gone; the feet and hands are always warm; she has headache very rarely, and when it does occur very slightly; the complexion is much brighter, and the expression much more cheerful. Bowels regular; pulse 102.

26th.—In consequence of feeling so well, she left off the cold applications to the spine as well as the pills; and on the 19th inst. had a fit lasting about three minutes. To apply ice until it melts along the whole spine three times a day.

April 24, 1865.—It is now exactly two years and two months since I began to treat this patient. She is looking extremely well. Her feet and hands continue warm; pulse 80; tongue clean; bowels regular. Her little fits have never recurred. Since May, 1863, I have seen her about a dozen times; but as she has been quite free from her little fits, and as her general health has been unusually good, I have not been able to prevail upon her to take the trouble of using ice as ordered. She has used it for a few days occasionally, and has then omitted it for months together. Finding that in consequence of leaving off regular treatment as soon as her symptoms subsided, she soon began to menstruate inefficiently again, and to have a return of pain at those times, I felt confident that the state of the circulation in her nervous system was again becoming unhealthy, and that it would soon induce more fits. I therefore ordered ice to be applied to the lumbar and lower dorsal region daily. My request was not complied with, and in August, 1863, she had another fit, and in December another. In 1864 she also had two—viz., one in October and one in November; and again, in March, 1865, she has had one. She has generally come to me immediately after each fit, and, having been duly reproached and admonished, has promised to comply with my injunctions; but at each succeeding visit has confessed her neglect.

> "The devil was ill, the devil a saint would be;
> The devil got well, the devil a saint was he."

The right mamma of this patient, which, as stated above, was larger than the left when I began to treat her, became of the same size by November 12, 1863.

SMALL-POX AND VACCINATION;

BEING AN INQUIRY INTO THE DIMINISHED EFFICACY OF VACCINATION AS A PROTECTIVE IN THE PRESENT DAY, AS COMPARED WITH ITS RESULTS IN THE HANDS OF JENNER AND HIS IMMEDIATE SUCCESSORS.

By THOMAS MASSEY HARDING, M.R.C.S.

WHEN Dr. Jenner discovered the application of cow-pox inoculation to the protection of human beings from small-pox, he indulged the dream that his discovery was ultimately fated to exterminate small-pox from the long list of human maladies; and most of his immediate successors writing on the subject took up this idea, and declared that if vaccination became universal the small-pox would be unknown. Experience has proved that this idea is not destined to receive absolute confirmation, and could only have arisen from a limited and imperfect knowledge of the subject. The fundamental error of Dr. Jenner and the writers of that time is contained in the proposition laid down that no person who has been successfully vaccinated and passed regularly through the successive stages of the vaccine disease can at any future period of his life be infected with the poison of small-pox. The cause of this error lies in mistaken views of the true nature of the vaccine disease. It is impossible to estimate correctly the value of vaccination without first determining precisely what the vaccine disease is.

Dr. Jenner himself, with the happiness of genius, expressed correct views on that subject, and was the first to understand and explain the true nature of cow-pox. He says:—"This event gives strength to what I have from the commencement of my experiment imagined—that the latter (small-pox) is a malignant variety of the former, the parental root being cow-pox." Also Dr. Jenner, in the third part of his first treatise, page 151, says:—"In my first publication on this subject I expressed an opinion that the small-pox and the cow-pox were the same diseases under different modifications."

Dr. Woodville, Physician to the Small-Pox Hospital, concurs in this opinion, and considers small-pox and cow-pox as very closely allied in their nature—indeed, "to a very principal point essentially the same."

We have in these words the first enunciation of the "identity theory;" and a rational consideration of this principle would have led to a true estimate of the protective power of vaccination, and also to an explanation why vaccination is protective. Subsequent writers departed altogether from this line of thought, denying most vehemently the identity of the two diseases. They sought to explain the protective efficacy of vaccination by the theory not of identity but antagonism.

This notion that cow-pox is a something radically and essentially distinct from small-pox—in fact, an antagonistic principle or antidote—has been very generally received, and is the common opinion of the world at this moment. I have found in conversation with Medical men, clergymen, and other highly educated men that the idea of the antagonism of cow-pox and small-pox lay at the bottom of their ideas concerning the protective agency of vaccination.

Imbued with this notion, the early supporters of vaccination strenuously maintained the correctness of the proposition that no person who had been successfully vaccinated could by any possibility take small-pox, and whenever any cases adverse to this opinion were brought forward, they sought to throw discredit on the facts, or when that failed, they invariably endeavoured to explain away the circumstance by saying that the true and genuine cow-pox had not been produced, but what they called the "spurious." All this was a necessity of their position, the inevitable result of the doctrine of antagonism, since if any failure of vaccination were admitted, the theory of antagonism could no longer be maintained. I have myself

experienced much pleasure in tracing the conception and growth of the theory of the identity of the two diseases through the earlier writers to its complete proof in the experiments of Mr. Ceeley, of Aylesbury, Bucks. A full and complete account of these experiments, from the pen of Mr. Ceeley himself, will be found in the eighth volume of the *Transactions* of the Provincial Medical and Surgical Association. Next to Jenner, no man has done so much to promote a correct appreciation of vaccination as Mr. Ceeley, and the thanks of the community are due to him for his arduous and unwearied investigation of this subject. For a full account of his experiments the reader is referred to the volume quoted above, and to the admirable *resumé* contained in the report of the Vaccination Section in the first part of the same volume; suffice it to say that the inoculation of Sturks—young heifers under twelve months old—with human variolous matter was followed by complete success; perfect vaccine vesicles were produced, and the matter taken from these vesicles produced the genuine vaccine vesicle in the human arm.

Pustular Eruption.—There is one circumstance which appears to me to have a decided bearing upon the question of the identical origin of the human and vaccine disease, viz., the occurrence of secondary pustular eruption about the body after vaccination.

The great feature of vaccination is, undoubtedly, that it produces a local manifestation only, together with a general influence upon the blood; but it has certainly happened that, in primary vaccination,—*i.e.*, direct from the cow—and also in vaccination a few removes from primary, a general eruption has occurred over the body similar to small-pox.

In the vaccinations performed at the Small-Pox Hospital, three out of five of the first five hundred were followed by a general pustular eruption, in the next hundred about one in five, in the next one in eight, in the next one in fourteen, and so on, gradually diminishing in frequency in proportion to the number of removes from the primary vaccination. By primary vaccination, I mean vaccination when the matter is taken directly from a cow affected with the casual cow-pox. Dr. Jenner explained the occurrence of secondary pustular eruption in persons vaccinated at the Small-Pox Hospital by supposing that either the virus had been accidentally contaminated by variolous matter, or that the patients were affected by the variolated atmosphere of the Hospital. The first explanation was disproved by Dr. Woodville, who found secondary pustules after the use of vaccine lymph supplied by Jenner himself. The idea of the variolated atmosphere was a plausible explanation, but its probability is much diminished by the circumstance that similar pustular eruptions occurred in the practice of gentlemen and clergymen practising vaccination in country districts with vaccine lymph of undoubted purity. It is abundantly evident, from the records of early vaccination, that pustular eruptions simulating small-pox occurred, in many instances, in the practice of various vaccinators in different localities, and that in these cases the vaccine matter employed was, as far as could be ascertained, uncontaminated.

Mr. Addington and the Rev. Mr. Holt, Rector of Feamère, give illustrative cases.

Dr. Auber has the following remarks:—"These eruptions have given room for discussion among vaccinators. The disputes on this point are terminated; we acknowledge that cow-pox can produce a pustulous eruption, but it is a rare occurrence." He asserts also that matter taken from these pustules will produce, not the small-pox, but the cow-pox.

Bell on "Cow-pox," page 41, says:—Some time between the eighth and tenth days an eruption of small pimples, or, rather, a rash now and then appears on different parts of the body bearing a strong resemblance to that which is frequently observed before the eruption of the inoculated small-pox.

All this receives complete corroboration from the observations of Mr. Ceeley, whose experience on such matters may be considered conclusive. In primary vaccinations Mr. Ceeley observed the development of secondary pustules about the arm and shoulders. Mr. Ceeley says:—"There is much irregularity in the period of full development of the vesicles, *i.e.*, after primary vaccination, and the areola is frequently not complete till the eleventh, twelfth, thirteenth, fourteenth, and even sixteenth day. About this stage of the areola, especially on children, small supernumerary vaccine vesicles in miniature often appear within its limits (*i.e.*, of the areola), sometimes on the shoulder, and still more rarely on the face and body."

To these facts I may add some still more striking examples afforded by experience in India. The variolous disease was extensively prevalent among the horned cattle, and was very fatal; the eruption was diffused over the whole of their bodies. Mr. Brown, stationed at Silket, took matter from the diseased animals, and with it inoculated several children. The ordinary vaccine vesicle was said to have been produced. After this matter had been employed for one or two months, cases occurred in which the vaccination was followed by an eruption spread over the whole body, accompanied with fever, and one case proved fatal to the vaccinated child. The same thing occurred in the practice of Mr. Wood, at Gowalpura, and though no fatal case is recorded in his experience, yet many cases of great danger are reported, and the impression made upon his mind was so strong that he thought it would be safer to employ human variolous matter than matter taken from those animals which were suffering from a very virulent form of the disease. Strongly impressed as I am with the opinion of the degeneracy of the vaccine lymph at present employed, and which opinion I intend to illustrate in a subsequent section, I think this fact should always be borne in mind, and that great care should be used in the employment of primary vaccination; care in selecting matter from animals of healthy constitution, and which are not affected with a virulent form of the casual disease. To accumulate proofs respecting a circumstance already so well established may be unnecessary. One other fact may be adduced which is recorded by Dr. Waterhouse, of Cambridge, Massachusetts, in a letter addressed to Dr. Jenner and given in the Report of the Vaccination Section of the Provincial Medical and Surgical Association, vol. 8. He writes: "At one of our periodical inoculations, which occur in New England once in eight or nine years, several people drove their cows to an Hospital near a populous village, in order that their families might have the daily benefit of their milk. These cows were milked by persons in all stages of small-pox; the consequence was, the cows had an eruptive disease on their teats and udders so like the small-pox pustule that every one in the Hospital, as well as the Physician who told me, declared the cows had the small-pox."

Protective Efficacy of Vaccination.—The complete establishment of the identity theory furnishes us at the same time with a rational explanation of the immunity from small-pox conferred by vaccination and a correct estimate of the value and amount of that immunity. It has been asserted that the protective efficacy of vaccination is equal to that of small-pox itself—*i.e.*, that a person who has been vaccinated is no more likely to take small-pox under exposure than one who has already had the disease. Dr. Jenner was in the habit of testing the vaccination by afterwards inoculating those who had gone through the successive stages of the vaccine disease with variolous, and in every instance he failed to communicate small-pox. He drew the conclusion that no person who had passed through the vaccine disease could take small-pox. No doubt Dr. Jenner's own experience warranted such an opinion; but the experience of more than half a century has not confirmed it, nor does the theory of identity justify such a conclusion. There are many specific diseases which affect the same individual but once in his lifetime, but in all of them exceptions to the rule are of no unfrequent occurrence. Moreover, cow-pox and small-pox are indeed identical in their origin; but it must be remembered that cow-pox is not simply and absolutely small-pox, but small-pox altered, modified, and mitigated by its transit through the cow. And that some actual change is wrought in the variolous poison by such transit is proved by this very important fact, that while small-pox is contagious the vaccine disease is not contagious or infectious, and cannot be propagated by any means other than by inoculation. The cow-pox does not protect against itself. Dr. Jenner himself says that a man may have cow-pox several times, and the results of revaccination prove that the vaccine disease may be excited more than once in the same person; about 34 out of every 100 revaccinated persons developed a perfect vaccine vesicle. This want of power in the vaccine virus to protect from recurrent attacks seems to me to be

> "That shadow of mischance
> Which cuts off the fiery highway of the sun,
> And isles the light in the offing."—*Tennyson.*

Now, since vaccination is not sufficient to prevent entirely attacks of the same disease, it may have been inferred that it was equally incapable of completely protecting from small-pox, and the experience of nearly seventy years has shown that to be the case. The protection afforded by vaccination is not absolute, but relative. 1st. Unvaccinated children are more easily affected with small-pox than those who have

been vaccinated; and 2ndly. Children who have been successfully vaccinated, and are afterwards smitten with small-pox, have the disease in a milder form. The proofs of the first proposition are to be found in the original experiments of Dr. Jenner, and a full and complete exposition of this great truth may be found in the papers of the General Board of Health relating to vaccination. As these blue books are accessible to everybody, I shall not reproduce them here.

Post-vaccinal small-pox is, however, very frequent; in fact, since 1798 thousands, and possibly hundreds of thousands, of such cases have occurred, and they are undoubtedly on the increase. The mortality from small-pox in the unvaccinated, of cases taken generally, is 35 per cent., but of children under five years of age it is 50 per cent. Of those who recover, a great many suffer permanent disfigurement, some loss of sight, and others have their health generally deranged. The mortality among the vaccinated attacked by small-pox is 7 per cent., taken generally; but among what may be characterised as badly vaccinated it is 15 per cent.

I consider this part of the inquiry the most important and practically useful of any, and it is in the power of general Practitioners to throw a vast amount of light upon this question. I myself have had an opportunity of witnessing a very severe invasion of epidemic small-pox in my parish district—viz., No. 3 District of the Stourbridge Union, comprising the Lye, Wollescote, and Old Swinford. I have kept a record of every case that has come under my notice from the commencement of the epidemic to the present time (June 21, 1865), and I subjoin the result:—

Vaccinated	104,	of which	8 died.
Unvaccinated . . .	41	„	7 „
Had small-pox and cow-pox at same time . . .	1	„	1 „
Uncertain	1	„	1 „
Had small-pox before . .	6	„	— „
	153		17 died.

The increase of post-vaccinal small-pox may, I think, be admitted by all, for if we consider the bitter and violent opposition offered to vaccination for some years after its discovery, we may feel quite certain that if the anti-vaccinists could have adduced any number of instances of small-pox after vaccination, they would have succeeded in throwing discredit on the operation. The supporters of vaccination took their stand upon the theory that the vaccine disease was an antagonistic principle, and the failure of the antidote in any number of cases would have been a heavy blow and great discouragement to the new practice. We may safely infer that post-vaccinal small-pox was rare in the early days of the practice, and it is a most important object of inquiry why post-vaccinal small-pox is on the increase. I am of opinion that there are two principal reasons—

1. Bad vaccination.
2. Degeneracy of lymph.

1. *Bad Vaccination.*—Every writer, from Dr. Jenner to the present time, has insisted upon the necessity of very great carefulness on the part of the vaccinator upon the following points:—To take the matter from a healthy child, not later than the eighth day, from a perfectly normal, well-developed vesicle. The Privy Council, in their instructions to public vaccinators, have added an injunction that not less than four punctures should be employed. It is obvious that the vaccinator ought to be able to form a correct judgment respecting the health of the child from whose arm he is about to take lymph, and also that he should thoroughly understand the various stages of the vaccine disease. In order to do this, he should be a qualified Medical Practitioner. It is further necessary that he should have an opportunity of continuing the vaccination from arm to arm by a regular supply of cases. The arrangements for public vaccination are not satisfactory on any of these points. It is true that vaccination contracts are not made with any but qualified Practitioners, but no care or precaution is taken to insure the vaccination being actually performed by the persons with whom the contract is made, and I am sorry to say that very great laxity prevails among Medical Practitioners on this point. It is a very common thing to confide the vaccination to pupils who have only been a few months apprenticed, whose energies are stimulated by the payment of a per-centage upon the number of cases, the master never seeing the children at all. It is also a common practice to pay an unqualified assistant a small salary, with a per-centage, on the vaccination. I have also known instances where arrangements have been made with druggists to vaccinate the children, the druggist to receive a proportion of the fee.

Under such circumstances, we need not wonder at the very painful disclosures which are occasionally made before Boards of Guardians respecting the vaccination charges. It is no uncommon thing to find fictitious entries in the vaccination book of names of children who have never existed except in the imagination of the young gentleman unduly stimulated by the promise of sixpence per case. I scarcely think that any one can maintain that such are proper persons to carry out a system of public vaccination. This much, however, is quite evident, that Boards of Guardians, in making contracts with qualified Practitioners, do so with the intention of having the work actually performed by the contracting parties themselves.

There is also another evil. Vaccination contracts are frequently given to all the qualified Practitioners in the locality—a mistaken liberality, the consequence of which is that there are too many vaccinators. No doubt this plan leads to the greatest number of vaccinations, but it also induces a considerable amount of bad vaccination. Mr. Badcock, of Camberwell, formerly of Brighton, whose labours for the attainment of a constant supply of good lymph are sufficiently known to have acquired for him the most honourable mention in the "Encyclopædia Britannica," says in a letter addressed to me, February 22, 1865, "Vaccination is in a wretched state, and getting worse instead of better. More than 60 per cent. of the cases admitted with small-pox at the London Small-pox Hospital last year had been previously vaccinated." Where there are several vaccinators in one district it is impossible for any one of them to maintain a regular supply of lymph from arm to arm; frequent resource is had to foreign sources, and lymph is employed that has been kept a long time. Competition arises as to who shall vaccinate the greatest number, and this, combined with scarcity of lymph, frequently leads to the use of lymph from irregular or imperfectly developed vesicles. The ill effects of employing vaccine lymph which has been kept a long time, or of taking matter from such irregular or imperfectly developed vesicles, is propagated throughout the series; like begets like, and the matter from an imperfect vesicle produces in its turn an irregular and spurious vaccine vesicle. This is propagated by repetition through an endless number of cases, and a large number of persons are thus only nominally protected by vaccination. Confidence in the protective efficacy of vaccination, in such cases ill merited, induces unnecessary exposure to the contagion of small-pox and a disregard of the precautions against the spread of the disease. Another effect of competition is, that in order to secure a large number of cases unbounded deference is paid to the caprices of the applicants, who always wish to determine for themselves from which children their own shall be vaccinated. The power of selection—the most important function of the vaccinator—is thus practically transferred from him to the parents, who may, indeed, possess some knowledge of the hereditary tendencies of their neighbours, but who certainly have no knowledge or judgment respecting the progress of the vaccine vesicle itself; they frequently, therefore, desire a child to be vaccinated from the arm of a child with whose parents they are acquainted when the vesicle is small, irregular, and imperfect. I maintain, therefore, that every public vaccinator should have a wide area at his command to enable him to keep up a regular and constant supply of lymph, and also to place him in a position thoroughly independent of the applicants themselves. A vaccinator so situated will not disregard the representations of the parents respecting the hereditary tendencies of the different families; but will be able to make his own selection of the children from whose arms he derives his supply of lymph. The first evil—viz., the employment of unqualified deputies—will also be checked by the appointment of fewer vaccinators, and a further check may be imposed by requiring the gentleman who undertakes a vaccination contract to accompany his bill of charges with an affirmation of this kind:—

"'I affirm that all the cases of vaccination charged in my account have been actually vaccinated by me, and also inspected by me on the eighth day.'"

I should also recommend that the appointment of public vaccinators should be transferred from boards of guardians to a central Government authority, and that the whole system should be under the management of a qualified Medical superintendent, whose duty it would be to receive the reports of the public vaccinators. I would also strongly urge upon all Practitioners the necessity of keeping a record of all cases of small-pox, marking especially the intensity of the attack,

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and whether the patient had been successfully vaccinated. If these reports were accurately kept by all Practitioners and regularly forwarded to an officer, as suggested above, a vast amount of information on the protective efficacy of vaccination would be accumalated, and data afforded for the solution of many problems which are at present undecided from want of sufficient evidence.

(To be continued.)

ON ACUPRESSURE FOR THE ARREST OF ARTERIAL HÆMORRHAGE:

WITH ILLUSTRATIVE CASES TREATED IN HOSPITAL.

By WM. KEITH, M.D., M.R.C.S.E.,

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For more than twenty years the use of needles for arresting arterial hæmorrhage has been familiar to the staff in the Aberdeen Hospital, and has been frequently practised by me, and I doubt not by many other Surgeons over the length and breadth of the land. Who ever thinks of using a ligature to arrest the bleeding caused by an operation for harelip, or for the removal of a cancer from a lower lip? A lady's sewing needle and a twist of silk or wire round it are the means employed by all. A branch of the temporal artery, so large as to occasion great loss of blood, was opened by the bite of a large leech, a lady's needle with one twist of silk thread at once arrested it. Assisting an elderly but very able Surgeon some twenty years ago at the operation for lithotomy, he would give a trial to Sir Benjamin Brodie's broad bladed beaked lithotomy knife as a cutting gorget, and wounded the artery of the bulb; the gush of blood was profuse and alarming, and the vessel so deep in the wound as to baffle one or two attempts to secure it by ligature. The point of a sharp hook was passed under the left ramus of the pubis, and the pudic artery, to my conviction, seized below where the artery of the bulb comes off. The hemorrhage was instantly arrested by my looping a ligature over the point and heel of the hook—the instrument being held to one side—the operation was proceeded with and finished successfully, the man making a good recovery. The hook was retained five days in the wound, when it ulcerated its way out, no hæmorrhage following. Improving on this idea, I have always had beside me sharp hooks connected with the handle by a screw, so that the handle can be detached while the hook remains in the wound. By this mode I have secured the deep palmar arch when wounded by the explosion of a powder flask, thereby escaping the necessity of cutting down on and securing the three arteries of the forearm—a practice I should deprecate highly.

The use of needle-pressure, therefore, is at this date no innovation in Surgery; and its more frequent use in stopping hæmorrhage will at an early date be accepted as a great advance in operative Surgery. The merit of its introduction is due to Professor Simpson, of Edinburgh. From him emanated the suggestion of withdrawing the needles when occlusion was accomplished, thereby leaving the wound clear of foreign matter entirely. In the use of my hook, trammelled by old ideas, I left it in the wound in every instance until it ulcerated through the vessel. Now the needle is withdrawn in from four to forty-eight hours, the straight needle coming out with greater ease and less risk of disturbing the tissues around than the hook would. I am, therefore, prompted to put my testimony on record to the sufficiency of acupressure for the arrest of arterial hæmorrhage. I would refer to the interesting and exhaustive communication from my friend and colleague, Professor Pirrie, published in the *Medical Times and Gazette* for July 1 and 8, as containing every instruction necessary as to the various modes recommended in using the needle-pressure; and I further express my entire concurrence in every sentiment therein expressed. I was present, and assisted at the greater number of the operations there recorded, and bear testimony to the verity of the reports.

Cases in which, after Amputation, Acupressure was employed for the Arrest of Arterial Hæmorrhage, in the Aberdeen Royal Infirmary, by Dr. Keith.

Case 1.—*Leg—Flap Operation.*—William F., aged 14. Diseased ankle-joint. On January 6, 1864, amputated the leg at mid-length; three needles employed, looped over. Two of the needles were removed at the end of forty-eight hours, and the third one at the end of seventy-two hours. No oozing after the operation, and no hæmorrhage at or after the removal of the needles. The wound was closed by wire sutures, and healed by first intention.

Case 2.—*Thigh—Flap Operation.*—Mrs. M., aged 29. Diseased knee-joint of three years' standing. On November 16, 1864, amputation at the middle of the thigh by the flap operation. Four long bead-headed shawl-pins with wire loops were employed for securing the larger vessels, and two small needles for muscular branches. Wound closed by wire stitches. No hæmorrhage followed; the after ooze seemed less than usual. Seventy-two hours after, the two small needles were removed: at the end of other twenty-four hours, three of the long pins were withdrawn; and, lastly, the long pin controlling the femoral artery was taken away one hundred and twenty hours after the operation. Not a drop of blood followed the removal of any of the pins. The wire sutures, causing no irritation, were not removed till December 4, eighteen days after insertion, by which time the wound was whole. It adds interest to this case to state that it was announced beforehand that acupressure was to be put on trial, and the case was consequently closely watched from its commencement to its close.

Case 3.—*Forearm—Flap Operation.*—Peter P., seaman, aged 54, recurrent fibrous tumour, extending from the palm of the hand up into the forearm. On January 21, 1865, amputation performed by flap operation, six inches above the wrist-joint. The bleeding from three vessels completely controlled by a long pin and one needle. Erysipelas, present in the ward at the time, affected the stump for a few days, but in no way hindered the removal of the needles or the union of the wound. In four weeks he went home to Shetland sound and whole.

Case 4.—*Leg—Flap Operation.*—Lauchlan G., aged 18, railway porter. Had his left foot crushed to pulp by the wheels of a loaded waggon having passed over it whilst lying on the metal rail. This happened at 1 p.m. on January 24, 1865; he was brought a distance of thirty-six miles, and arrived at the Royal Infirmary, Aberdeen, at 8 p.m. the same night in a very exhausted condition. Reaction established, by the end of sixteen hours after admission, the leg was amputated a little below the middle at 12 noon on January 25. Four arteries required to be stopped, and this was done by Simpson's pins with wire loops, and the wound was closed by wire sutures. On account of the molecular injury which the tissues forming the flaps were feared to have sustained (no retraction whatever taking place in the gastrocnemius and soleus muscles when cut), the stump was at once laid in a warm poultice.

January 26.—Stump a little swollen and red, the swelling extending up the thigh. The patient otherwise as well as could be expected. Continue the poultice.

27th.—Stump and thigh considerably swollen. Continue the poultice. The four pins were this day removed forty-eight hours after insertion, and not a drop of blood followed. The patient's state satisfactory, but the pulse is to-day more frequent than hitherto.

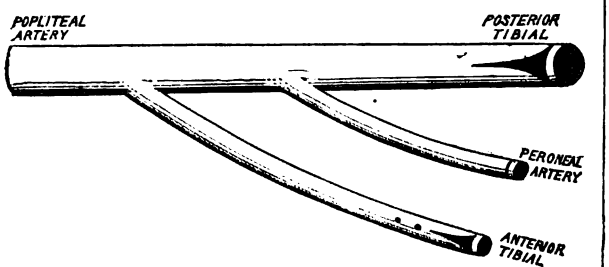
28th, 12 noon.—Stump looks well; swelling much reduced; patient's condition much as yesterday. At 8 p.m. he had a severe rigor, followed by great prostration. Pulse scarcely to be counted; intense thirst, and in a state of approaching coma. Mustard cataplasms to the nape of neck, and wine.

29th.—Patient sensibly improved. Takes sustenance, but still drowsy, and feels very faint.

31st.—In spite of every effort he sank at 11·30 a.m. this day.

Inspection of Body Twenty-four Hours after Death revealed the evidence of acute phlebitis in the saphena major vein of the injured limb; the coats of the vessel were thickened, and it was filled with a white, thin, sero-purulent looking fluid, not even tinged with blood. The deep-seated veins were all sound and healthy. The kidneys were greatly injected and friable. The stump was made the subject of very careful dissection. The flaps were easily separated; no coagulum of blood was in the wound; one red stain, the size of a four-penny piece, tinged the flesh at the end of the posterior tibial artery, and that seemed all the effusion of blood that had followed the closing up of the wound. The mouths of the anterior tibial, the peroneal, and the posterior tibial arteries lay open to view. Their ends were abrupt, solid looking, not much retracted, nor in any great degree contracted, but filled up by organised fibrine or lymph, as solid to the look, and almost as much so to the feel, as the coats of the vessels. The popliteal and these three vessels were dissected out together, and showed, on trial, as perfect occlusion at the cut ends as I have ever witnessed. On slitting these vessels from above downwards the following observations were made:—The peroneal artery was firmly plugged at its cut end for one-

fourth of an inch by a colourless, fibrous-like tissue indissolubly united to the lining arterial coat. No conical continuation of the plug extended farther up that vessel. The anterior tibial was in like manner completely occluded; the vessel, when slit up, revealed a short conical continuation of fibrine, pointing upwards, its further progress having no doubt been hindered by two small branches in close proximity passing off from the main vessel just above the tip of the clot. The posterior tibial was very effectually closed by a well-plugged mouth, and inside by a conical extension of the plug upwards to fully half-an-inch; the tissue composing it slightly tinged with blood, the plug and the cone being one and the same mass. The vasa vasorum had evidently maintained the



vitality of the arterial coats, so as at once to commence the vital and healing process of exudation of lymph at the cut ends, all the more readily that the cellular attachments around had never been disturbed.

Case 5.—Thigh—Flap Operation.—March 6.—George R., aged 12, parish of Newhills, labours under necrosis of the tibia of right leg; extensive abscess of the thigh surrounding the knee-joint and diagnosed to communicate with the joint; the boy greatly reduced in flesh and strength. The collections of pus were one after another freely emptied by incisions, and his strength recruited as much as possible by rest and generous diet, but it was the 3rd of May before matters were quiet enough about the limb to admit of amputation with any chance of success.

At 12 noon of May 3 the limb was removed at mid-thigh, under chloroform, and five arteries were speedily pinned under and looped over by a wire loop. The wound was closed by wire stitches; no dressing applied; not an ooze has followed the closure of wound. The pin heads varied in colour so that each vessel was individualised by the protruding pinhead, while the length of each pin selected was regulated by the distance of the artery from the margin of the wound, the head visible outside, the free point for steadiness being stuck into any adjoining muscle. At 8 p.m. the same day not a drop of blood had exuded from the wound, although it was then discovered that he had drawn out three of the pins and one of those securing the femoral.

May 5.—Wound adherent throughout; not an ooze of blood from the wound, or even serum; boy in good spirits. To have meat diet, and four ounces of wine daily.

7th.—The remaining two pins were removed to-day. Some pus followed the withdrawal of each, but not a tinge of blood. Had considerable headache yesterday, which was removed by free action of the bowels.

8th.—Going on favourably, but very weak. To be allowed 6 oz. of wine daily.

18th.—Last of stitches removed yesterday; wound united with little suppuration.

24th.—Stump quite whole. Boy is up every day.

June 20.—The stump has been whole for a long time; but he has been kept in the house on account of his exhausted condition. Discharged to-day quite cured, forty-eight days after the amputation.

Case 6.—Arm—Circular Operation.—G. W., boiler-maker, aged 45, was admitted on June 8 with lacerated arm. About 10 o'clock the same day, while working at a foundry, he was caught by a belt and carried round a revolving shaft near the ceiling, between which and the shaft he was pinned. The machinery was immediately stopped and the man extricated. The only injured part was the left arm, which was almost torn through at two places. The flexor muscles of the forearm were severely lacerated, the ulna and radius fractured, and the broken ends of the bones protruded through the tissues. At the elbow there was similar laceration of the soft parts for some distance above and below the joint, and the forearm was completely torn away from the humerus. Amputation by the circular method was performed about six inches below the acromion process. Six arteries bled. The brachial was secured from outside the skin by Simpson's first method, using simply the long pin. Two others of some size were secured by the third method, that of needle and loop, and three lesser by the needle twist, or Aberdeen method, known as the fifth mode. The stump was left exposed.

On the 11th the stump was tumid, and a livid patch appeared on the front. Four of the needles were removed. He was ordered 8 oz. of wine.

On the 12th the pin compressing the brachial artery was removed.

On the 14th all the stitches were removed; the stump was still red, but less tense, and was discharging pus freely.

On the 18th the slough which had formed separated, and was taken away; the sixth pin, the head of which had been concealed by the tumefaction of the stump, was removed; he continued to progress favourably, and on July 15 was dismissed, sound and whole.

Case 7.—Arm—Flap Operation.—John G., aged 29, labourer, admitted July 6, 1865, for a crushed elbow. About 11 o'clock on the same forenoon, while carrying a large stone on his back, his shirt became so tightened about his neck, in consequence of the stone dragging it down, that he fell down in a state of insensibility, and the stone fell on the left elbow. The elbow was so crushed that amputation by the flap operation, about nine inches below the acromion, was resorted to. Four arteries were acupressed—the brachial by the pin and loop and other three by the twisted needle. The stump was left exposed. No blood oozed from the wound. On the 8th one needle was removed without a drop of blood, and on the 9th another, followed by three drops of blood. On the 10th all the stitches were removed, and on the 11th the pin controlling the brachial artery, with the loss of two drops of blood. The wound suppurated a little, but he went on favourably, and on August 3 was dismissed cured.

Dr. Greig, of Dundee, was the first Surgeon who trusted entirely to acupressure in a case of amputation. On January 6, 1864, I followed his example in the operating theatre at Aberdeen on a leg; ligatures were ready in case of need, but no need occurred; the case speaks for itself. On the occurrence of the second case—amputation of a thigh—I gave previous notice to my clinical class and the Hospital staff that I meant to put acupressure on trial and trust entirely to it. The result was most satisfactory and conclusive, and led to its adoption most cordially by my colleagues Drs. Pirrie and Fiddes. The former has spoken for himself, and for the latter I have his authority to say that his reliance on the practice is entire, but more especially on the Aberdeen mode known as Knowles' needle twist. In my third case—of forearm—the simplicity of needle pressure by Simpson's first mode was striking. Entering from without through the skin, under the radial, out through the skin, crossing a portion of skin, and passing under the ulnar artery with the same needle in an exactly similar way, left only the interosseous to be secured, which was readily effected by a small needle and the half twist, or fifth method.

The fourth case presents many features of interest. The injury sustained by the patient was severe; his journey was long and fatiguing, and he lost much blood by the way, all tending to place his life in jeopardy, and lessening surprise at his death in the end. Yet he was got into a fit enough state for operation, bore it well, and gave promise for some days of getting through. He survived till the eighth day, affording ample time for the complete occlusion of the arteries—four in number—cut and secured at the operation, a long pin and wire loop (according to Simpson's fourth method) having been employed for each artery; and at the end of forty-eight hours these were all removed, not a drop of blood following them or afterwards. The vital and effective closure of the vessels during life was demonstrated by the dissection. The process of lymph plugging, so familiar to all who have followed Jones through his experiments on the arrest of hæmorrhage, is well seen in the preparation made of the vessels of the leg in Case 4, much as is represented in the accompanying sketch.

In the fifth case (amputation of the thigh in a boy aged 12) an occurrence happened not at all desirable, but still instructive. The restless boy, amusing himself with the pin heads protruding at the angles of the wound, had, before four hours had elapsed, withdrawn three of them; yet no hæmorrhage took place. I applied no substitute, and yet all did well. It would, therefore, appear that four hours' pressure would suffice

to perfect coagulation sufficiently to shut any artery; for the femoral was one of those relieved of its supporting pin. Although no one will, I presume, advocate such an early removal of a useful means of support and control, yet it gives great strength to the affirmation that at the end of forty-eight hours the needles and wire loops may be safely and confidently removed. In the other cases, it need only be noticed that the method of needle pressure varied according to the position of the vessel—at times a long pin through the skin, over the vessel and out again, without a loop; at others, a short needle with a wire attached to withdraw it by, and the vessel looped over by a wire; and at times, again, the Aberdeen twist, which is truly a simple and secure mode of proceeding, and has this additional to recommend it, that it can be so easily withdrawn without disturbing the vessel or surrounding tissues in the very slightest degree. Whether a short needle with wire attached to its eye is employed, or a long bead-headed pin with which to secure the vessel by the twist, you have, on withdrawing it, only to pull gently in the line of direction in which the needle or pin already lies, assisting the pin with a slight rotation before beginning to draw; and as nothing really grips it, no difficulty is ever felt in the proceeding. The same can hardly be said when a wire loop has been employed. The loop to secure the vessel passes first over the pin point after the pin has passed under the artery, then the wire passing over the artery is made to embrace the pin stalk below its head, and that pretty securely, too – all very right, and in some degree necessary; but when the hour comes for withdrawing the pin or needle, it is not found to come quite so easily away. Of course it comes, but with a little drag, and when the needle has been withdrawn, the wire loop has yet to come. As it had an eye at its further end, was bent a little over the vessel, and twisted not a little round the shank of the pin or needle, there remains a crooked wire to bring away after the pin or needle is out. It also comes away with a drag, usually paining the patient a little, and what I feel always most anxious about is, lest the wire should in its progress out drag the vessel so as to loosen its closing plug. No such thing has happened in any degree within my own experience or observation of others; yet I deem it fair to point attention to the circumstances that all will have to encounter, and I adduce it as one chief reason why my colleague, Dr. Fiddes, all but invariably gives the preference to Dr. Simpson's fifth method —viz., by the quarter or half twist without wire loop pressure at all. When the loop is employed, the objection I have just stated is most easily obviated by using a wire simply doubled without being at all twisted (see Figs. 4 and 5, representing Dr. Simpson's third and fourth methods, in Dr. Pirrie's paper in the *Medical Times and Gazette*, July 1), and by undoing the closing twist fully before withdrawing the needle. In all cases reference should be had in the selection of pins and needles to the size of the limb about to be operated on, so that when the pin head is outside the flaps the point may in no case protrude at the other side, and if the point shows, better clip it off. While inserting the needles, it is also advisable to regulate so that all may present at one or other angle of the wound (this is not absolutely necessary, but will be found convenient), and that a knowledge of each vessel may be distinctly preserved, pins with different coloured heads might be employed, or, if needles, silver or iron wire attached as required.

A little tact is no doubt necessary in introducing the pins or needles, whether through the skin or only through flesh and cellular tissue, but both are greatly facilitated in their movements by being provided with spear points. In penetrating from without, the index finger of the left hand laid over the vessel on the cut sides guides the pin point with great precision, at the same time preventing any flow of blood, and in passing a needle behind an artery of any great size on the cut surface of a flap it will be found very useful if an assistant would size the mouth of the vessel and draw it a little out, steadying it while the operator passes the needle under it and while he applies and secures the wire loop over it. By this mode the proceeding becomes momentary indeed; much or little tissue may be allowed to intervene between the coats of the artery, and the surface of the pin or needle employed as the operator pleases. In the first method the artery should be crossed by the needle at a point where its sheath is entire, hindering, therefore, contact between the two; in the second, third, and fourth methods not only should the same be allowed, but a moderate portion of muscular fibre or cellular tissue will be usefully included to act as a cushion while compressing the vessel. In the fifth method less, but still a portion of the adjoining tissue should be entangled in the twist along with the artery, and the twist secured entirely by plunging the needle point deeply into the firmest soft tissue within reach, always providing by the lie of the needle for its safe and easy withdrawal when desired. It is unnecessary to repeat that inelastic wire is now exclusively used to close all amputation wounds; the stitches are allowed to remain in until the wound is healed, and no dressing is applied whatever.

The pins and needles employed should be soft-tempered, so as to bend rather than break, should be flat, sharp, spear-pointed, round in the stem, and of various lengths. Mr. Young, the Edinburgh cutler, is familiar with their construction, and Mr. R. B. Turner, of Redditch, is highly commended by Dr. John Burton, of Walsall. At a very moderate cost, Mr. Turner supplies the needles electro-plated with gold—a process that will, by preventing oxidation, preserve the polish and purity of the needle for future use, but what is of still more importance, will hinder any gumming between the wire and needle, and so facilitate the withdrawal of both.

The preceding cases may be tabulated, thus showing the method employed:—

No.	Operation.	Age.	Method.
1	Amputation at mid-leg.	14	Third method—viz., needles looped over.
2	Amputation at mid-thigh.	29	Third method, for two smaller vessels — viz., needles and loops. Fourth method, for four large arteries—viz., long pins looped over.
3	Amputation of forearm.	54	First method, for two large arteries—viz., one long pin for both vessels. Third method, for the interosseous — viz., small needle and loop.
4	Amputation of leg .	18	Fourth method, four vessels—all by long pins looped over.
5	Amputation of thigh .	12	Fourth method, five vessels—viz., by pins and loops.
6	Amputation of arm .	45	First method, the brachial artery —viz., by a long needle from without. Third method, in two—viz., by needle and loop. Fifth method in three lesser vessels—viz., by the twist.
7	Amputation of arm .	29	Third method, for the brachial viz., needle and loop. Fifth method, for three remaining vessels—viz., the twist.

We desire to suppress hæmorrhage promptly, effectually, permanently, after every Surgical operation. Acupressure is equal to do all this, and in every emergency. Having secured the bleeding vessels and allowed time for the surface of the wound to glaze and every ooze of blood to cease, the wound is closed over an unirritating substance, so arranged as to be capable of being withdrawn at any moment whenever its work is deemed to have been accomplished, leaving a clean glazed wound already adherent face to face by forty-eight hours of undisturbed repose, and now relieved from the presence of any foreign matter whatever. What need hinder union by first intention? Yet we have been recently told by a Surgeon of some eminence that this mode of treating wounds and wounded vessels is "a proposal that ought to be received with regret," and as the newest important suggestion in Surgery, he enjoins the "leaving both ends of the silk ligatures with which the arteries in a stump have been secured protruding from the wound, to maintain an outlet for the discharge of fluids that might otherwise accumulate in the cavity." What cavity? The surfaces are carefully approximated with a view to healing by primary intention. What kind of fluids? All the vessels are closed, the ooze had ceased, and before any irritation is created the wire ligatures are withdrawn. I again ask, Where are the fluids to come from? To be sure, if after amputation of an adult thigh from five to eleven double silk ligatures are left attached, each pair to the strangulated end of an artery, and their ends traversing the length or breadth of the wound, as may be, and that for many days in succession—in truth, until time or chance liberate the ligature by the dead end of the vessel sloughing off—one need not wonder at what may follow in the way of morbid action or copious secretion either; but every unprejudiced

person will see and acknowledge that the cause of all that is the presence of the silk ligatures.

In dealing with this question of needle pressure I am conscious of no thirst for innovation on the part of my colleagues or myself; and certainly we have not rushed into print with any undue haste; we calmly thought over it, coolly tried it fairly, and now, at the solicitation of others, give our unqualified approval of it as quite safe and quite sufficient for arresting arterial hæmorrhage, having fewer after drawbacks than the mode by silk ligature. We do not need to condemn the use of silk thread more than do people condemn stage coaches where other conveyance cannot be had; but where a locomotive is available I suppose most people nowadays would prefer it; and so with silk thread and acupressure.

CASES OF EXCISION OF THE KNEE-JOINT.

By ALFRED ROBERTS, Esq.,
Surgeon to the Sydney Infirmary, New South Wales.

Case 1.—Chronic Synovitis of Knee-Joint—Ulceration of Cartilage—Excision—Recovery—Excellent Limb.

JANE M., aged 34 years, was admitted into Sydney Infirmary, New South Wales, on June 30, 1863. States that when 13 years of age her right knee swelled and became painful for the first time. She kept her bed, in consequence, for some weeks, after which the symptoms subsided, the joint remaining larger than its fellow, and being at times painful. She continued to go about as usual until the period of her marriage and first pregnancy, when a more severe recurrence of the symptoms took place; immediately after her confinement they still further increased. After a few weeks they again subsided as before, but only to recur with increasing severity at each successive pregnancy and confinement. Since the birth of her last child, about six months since, she has been confined to her couch, the constitutional and local suffering having been much aggravated during the last month. She is a delicate, thin, strumous-looking woman, with a very anxious, worn expression of face; has no appetite, and passes sleepless nights in excessive pain.

The right knee is considerably larger than the left, and elastic to the touch; the temperature is but slightly increased; the extremities of the femur and tibia do not appear to be enlarged, but the synovial membrane is greatly thickened; there is no sinus or external wound; intense pain is excited by the slightest movement of the limb, which appears to be fixed in a slightly flexed position. Diagnosis: Interstitial thickening with disorganisation of the synovial membrane; ulceration of cartilages; bones probably free from disease.

July 15.—The patient's constitution has suffered severely since her admission; the joint has increased in size, is congested, and exquisitely painful. Considering that no time should be lost, if an attempt was to be made to save the limb, the immediate excision of the joint was decided upon, with the alternative of amputation, should the disease require it. The letter H incision was adopted. The operation being simple and favourable, one large abscess was opened; little blood was lost; the articulating surfaces of the femur and tibia were removed, with as thin a portion of the bone as possible, the first section proving healthy; the patella was extirpated; the limb was carefully put up in the operating-room upon a firm splint with moveable sides.

30th.—For five days after the operation she suffered severely from vomiting, the result, I believe, of the use of German chloroform during the operation. As soon, however, as this subsided the wound took on healthy action, and its progress became steadily good. Its present condition is very favourable; the entire anterior, and most of the internal lateral, incisions have healed; the external lateral wound is open, and discharges healthy pus with a little oily fluid; there is but slight swelling, and no redness; during the last week it has been dressed daily; the patient takes her nourishment and sleeps well, but is still weak.

February 10, 1864.—To the end of August the progress was everything that could be desired, and far beyond my most sanguine expectations. Firm osseous union had taken place; the external wound had nearly healed; the patient looked, ate, and slept well, and was in excellent spirits. About this time, however, great constitutional disturbance took place, with unhealthy congestion of the soft parts in the locality of the operation, followed by rapid ulceration of large portions of the cicatrix. These symptoms were evidently due to a recurrence of the catamenial period, without healthy assumption of the uterine function. From this period to the present time she has alternately progressed and retrograded, but upon the whole made steady progress. There was considerable thickening of the soft parts; several abscesses formed and were opened, and once offensive pus was discharged from one of them; on no occasion, however, have I been able to feel bone with the probe; there are now several small spots of ulceration on different parts of the cicatrix; the patient's health is very good. Being anxious to know whether the constant recurrence of inflammation arose in any degree from an unhealthy condition of the bone, I placed the patient under chloroform and, having traced one sinus to a spot in the line of union between the bones, I cut down upon it and gouged out a small portion. This proved to be quite healthy, hard, and well developed bone. Under these circumstances the patient was discharged for change of air and scene as soon as she had recovered from the immediate effects of the last slight operation.

February 20, 1865.—Upon leaving the Hospital the patient returned to her home, where she was placed under very unfavourable conditions; yet she has improved greatly; the limb is now very strong, and bears all the work she can give it, as well as its fellow; the sinuses have been healed long since; the thickening of soft parts has greatly subsided, and the patient has grown stouter.

It is worthy of remark that in this case the osseous union was rapid, perfect, and healthy from the first, and withstood the complications of the very serious periodical disturbance of the system and soft structures around the knee without injury.

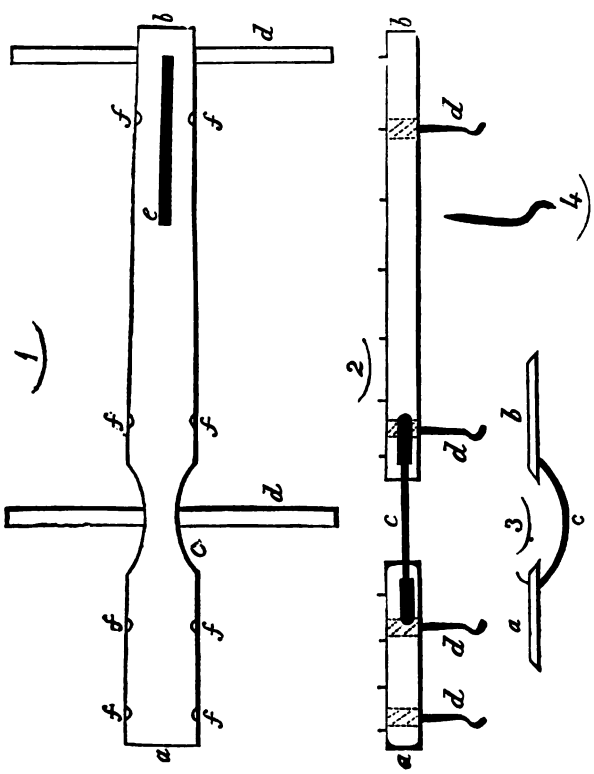
Case 2.—Chronic Synovitis of Knee-joint—Ulceration of Cartilage—Disease Extending into Bone—Excision—Recovery, with Excellent Limb.

James H., aged 29 years, admitted into the Sydney Infirmary October 21, 1863. He stated that he had suffered from disease of his left knee for the previous eight years, during which time he had undergone a great deal of treatment. Having failed to receive material benefit, he had come to Sydney prepared to sacrifice his limb. He was at this time suffering great pain, was emaciated and weak. Examination induced me to diagnose "degeneration of synovial membrane, and ulceration of cartilage, with probable disease of bone." Excision of the joint, with the alternative of amputation, were decided upon. On November 11 the patient was placed under the influence of chloroform, and I performed excision, adopting the following modification of the ordinary operation. In making the lateral portions of the H incision, the knife was carried to the bone as usual, but in forming the transverse cut the knife was guided down to and over the ligamentum patellæ without dividing it. The flaps being now easily dissected back from the patella and its ligament, that bone was removed by two strokes of the scalpel, thus avoiding the comparatively tedious dissection of the patella from the anterior flap. It was necessary to remove two thin slices from the head of the tibia to secure section of healthy bone. A large abscess was opened, which was found to extend a considerable distance up the thigh and towards the external popliteal region. At the latter point I passed the scalpel through the soft parts, and tied in a few threads to establish drainage. The limb being now placed upon the splint prepared for it, the transverse wound was brought together by sutures of silver wire, covered with wet lint, and the leg was placed in position. In the evening after the operation the patient was very comfortable. The subsequent progress of the case offers nothing worthy of remark, except that the opening made in the ham proved of the greatest service, and that the simple splint made for the patient was most efficient, and a great comfort to him. The man was discharged the following June; he walked out of the Hospital, flourishing his walking-stick and wearing his ordinary shoes. The slight limp in his gait appeared to be owing rather to the absence of the joint than to shortening of the limb. I heard from him in February last, eight months after his discharge. He writes from Goulbourn, about 130 miles from Sydney, and states "that on leaving the Hospital he had a severe twenty-four hours of travelling, but since then had suffered no pain. One or two sinuses, which were discharging when he left Sydney, had healed, and he was quite well, having the full use of his limb."

May 3, 1865.—Upon visiting the Infirmary this morning I found this patient in the waiting-room. He had travelled with some drags from Goulbourn to show me his leg, and was

anxious to get back immediately. He was very tipsy, and could with difficulty keep on his feet when walking; but, after watching him for some time, I was gratified to feel that, even under these circumstances, his control over the limb operated upon was as perfect as over the other. On examining the seat of operation, I found the tissues in a perfectly healthy condition; there was no enlargement; the external lateral incision was scarcely perceptible; the internal was more so; the transverse was a little depressed. The man stated (and a sober brother, who accompanied him, bore him out) that the limb was quite as strong as the other, and that he was able to do any amount of work on it without inconvenience. The accompanying photograph affords an excellent idea of the limb, although, being taken by a photographer unused to such cases, without the assistance of a Surgeon, and from an intoxicated patient, it is probably inferior to those he may take in future; the transverse cicatrix is too strongly marked, I presume, from its being somewhat in the shade.

The accompanying sketch will enable your readers to understand the simple but very efficacious splint I used in the above case. Fig. 1 is a drawing of the under splint; Fig. 2 of the side splint. Fig. 1, *a b* is formed of a thin, light, and flat piece of wood; at *c* the width is reduced one-half to allow the Surgeon to get easily to the popliteal space on either side; *e* is a slit for the foot piece to travel in; at the points lettered *f* a common brass eye is screwed into the edge of the splint; *dd* are lathes of wood, which slip in grooves placed under the splint, and serve to steady the splint when it is not suspended from a travelling swing. Fig. 2: *a b* is a thin light piece of flat wood, not more than two inches wide, and interrupted at *c* by a strong bow of iron; *dddd* are iron hooks with long stems, having the upper end hammered flat and firmly attached by screws to the splint, the lower ends terminate in hooks having a very slight curve, as seen in Fig. 4; these hooks drop into the brass eyes placed in the sides of the under splint, and are so shaped that by moving the side splint a little from the limb it can be unhooked and removed with ease and without shaking. Fig. 3 shows the degree and the length of the curve of the bow of iron opposite the seat of operation.



The pads to be used with this splint should be made exactly of the size of the respective portions upon which they are placed, that for the under splint being somewhat thicker along the centre than at the sides, and covered with gutta-percha tissue, the fibres of which should be placed across the pad. In using this splint I did not employ a bandage, but brought the side portions together by lacing a piece of strong tape over the brass-headed nails placed for that purpose along the upper edges (seen in Fig. 2); it is passed across from side to side, and over any splints that may be found necessary to place on the femur.

When a limb is thus put up, the lower portion of either side is open to view from the hip to the foot, the under pad can at any time be examined, and the seat of operation can be dressed without disturbing the splints; at the same time the splint is remarkably steady when fixed up. I should add that the inner thigh piece is cut about three inches shorter than the outer.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. BARTHOLOMEW'S HOSPITAL.

OVARIAN DROPSY—OVARIOTOMY—DEATH FROM ACUTE PERITONITIS FORTY-EIGHT HOURS AFTER THE OPERATION.

(Under the care of Dr. GREENHALGH and Mr. PAGET.)

M. L., a single woman, 32 years old, suffering from advanced ovarian dropsy, was admitted on April 8 into Dr. Greenhalgh's ward. In answer to inquiries into her history, the patient stated that she became aware of the presence of a tumour in the right side of the abdomen four years previously. At first this caused her little inconvenience, and appeared to make slow progress; but in the last two years it had increased more rapidly, and had been accompanied by severe pain in the neighbourhood of the uterus; during this period, also, her general health had declined. At the time of her admission she was in a feeble general condition, looking pale and ill-nourished, with a small weak pulse, and slight œdema of the legs. The examination of the tumour need not be given in detail, as it revealed nothing of special note. The measurements of the abdomen were—from the ensiform cartilage to symphysis pubis, twenty inches; right anterior superior iliac spine to left across umbilicus, twenty-three inches; extremity of twelfth rib on right side to left groin, twenty-three inches; extremity of twelfth rib on left side to right groin, twenty inches. By a vaginal examination it was found that the uterus was placed high up in the pelvis, and that it was freely moveable. Apparently no part of the ovarian tumour extended into the pelvis. As the case appeared on the whole favourable for ovariotomy, and as the patient pressed for relief from her disease, the operation was performed by Mr. Paget on April 27. The incision in the abdominal walls was four inches in length, commencing one inch below the umbilicus. The tumour proved to be free from peritoneal adhesions, and to be formed chiefly of one cyst; after this had been emptied and drawn through the wound, and a smaller one punctured, the pedicle—which was thin, and about three inches wide—was secured by the application of a Clay's clamp, and the wound closed by an interrupted silver suture. The left ovary appeared healthy. On waking from the chloroform sleep the patient was sick, and complained of severe pain in the region of the uterus. Ordered to take ice, and to have a quarter of a grain of morphia in solution injected under the skin. Five hours after the operation reaction was setting in, the pain and sickness had abated, and she was sleeping quietly. Shortly after this time, however, pain in the lower part of the abdomen became almost constant and occasionally very severe, and vomiting was frequent and violent. Sleep was procured during the night by the hypodermic injection of morphia; little besides ice could be taken on account of the sickness; symptoms of very acute peritonitis rapidly increased, and the patient died forty-eight hours after the operation.

A post-mortem examination showed that death had been caused by very acute inflammation of the peritoneum. This membrane, both in its visceral and parietal portions, was intensely congested, and its cavity contained nearly a pint of

purulent blood-stained fluid. The pedicle of the tumour was found to have been well secured, no hæmorrhage had occurred, and no cause for the peritonitis was discovered beyond the excess of reaction which had followed the operation. The lungs were much congested; the right had been so compressed through the pushing up of the diaphragm by the abdominal enlargement that its base was on a level with the third rib; the heart was pale and flabby; the liver flattened, and very anæmic.

This was, we are informed, the fourth occasion on which ovariotomy has been performed at the Hospital. Mr. Skey operated on a patient in 1862. In his case the disease was far advanced, and the woman much exhausted. At the operation, during the breaking down of some old adhesions between the abdominal wall and the tumour, the latter gave way, and some of its contents escaped into the peritoneal cavity. Some very firm adhesions were found connecting the tumour at its posterior part, which consisted chiefly of solid matter, with the intestines and uterus. The patient died about sixty hours after the operation. At the after-death examination the peritoneum was found acutely inflamed in its whole extent; the walls of the rectum in one part, where very firm adhesions with the tumour had existed, were in a sloughing condition. Hæmorrhage to an inconsiderable amount had occurred into the peritoneal cavity. Mr. Paget operated in 1863, but the woman died at the end of forty hours of acute peritonitis.

In the third case, which was under the care of Dr. Greenhalgh and Mr. Coote, the patient was found to be suffering from malignant disease. Both ovaries were removed. Death occurred in four days from exhaustion.

Some years ago, before the details of the proceeding were as familiar to the Profession as they have since become, Mr. Paget commenced the operation in two instances; but finding extensive adhesions between the anterior surface of the tumour and the abdominal walls, did not proceed further. Both patients were subsequently tapped; and after living for some few months at length died exhausted by the disease.

ST. GEORGE'S HOSPITAL.

PECULIAR AND SUDDEN EXTRAVASATION OF BLOOD BENEATH THE SKIN, IN THE NEIGHBOURHOOD OF THE JOINTS, ATTENDED BY MUCH PAIN, IN A CACHECTIC AND HYSTERICAL PERSON.

(Under the care of Dr. OGLE.)

L. W., AGED 46, a rather delicate and nervous married woman, experienced, without any assignable cause, one day, sudden pain in the right elbow, which remained all night. On the morning following the same elbow was red and swollen, and soon became, as she described it, "darkish." This gradually took its departure; and three weeks later, two days before she came to the Hospital, she was seized with sudden pain, and a swelling of the size of nearly two peas on the surface of the skin, at the side of the right knee. This left a broad dark purple stain, very like a bruise, with yellow edges, which was obvious on her coming to us, when she persisted in stating that she had had no bruise or injury at the part of any kind whatever. It appeared that for a year the catamenia had been absent, and during that time she had been more or less sickly, but had never been seriously ill. I prescribed the infusion of valerian, with the compound tincture of quinine and chloric ether, and also the compound sagapenum pill at bed time, with a purging draught. At the end of a week, the redness and discoloration about the knee had quite disappeared, and after continuing her remedies for another ten days, she ceased to attend.

BIRMINGHAM GENERAL HOSPITAL.

TEMPORARY RIGHT HEMIPLEGIA—PERMANENT DEFECT IN THE POWER OF EXPRESSION—SUPERFICIAL DISEASE OF THE LEFT ANTERIOR CEREBRAL LOBE.

(Under the care of Dr. RUSSELL.)

THE following contribution to the discussion relative to the connexion between defect in the faculty of expression and disease in a particular part of the brain, is of value from being accompanied with a post-mortem examination. The details of the dissection are imperfect, but so far as the situation of the chief disease goes, it certainly appears to support M. Broca's hypothesis, by occupying the site of at least a portion of the particular convolution which he has named as the seat of articulate language. The function of speech was very much restored; but, on the other hand, the power of expression by writing was quite lost. From the history of the case, the disease in the aortic valves, and the condition of the corpus striatum, it appears most probable that the attack was occasioned by obstruction of the middle cerebral artery, the branches of that vessel distributed to the corpus striatum subsequently becoming pervious, whilst certain of those supplying the convolutions, never recovered. The paralysis, it is to be noted, was never complete.

J. G., aged 65. Two years ago he was attacked suddenly with right hemiplegia, accompanied by loss of consciousness; he states that he remembers nothing for seventeen weeks; his wife adds that during that period he lost the function of speech, and made signs which were very imperfectly intelligible. The paralysis was never complete, but the face was affected, and for three weeks he had difficulty in swallowing. He regained the use of his limbs in about a year, and at present muscular power and nutrition are perfect. Speech was long very imperfect, he stammered, and often used wrong and "contrary" words; but he gradually recovered this function, though his mental power remained feeble, and could not answer any extra demand; his memory continued bad, he often forgot what he was going to say, and when hurried was at a loss for the right word; this instance of failure especially applied to names. He has perfectly lost the power of writing, though previously he "was a good scholar;" "he had entirely forgotten his letters."

We found him able to talk well, though occasionally he hesitated, repeating the last few words. His mind seemed unequal to carry on any but a short sentence, and at a later period he called his powders "bile," and then substituted signs. He read easily and correctly. When told to write his name on a slate, he inverted the order of the Christian and surname, and could not tell why he did it. This was the only instance of his writing with any correctness. A short sentence being dictated, he instantly gave up the attempt to transfer it to the slate, and could not be induced to renew it. Subsequently he wrote the sentence, "He whom you seek is not here" ("Brornalsd jinon do ter"), "Many who have lost the last farthing and sold" ("Many ou belbeg lett funong wouoder").

He was admitted with symptoms of renal disease of recent origin, which ultimately proved fatal. He became imbecile before he died. He had suffered from one attack of rheumatism in 1824.

He died during my absence from town. The following report of the post-mortem has been preserved for me:—

Brain: Dura mater and arachnoid healthy. A cavity partly filled with disintegrated brain tissue, of the size of a walnut, existed in the left anterior lobe of the cerebrum. It was superficial, and involved the grey and white substance of the convolution. It was bounded to the outside by the arachnoid, and behind by the fold of arachnoid lining the fissure of Sylvius. The left corpus striatum was not involved, but like the rest of the brain was healthy. The vessels were not examined. Heart weighed 21 oz. The aortic valves contained spicula of bony matter, but were apparently competent. Mitral orifice contracted; valves perfectly competent. Aorta slightly atheromatous. Liver rather granular on the surface. The kidneys were granular; combined weight 10 oz.

For the above case and remarks we are indebted to Dr. Russell.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

HEMIPLEGIA ON THE RIGHT SIDE, WITH DEFECT OF SPEECH—DEATH—AUTOPSY.

(Under the care of Dr. HUGHLINGS JACKSON.)

A WOMAN, 66 years of age, was considered to be well up to October, 1862. She was one day sitting for her photograph, when all at once she called out that she feared she was losing the use of her right side. She fell off her chair, and did not speak a word for a month or more, and she never spoke properly afterwards. Her tongue was "swollen," and for months she did not eat solid food, but swallowed fluids well. For several days after the attack she did not put her tongue out. When she began to talk she said but few words, and seldom

called anything by its right name. She not only called "dinner" "supper"—words having some connexion—but called "dinner" "chair," etc. It was impossible to get to know what she wanted, either by words or signs. She could not write with the left hand, but made meaningless marks on paper.

When Dr. Jackson saw her, two years after the attack, there was total paralysis of the right arm and leg, and a defect of articulation so great that he could never make out anything she said. This was not due to inability in the muscles of the tongue, lips, and palate, as she moved these parts well. Her friends could sometimes make out what she said, and could understand what she meant by signs. She did not come to the Hospital for a year before her death, which occurred two years from the attack. Before death she suffered from extreme œdema of both legs, and for some months passed her time in bed. She died slowly from exhaustion.

Autopsy.—There was granular disease of the kidneys. The heart had probably been hypertrophied, but at the post-mortem both ventricles seemed nearly equally thin and rotten; in the brain were found the remains of an extensive apoplexy; on opening the lateral ventricles there was seen on the left side a large yellowish walled cavity the size of a walnut, which seemed to affect equally the corpus striatum, the thalamus opticus, and the adjoining hemisphere. It was found that it extended downwards to the Island of Reil, but the convolutions were unbroken; the cavity extended under the thalamus, and into the crus cerebri; it had not broken into the descending cornu, nor did it encroach on the corpora geniculata or corpora quadrigemina. The frontal convolutions seemed healthy, but they were not examined by the microscope.

In this case, with hemiplegia on the right, there was defect of talking, although the tongue was not paralysed. The disease, however, was far too extensive to help us to determine anything precisely as to the seat of speech. The case has, however, this value, that it shows that what may appear at first glances to be a mere defect of articulation is often due to disease of parts far above the ninth nerve or its nucleus. The probability is, that the convolutions near the corpus striatum have to do with guiding muscles in articulation. Although the frontal convolutions appeared healthy, so extensive disease of the motor tract must have interfered with the exercise of their functions.

CHELTENHAM HOSPITAL.

HAIRPIN IN THE FEMALE BLADDER—EXTRACTION—RECOVERY.

(Under the care of CLEMENT HAWKINS, F.R.C.S.)
Reported by Mr. L. WINTERBOTHAM.]

E. S, a well-grown girl, 12 years of age, was admitted on March 27, 1865, into the Cheltenham General Hospital, under the care of Mr. Hawkins, for urgent symptoms of stone in the bladder. On sounding her, a mass of calculous matter was readily detected. In answer to a question, she at once admitted that she had introduced a hairpin into the urethra in December last, since which time she had suffered greatly, having latterly lost all control over both bladder and rectum.

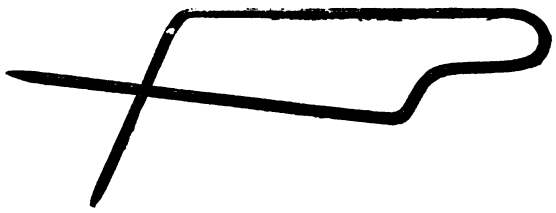
On April 1, the patient being under the influence of chloroform, the urethra was rapidly dilated with Weiss' dilator, a small lithotomy forceps introduced, and there was readily extracted a soft calcareous mass, on which the cast of the leg of a hairpin was apparent. The bladder was cleared as much as possible from the *débris*, and further operative measures were postponed.

On April 8, the urethra being again dilated, an attempt was made with a pair of straight forceps to remove the pin; it was several times fairly seized, but its extraction was found impracticable owing to its position, a finger introduced into the bladder detecting the hairpin fixed across the outlet. It was determined to procure a special instrument before making any further attempt. Mr. Hawkins obtained from Matthews, of Portugal-street, one of the ingenious French instruments having for its object the seizing the hairpin with a hook, and then folding it up and drawing it into a tubular shield, and removing it thus safely guarded from the bladder.

On April 26, the attempt to remove the pin was renewed with this instrument; the hairpin was readily caught in the projected hook, and the hook screwed down on the collar of the tube, when, on applying considerable force for the purpose of bending the pin, the instrument gave way, several of the cogs of the rack being broken off. Fortunately, however, it was found that one leg of the hairpin had been drawn some way into the shield, where it had been broken off and become impacted; the other leg had been forced parallel to the side of the tube; so that on withdrawing the instrument the pin came away.

No bad symptom occurred, continence of urine was at once re-established, and on May 15 the patient left the Hospital in perfect health.

Remarks.—The case clearly demonstrates the impunity with which the female urethra may be rapidly dilated under chloroform. We have here the urethra of a child of 12 dilated in a few minutes sufficiently to allow the introduction of a pair of forceps or of the finger into the bladder, and this operation performed three several times, and no incontinence of urine or other unpleasant symptom resulting. It follows from this ready dilatability, that the instrument employed might be made with advantage very considerably larger and stronger. There is no reason why the shield should not be as large round as the forefinger; the rack and pinion could then be made strong enough to resist any strain that might be brought to bear on them, the risk of any accident jeopardising the success of the operation would be avoided, and a useful instrument would not have to be laid aside, as it was in a recently-reported case, for the very serious alternative of cutting into the bladder from above the pubes. An exact sketch of the hairpin is subjoined, showing it to be one of extra size and strength.



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Medical Times and Gazette.

SATURDAY, SEPTEMBER 9.

THE THEORY OF EPIDEMIC DISEASES.

THE lecture of Professor Lionel Beale, which we publish in this week's number, shows how admirably the advance of physical science furnishes us with probable solutions of some of the problems which have been puzzles for years. Of such puzzles, the origin and propagation of epidemic diseases has been one of the oldest and most hopeless. Dr. Beale applies to it, with great probability, his theory of the existence and nature of the "germinal matter" in the living organism. He believes that when this substance has its powers of growth perverted and degraded, it may obtain a power of indefinite multiplication, even like the pus of an abscess, or of an inflamed mucous surface. Such pus, *i.e.*, such degraded germinal matter, he believes, and can prove, to have the independent power of growth under various conditions, and to be capable of maintaining its vitality for long periods, if imperfectly deprived of moisture; when introduced into another animal body offering favourable conditions, it increases and

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multiplies. This theory of Professor Beale's seems inconsistent with that of our distinguished friend, Dr. Richardson, who, if we understand him aright, believes in the existence of definite volatile organic poisons, as the *materies morbi* in epidemic diseases. Yet, for aught we know, the growth of ill-conditioned germinal matter may be accompanied by the development of poisons in the organism which it grows in; just as the growth of mould changes the quality of a cheese or a pot of jam. Dr. Beale's theory also resembles the *zymotic*, but with this difference. He assumes the existence of no spores, or fungi, or other organisms, whose existence has never been demonstrated, but appeals to germinal matter whose existence and growth he has demonstrated. He holds out little hope of the extinction of all diseases of the contagious sort; yet shows how much good may be done by keeping the living body in an unsusceptible state, whilst he endorses all the teaching of the sanitary school, by showing how fresh currents of air, sunlight, dryness, and general cleanliness act as preventives of epidemic disease. The question of propagation by contagion, which we hold to be as established as the law of gravitation, and the correlative—not opposite—doctrines of the occasional independent origin of certain diseases—as influenza, typhoid, and diarrhœa, and of the fact that they can only flourish and acquire vigour under certain conditions, are all provided for in this theory.

POISONED WELLS.

In the middle ages, whenever a pestilence broke out in a city, the people set to work to hang the Physicians for poisoning the wells. We cannot help thinking that the hanging of the Physicians was an unnecessary measure, to say the least; but we are very much inclined to believe that the instinct which told them to accuse the wells of being poisoned was right in the main. Not that the poison had been put in by the doctors, but that it leaked in through the earth, and consisted, in plain English, of sewage.

But though centuries have passed, in which each generation has laughed at the ignorance and filth of its predecessors, the drinkers of the water of shallow wells are just as likely to suffer from the same kind of poison in the nineteenth century as in the twelfth.

We have before us in the Reports of the London Medical Officers of Health two parallel series of facts, one showing that sewage soaks abundantly into the porous earth, the other that this identical sewage is found in pump water. Yet this water is as popular and palatable as ever!

Turning to a "Report on the Sickness and Mortality in the Parish of St. George, Hanover-square," for the quarter ended Jan. 2, 1864, we find the following:—

"No. —, Adam's-mews, is a house having a cottage in its yard, often visited for illness, and which had in our eyes the reputation of anything but a healthy house; nevertheless, the rooms had been cleansed, and the drains were said to be efficient. At all events, there was no evidence that would have justified us in ordering them to be dug up. At last, however, Mr. Grant found out that the drainage from this house, containing five families and twenty people, consisting of all their sewage and slops, was not carried away nor yet even received in a cesspool, but was permitted to soak away, into the earth underneath the cottage in the yard. This state of things had existed ever since the house was built. The soil is, of course, porous; and there is a pump in the next yard, the water of which was used for washing carriages, and was noticed to be often offensive."

In a similar report to December 31, 1864, we find the following:—

"No. —, Steel's-court, Lee's-mews.—When a house, or set of houses, continues unhealthy spite of white-washing, cleansing, and the removal of whatever nuisances are apparent, further search at some future time is sure to explain the mystery. In the case of this court, the main drain leading from it had been inefficient for years, and 27 yards of it, with very imperfect fall, were choked with night-soil, so that these houses, instead of effective drains, had nothing but an elongated cesspool, which disposed of the sewage put into it as so many other imperfect drains do; that is to say, the liquid part was let soak into the earth for the benefit of the nearest pump—the solid remained in the drain, and the fœtid gases escaped into the dwelling, particularly at night. Strange to say, a respectable man who knew of this state of the main drain, and who lost a child from diphtheria soon after coming into the house, never made any complaint of it to us, although such an inquiry was in this case, and always is in others, made personally after death from the like cause."

So much for the evidence that sewage does, and must, soak into the earth.

Now for the pumps. In a report from the same parish, dated July 2, 1864, we read as follows:—

"An analysis has been made of the water yielded by five pumps:—

	Total impurity in grains per gallon.	Organic ditto.	Inorganic, Earthy, &c.	Nitric acid.
1. Pump in Bell-yard	49·33	8·10	41·23	Slight trace.
2. Do. Robson's-yd., Chapel-street	44·47	8·25	36·22	Ditto
3. Do. Adam's-mews	92·53	31·68	60·85	More.
4. Do. Swan-passage	111·44	24·30	81·13	Ditto.
5. Do. Private House, Park-lane, near Hamilton-place	48·97	7·56	41·41	None.

"These analyses, especially if compared with those contained in a former report, show some interesting facts. The pump in Bell-yard, in Robson's-yard, Chapel-street, and in the house in Park-lane yielded water pretty uniform in quality, and containing about eight grains of 'organic matter' per gallon—*i.e.* about six times as much as is contained in the water yielded by the water companies. But the water from the pump in Adam's-mews, and that in Swan-passage, contained an enormous quantity, and may fairly be called 'filtered sewage.' It is perfectly certain that a sewer in Bell-yard was lately broken in, and that the sewer leaked into the adjoining cellar. It is difficult to conceive that some of it did not leak into the Bell-yard well; but if that escaped, the well in Swan-passage may have been enriched by some of it. As for the pump-well in Adam's-mews, at the rear of the Trafalgar stables, there was no mistake about it during the month of May, for it then yielded undiluted yellow sewage, too offensive for washing carriages; and about this time an obstructed sewer was discovered, leading from Nos. 5 and 6, Adam's-mews, which was replaced by a pipe at the parish expense. The well was then pumped dry, and the water is now clear; but the enormous quantity of 31· grains of organic matter per gallon shows that, even if cool and bright, it must be a very suspicious kind of drink. We have cautioned some of the neighbours, but there seems to be a kind of rooted conviction that all water which comes out of a pump must be good."

It is difficult, after this, to account for the infatuation which induces the inhabitants still to relish this dirty water as a luxury.

But let us go where we will, the surface well water is as bad, if the well be anywhere near the cesspool that receives the water-closet drainage. It is as bad at "watering places" and "health resorts" as elsewhere. At Freshwater, in the Isle of Wight, a year or two ago, we heard of a case in which sewage found its way into the well. At Margate, we have heard of a well, belonging to an eminent Medical Practitioner, in the same predicament. At Felixstowe, we hear of small gardens belonging to two houses, and containing two cesspools and one pump well in each. At Cromer, the town filthy from neglected sewers. At Whitby, the river made the receptacle of filth, stinking abominably at low water, and presenting along its shores a series of filthy sewage arrangements hardly to be paralleled in England. Now, if the cholera should come, we know full well, as we said last week, that we should rouse the dreary wail from every church about "Moses and Aaron." Let people, whilst they have time, copy the Mosaic ordinances, and especially take care that the wells give sweet water, and not bitter. It will be too late to cry out when the plague is at our doors.

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SETTING OUR HOUSE IN ORDER.—MODERN METHOD OF ANALYSING WATER.

Now that the advent of cholera into this country is somewhat imminent, our thoughts ought in wisdom to turn to the application of knowledge derived from past experience for the prevention of the spread of this epidemic, should it visit our shores. Of all the conclusions from this experience none is less open to dispute than that water is the great channel through which cholera infects the organism. The facts which have been adduced by Dr. John Snow and others to show that choleraic matter in the vomit or alvine evacuation of a sufferer when allowed to pass in any way into the alimentary canal of other persons proved a sure means of exciting the disease in them; and that this matter passed in many cases through water which was partaken of after it had in some ascertained way been contaminated with the ejecta of a cholera patient, seem to be of a kind to justify us in regarding the above conclusion as one having all the certainty of a rigid induction. It need hardly be said that of the substantial nature of this cholera matter we are in total ignorance. Still, it is not difficult to understand how profitable is the examination of water obtained in a cholera district, for the purpose of discovering its probable contamination or otherwise with this poison. For the detection of any excrementitious matters, or matters recently derived from these through alterations they may have undergone, would, besides showing the general unfitness of the water for human consumption, indicate its more than probable infection in such a district with the exciting cause of the disease. Let us therefore take a glance at the present state of water analysis, and at the results of its application to the London water supplies for the last few years. Even should this dreaded epidemic not reach us, such a glance at what has been done on this subject ought to prove of service, considering how much the general health of the inhabitants of a district depends upon the purity of its water supply. We shall first direct our attention to the present methods of examining water for sanitary purposes, which are much more satisfactory than they were even at the time of the last outbreak of cholera.

One of the greatest general improvements in chemical analysis is the much more extensive use of *volumetric* methods. Besides the old application of these methods for estimating the commercial value of alkalies, the progress, and, at the same time, the wants of science have caused them to be resorted to for many other purposes. Through greater care in preparing and employing the *burettes* and other graduated apparatus, and through using much more dilute standard test-solutions than was formerly done, an accuracy is obtained by these methods equal to that by the use of the balance only, at least in many cases. They are sufficiently illustrated in one of the appendices of the Pharmacopœia, and need not be enlarged upon here. We have only to remark that, by making one weighing serve for many, and by avoiding much evaporation and filtration otherwise necessary, they have effected a very great saving of time, in consequence of which they have proved a great boon to the analyst who has to frequently examine the same kind of substances. One extension of their use is to the examination of potable waters.

In close connexion with this practical improvement in water analysis is the more general use of *colour* tests in determining the quantity of certain substances existing in only small quantities in the body examined. By contrasting the intensity of colour produced by a certain chemical reaction, when the quantity of reacting substance is unknown, with that produced in experiments where the quantities *are* known, until one is observed in which the same degree of tinting is obtained as has been obtained in the body undergoing trial, the unknown quantity of substance may be estimated with a considerable approach to exactitude. Thus, a colour-test is now generally employed in estimating the quantity of *ammonia* in water, a substance which is usually in only rather minute quantity, but which it is important for sanitary purposes to properly determine. We cannot enter here into a detailed account of this method, but we shall point out its nature as briefly as may be. The distillate obtained from a measured quantity of the water under examination previously mixed with baryta water is treated with suitable excess of a solution of iodide of potassium, red iodide of mercury (soluble in iodide of potassium), and a considerable excess of caustic potash; a yellow colouration is produced of an intensity proportioned to the quantity of ammonia the water may have contained. The same volumes of distilled water in similar vessels, but charged with different quantities of a standard solution of hydrochlorate of ammonia, are then successively taken and mixed with a quantity of the iodide solution equal to that added to the water under examination, until the quantity of hydrochlorate of ammonia necessary to cause a colouration of the same depth as that produced in the original experiment is ascertained. This being done, the quantity of ammonia in the water under trial is reckoned to be equal to that in the quantity of hydrochlorate producing the same colouration.(a)

In the examination of water the points of greatest importance for sanitary purposes are the determinations of the quantity of the organic matters, the quantity of ammonia and nitric acid, and the quantity of dissolved oxygen. The way of estimating the quantity of organic matters per gallon is still principally by burning it, in a current of air, out of the solids obtained from the water. These may be obtained in two portions,—that formed of the *suspended* matters, which are separated partly by allowing them to subside from the water left at rest, and partly by filtration, and that formed of the dissolved matters, which are separated by evaporation of the clarified water to dryness. The material objection to this process of combustion is that other substances may be driven off by the heat besides the organic matters, and cause the latter to be over estimated. For instance, the carbonic acid of the carbonates of lime and magnesia, the water of the gypsum, and some alkaline chlorides may escape and be estimated as organic matters, and as such also may be estimated the difference of weight between chemically equivalent quantities of water and hydrochloric acid caused by the escape of the latter in place of the former, when chloride of magnesium is to be found in the water. But by the observance of several precautions these sources of error are to a great extent avoided.

It is now generally felt, however, from the evidence of many analyses, that the actual *quantity* of organic matter contained in water is quite of minor importance compared with the *quality* of it. According to Dr. Odling, in his report, some years since, upon the effect of sewage upon the Thames water, sea-water even contains much more organic matter than river-water; and it is found that in many waters used for drinking which prove noxious, there is less organic matter than there may be in waters which are wholesome.

That quality of the organic matters dissolved in water which renders them particularly unwholesome, seems as a rule to be that of putrefying, or undergoing a gradual breaking-up, partly spontaneous, partly induced by the action of the atmosphere. For this property is very apt to cause the matter, even when present in minute quantity only, to act as a ferment or agent of change upon large masses of other organic substances, and, among others, those of the body.

Although the organic matters dissolved in water do not, as yet, admit of much distinction one from another, it is known that this putrefactive quality appertains principally, if not exclusively, to those capable of much oxidation, so that the knowledge of the quantity of oxygen required to oxidise the organic matters in water becomes of considerable moment.

(a) A full account of this colour test of the quantity of ammonia in water will be found in Professor Allen Miller's discourse on the "Analysis of Potable Waters," published in the *Journ. Chem. Soc.*

For this purpose the now familiar disinfectant substance, permanganate of potash, is employed. It is a body which gives up a definite quantity of its oxygen—five-eighths of it, or nearly one-fourth of its own weight—to oxidisable bodies with great readiness, especially when acidified, and one, moreover, possessing very high tinctorial power. It is employed by adding solution of it of known strength either until its colouration of the water begins to be permanent, for then it is known that the whole of the oxidation of the organic matter is just effected by the quantity added, or at once using it in excess, but in a known quantity, when the excess added is to be determined by other means, and deducted from the whole quantity. The simple calculation based upon the fact that 3·95 grains of permanganate of potash yield 1 grain of oxygen, one which can be greatly simplified by a little ingenuity in preparing the standard solution so that units of measure are equivalent to certain units of weight of oxygen, then enables the analyst to say how many grains of oxygen are required per gallon of the water to oxidise all its constituents. Dr. Letheby, in the returns of the Metropolitan Association of Medical Officers of Health, adopts the estimate that *one* part of oxygen given up by the permanganate is equivalent to *eight* parts of organic matter oxidised. This must, however, only be taken as an approximation.

The objection that nitrites and other non-carbonaceous matters will also be oxidised by the permanganate, while it holds good to some extent against the estimation of the actual quantity of this kind of organic matter, has little weight when considering the conclusions to be drawn from the test; for when the nitrites are present they may almost always be set down as results of the recent transformation of nitrogenous organic matter—that is, in all probability, organic matter in its worst form—and, further, that even when these or other oxidisable matters, though present, are not the products of changed organic matter, they have still been probably produced by the reducing action of oxidisable organic matter upon oxidated bodies. This test, therefore, is most important, and one which would, we think, be more definite in its indications if the results of its use were always stated in the quantities of *oxygen per gallon* required to oxidise the contained matter rather than in the quantities of *oxidisable organic matters* these are presumed to be evidence of, as is sometimes done.

Besides the use of the permanganate of potash, other very valuable tests are to be found in the sensible qualities of the water, which are now always employed in ascertaining for sanitary purposes the nature of the organic matter, and are easy of application by every one. If the water appears cloudy when viewed in some quantity, the great likelihood of some of the organic matter being in the form of suspended particles renders the quality very suspicious; for, in comparison with dissolved organic matters, those merely suspended seem to be usually of a kind vastly more deleterious to health, and much more apt to render the water offensive. It is found, for example, that where the unpleasant odour of the Thames is marked, it is always more or less traceable to the suspension in it of particles of the black organic mud of its banks.(b) Clearness of water is, therefore, one of the qualities to be, as a general rule, most insisted upon, and is provided for in that obtained from the Thames by one of the enactments of the Metropolitan Water Act.

The *colour* of the water is also of much assistance, after a little experience, in determining the comparative quality and quantity of the organic matters present (excepting in certain special cases, as when iron is present). Water containing organic matters has a greenish or brownish tint, of varying depth. To observe this satisfactorily, the water is compared with distilled water, either by placing a gallon of each side by side, in white porcelain basins, as recommended by Dr. Hassall in his report on the microscopical examination of London waters, or, preferably, perhaps, by placing the two in white glass vessels, two feet deep, and standing side by side on white paper, as is now practised by Dr. Letheby and most chemists.

The *odour* of water is also a well-known indication of the character of its impurities, of which we have only to notice, to such of our readers as may be unacquainted with the facts, that it is much more evident if the water be slightly warmed and rendered a little alkaline with lime water, and that most, if not all, waters will evolve *some* odour in these circumstances, if examined in quantity. Lastly, the *taste* of water is often a useful test of the quality of its organic matters, particularly if observed, according to Dr. Clark's recommendation, at a temperature of 86° F., or a little above it.

As a probable indication of the presence or absence of much oxidisable organic matter in water, at least of those readily disposed to change, the determination of the quantity of oxygen dissolved in it becomes a matter of importance for sanitary purposes. It is performed by analysing, by means which need not detain us, the gases obtained from the water by prolonged ebullition. As, however, the quantity of air dissolved in a water varies, within limits, so much according to the extent of its exposure and to its temperature, the relative quantity of the oxygen to that of the nitrogen is a point of much greater interest and value, because for every two parts of nitrogen one part of oxygen is dissolved. In proportion, therefore, as the quantity of oxygen is less than half that of the nitrogen have we the stronger indication of the presence of matters which are oxidising in the water at the expense of the oxygen dissolved from the atmosphere, and therefore of the degree of probable unwholesomeness of the water. Dr. Allen Miller considers that when the oxygen is less than one-third of the nitrogen the water is imperfectly aërated.

The detection and estimation of ammonia and nitric acid are of importance, not because of any deleterious properties they themselves can impart to water, but as indications in most cases of the passage into it of animal matters containing nitrogen, and, therefore, of the probability of some of these highly putrescible matters either co-existing with them in the water or else occurring in the water at other times instead of them. We have already noticed a method combining considerable accuracy with simplicity of performance and comparative quickness of execution, which is now used for determining small quantities of ammonia in water. We have only, therefore, to add that by the method of the late Dr. Pugh the determination of the nitric acid is now also a matter of relative ease and accuracy, which could not be said a few years since. This method depends upon the oxidation of a mixture of protochloride of tin and hydrochloric acid by the nitric acid heated with them, so as to produce bichloride of tin and water. The concentrated water under examination, made alkaline previous to examination,(c) is mixed in known quantity and heated, after further evaporation, with the protochloride of tin and hydrochloric acid, taken also in known quantity, in a tube which is then, after all atmospheric air has been expelled by the generation of a little carbonic acid gas in the liquid, hermetically sealed. After the experiment the quantity of unchanged protochloride of tin is determined by a volumetric solution of bichromate of potash. This being done, and the relative quantities of bichromate and of nitric acid required to change the same quantity of protochloride of tin being known, the quantity of bichromate solution *not* required *after* the experiment out of that which would have been *before* it, readily furnishes us with the knowledge of the quantity of nitric acid which the water contained.

We must leave the review of the results of the examination of our water supplies for our next article.

(b) In Dr. Whitmore's report for July, he refers to the condition of the water in the ornamental basin in Regent's-park, and states the quantities of suspended and dissolved organic matters which he found in water taken respectively from the northern, southern, and eastern extremities. In that from the northern extremity, which was exceedingly offensive in both smell and appearance, there were only 8 grs. per gallon of *dissolved* organic matters to 12 grs. in that of the southern, and 9·76 in the eastern extremities; while there were 42·5 grs. of *suspended* organic matters to only 5 grs. in the southern, and 3 grs. in the eastern.

(c) That portion treated with baryta water and concentrated by distillation in the determination of the ammonia serves well.

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THE WEEK.

THE CATTLE PLAGUE.

THE last week's reports of the spread of the cattle plague are by no means reassuring. The disease has already made its way to remote country districts, and there is no longer any semblance of truth in the assertion that it is confined to the stifling atmosphere and dependent for its existence on the sanitary shortcomings of London cowhouses. In England it is reported to exist in Suffolk, Norfolk, Essex, Bedfordshire, the Isle of Ely, Devonshire, Durham, and Lancashire. In Scotland it has carried off many dairy cows in Edinburgh and its neighbourhood. A recent telegram reports its appearance in the County Donegal, in the North of Ireland, and cases have lately occurred in Caerphilly and other localities in South Wales. If the spread of the disease be allowed to furnish an argument on the question of its origin, the various accounts from country districts, although not actually proving importation, yet give a balance of evidence against the spontaneous generation theory. Thus at Woburn, in Bedfordshire, the disease is said to have been introduced by some calves, the produce of London dairy cows. The remarkable outbreak at Earl Granville's farm at Golder's-green followed the purchase of some Dutch cows which died of the malady whilst in quarantine. It is true that they were kept a mile distant from the farm, but it may be safely surmised that they were at least visited by persons who had charge of Lord Granville's stock. Some sheep from Scotland are said to have been the channel through which the disease was brought into Donegal. It is clear that such reports will not settle the question of origin. There is nothing unphilosophical in the opinion that diseases which spread by contagion, which multiply by the production of germs, and which even may be inoculated, may yet under favouring circumstances originate *de novo*. No one, we suppose, would support the opinion that the poisons of syphilis, small-pox, measles, scarlatina, glanders, typhus, typhoid, hydrophobia, and the like, were created at the creation of all things, and have come down to our times in natural descent from the era of the primary fossiliferous rocks. The poison of the Rinderpest must have originated at some time and somewhere, and what has occurred once may occur again. Whilst, however, this is clearly admitted, we acknowledge there is a strong balance of evidence in favour of the belief that this country is now suffering from the indiscriminate importation of foreign cattle. It is a remarkable coincidence that the commencement of this cattle disease, which is allowed by all competent judges to be identical with the Russian pest, should have so closely followed the importation of cattle from Revel. It may be quite true that the cattle from Esthonia were apparently healthy, and that that province had been free from epizootic; but the Russian herds are probably never entirely exempt from this form of fever. Sporadic cases may always be found, and we know far too little of the nature and properties of the germs of morbid poisons to dogmatise on the impossibility of convection. It is very probable that there was no epidemic of small-pox in England and Spain when that disease was exported to the Indians of North and South America; and it is an historical fact that the prisoners who were tried at the Black Assizes of Oxford and Exeter, when the judges, large numbers of the bar and of the audience, were stricken down with a rapidly-fatal typhus, were not themselves suffering from the disease, although they were brought from dungeons where gaol fever was never absent. The geographical distribution of the Russian cattle disease, the history of previous epizootics and of its spread in this country, and the fact that it may be inoculated, afford strong evidence of its easily communicable nature; and, without agreeing with Dr. Budd that it is unphilosophical and absurd to suppose that it can ever originate *de novo*, we believe the chain of reasoning by which he supports the theory of its spread by specific germs to be well-nigh irrefragable. The City of London proposes to spend £1000 in sanitaria for the treatment of cattle stricken with the disease. We fear very little good will result from such a scheme. The disease was imported into this country by means of some Russian hides in 1742, and it was only got rid of by the uncompromising destruction of infected beasts, together with all excreta, bedding, etc., and measures of thorough cleansing and quarantine. The remedy which Professor Symonds at first recommended—the poleaxe—is, we believe, the only one to be relied upon; and it must be resorted to without hesitation if we would escape a winter in which the dearth of meat and milk will give rise to an amount of human mortality not surpassed by that from cholera or plague.

HAMBRO' SHERRY.

SINCE the publication of the "Report on Cheap Wines" in the *Medical Times and Gazette*, considerable interest has been excited on the subject in the mind both of the public and of the Profession. One of our contemporaries seems to think that the fictitious wines concocted at Hambro' may not be so bad after all, or perhaps that the statements of our contributor were a little exaggerated. A glance at the independent evidence afforded by the following case will, we think, set the matter in the clearest possible light:—

"*Banner and Others v. Deneker.*

"Mr. Brett, Q.C., and Mr. Littler were for the plaintiffs; and Mr. Milward, Q.C., and Mr. Owen for the defendant.

"The plaintiffs are wine merchants in Liverpool, who had received a quantity of sherry from the defendant, who is a wine merchant and 'sherry exporter' in Hamburg, although the learned counsel said he had not been hitherto aware that sherry was grown in the streets of Hamburg. However, the wine was sold as 'sherry,' and at a very moderate price—viz., £6 a butt, or about 2s. a dozen. An article such as this was charged at the Custom House 2s. 6d. a gallon duty if it was wine, or had any wine in it; but if, on the contrary, it consisted of mere spirit it was 14s. a gallon duty. The plaintiffs having been pleased with their first purchase, and, at all events, having succeeded in disposing of it profitably (however unsatisfactory the disclosure may be), gave a second order for a double quantity; but when it arrived they found that it was a much inferior and less plausable article than the first, and, in point of fact, it was so destitute of any ingredient of wine that it was charged at the Custom House with a 14s. duty as simple spirit. This being the case the article was returned, and the present action was brought for a return of the price which had been paid to the defendant.

"The defence was that the plaintiffs knew the kind of article they were dealing for, and for which it is necessary to resort to Hamburg dealers, and that they were accustomed to buy wines or compositions, of various degrees of inferiority, for the purpose of mixing them with their other wines. More than that, they were told by the manager of the defendant's business at Hamburg at the time that the article they were buying was so poor that they would have difficulty in passing it through the Custom-house at a less duty than 14s., and in order to escape this it was sent round by Havre, so as to come in with the quantity of light wines thence paying the smaller duty, rather than that it should appear as coming from Hamburg, the character of the wines from there being well known. Moreover the two lots of wine were as nearly as possible identical in the amount of spirit contained in them (the matter in dispute in the action), the first containing 38·3 of spirit, and the second 37·9 only, so that the lot complained of had rather the advantage. The defendant's manager was called to proved this, and he described the composition to be of light Hungarian and French wines, and spirit 'sufficient to make it keep,' water, and sherry, and he stated that although the second lot was not of the same 'brew' (to use his lordship's expression) as the first, it nevertheless was as nearly as possible of the same composition. Besides, the defendant had no object in doing this, for the spirit cost him as much as the wine.

"In reply, it was denied that the excess of spirits was the sole question in dispute, as separated from that of the deficiency of wine, and that if this case was to be decided apart from prejudice, there could be little doubt that the two parcels of wine were not the same in quality, and the plaintiffs were entitled to succeed.

"His Lordship said it was difficult to enter upon the decision of the case without prejudice, and he confessed that his prejudice was rather in favour of the defendant, who got rid of the rubbish, than of the plaintiffs, who imported it; and

"The jury immediately returned a verdict for the defendant."—*Times*, August 25.

THE MEDICAL TIMES & GAZETTE SPECIAL REPORT ON THE EPIDEMIC OF CHOLERA: WITH A PRACTICAL HISTORY OF THE DISEASE.

Chapter II.

Definitions of Cholera.— *Endemic Hepatic Cholera—Epidemic Intestinal Cholera—Ancient Definitions.*

In studying the natural history of cholera the most careful scholar soon becomes mystified by the name. Nothing has caused so much confusion amongst Practitioners of Physic, men of letters, statists, sanatarians, therapeutists, and even pathologists, as the word cholera. The word is of the oldest in Physic, but scarcely any two writers who have entered into careful definitions have described under it the same disease. We believe that all this confusion has arisen from the simple fact that there are two diseases, easily confounded, but in truth very distinct. The simpler of these diseases is merely an endemic, occurring under the influence of season, originating in excessive hepatic action, affecting many persons at the same time, and proving now and then fatal, but never spreading by intercommunication, nor moving from country to country. For the sake of scientific accuracy, it would be well to denominate this form of the malady Endemic Hepatic Cholera.

The second form of the malady is epidemic. It has no reference to season nor place; it may commence by attacking many persons at once, but its natural tendency is to spread or radiate from a provisional centre; it moves from country to country, irrespective of climate, and, in the main, presents the same symptoms wherever it goes; the symptoms of it are due to excessive excretion from the alimentary mucous surface, the hepatic secretion remaining either unaltered or being lessened in quantity. For the sake of scientific accuracy, this cholera should be named Epidemic Intestinal Cholera.

Under these definitions the vague terms "cholera morbus" and "Asiatic cholera" would be dispensed with. They are both absurd, because Asiatic cholera may become European, African, or any other, and cholera morbus may mean, as for centuries it did mean, the common endemic hepatic seasonal cholera of this country; or the term may be applied, as it was almost exclusively in 1832, to the epidemic intestinal visitation.

The two diseases have in common the symptoms of vomiting and purging, but in essence they are entirely different;—indeed, hepatic cholera is as distinct, in a pathological sense, from intestinal cholera as it is from sweating sickness; while sweating sickness and intestinal cholera are intimately allied, the simple difference being that in the first the glands of the skin, in the second the allied glands of the mucous membrane, furnish the profuse excretion.

There is a subject of some interest in a classical point of view connected with the division of cholera into the two classes just described; for, in fact, this is the ancient division, and was without doubt founded on a correct appreciation, by the ancients, of the two disorders. Cœlius Aurelianus, for example, defines cholera as essentially a flux of bile, and gives the derivation accordingly, χολὴ ῥεω, in which he has been followed by almost every succeeding author; but Alexander, better known as Alexander the Physician, or Alexander of Tralles, describes cholera as a flux from the intestines, and founds the derivation of the term on its supposed or known pathology, χολὰς ῥεω—a derivation which has well-nigh been forgotten.

It is easy to suppose that the simple hepatic cholera has been observed from the first days of physic, and that the definition of Cœlius Aurelianus, therefore, holds good through the ages; but it may be doubted whether the true intestinal epidemic disorder has any date far in the past, and whether Alexander, who travelled widely, saw anything more than the simpler disorder. To us it seems that the question is settled by Celsus, who, often quoted and misquoted, makes, we think, in the eleventh chapter of his fourth book, a reference—that does not admit of being misunderstood—to none other but the intestinal form of cholera. Thus, speaking of the fluid ejected by the patient, he says, it is at first like water, then as if fresh meat had been washed in it—"deinde ut in ea recens caro lota esse videatur." In addition to these symptoms, sometimes the legs and hands are seized, he tells us, with involuntary contractions, the thirst is urgent, and the animal power fails quickly; it is not to be wondered at, therefore, if the sick man die suddenly. The one observation that the excreted fluid resembles water in which fresh flesh has been washed is sufficient to show the drift of the writer. Let any one who has often seen the evacuations of patients suffering from intestinal cholera in the later stages compare the fluid ejected with water in which animal matter has been washed, and he will at once see the perfection of the analogy.

The only difficulties that lie in the way of determining absolutely the point whether Celsus does or does not describe true Asiatic cholera are two: first, that he does not speak of the disorder as a pestilence; and secondly, that he speaks of it as a malady, than which there is none less difficult to cure. We believe, however, that these difficulties are removed by the suggestion that Celsus in writing his chapter on cholera was depicting, not from nature herself, but from descriptions by the Greek Physicians. His eleventh chapter of the fourth book, when read critically, is obviously not the work of a practical observer, but of a scholar. This is indicated in the treatment named, essentially Greek in its nature, and after all still of the best—viz., that the patient is to be made to drink of tepid water in large quantities; as well as in the remark, in the twelfth chapter, that the seat of the disease is seated between the stomach and intestines, but is not easily defined. "Sid hic quidem morbus et acutus est, et inter intestina stomachumque versatur sic, ut cujus potissimum partis sit, non facile dici possit."

If, then, it be true that Celsus described the true intestinal disease, it follows that this disorder is as old as most of the ordinary recognised diseases of the human family, and, as we may gather from numerous authors, that endemic or bilious cholera is equally old, the point, we believe, is clear that the two diseases have existed from the earliest times. At the first they were perchance described accurately by the authors who observed them, but the endemic variety being most common, indeed, a constantly recurring disorder, has been held incorrectly as the type of both. In order that we may steer clear in our future work of all obscurity in the use of terms, we shall insert a short chapter on Endemic Hepatic Cholera.

In modern times there has been added to our knowledge the existence of another variety of cholera, which may be aptly termed Septic Cholera. We shall add also a short chapter on this disorder.

Chapter III.

Endemic Hepatic Cholera.

The question,—What is endemic hepatic cholera? is answered by nearly all our old classical English writers,—by Sydenham and Cullen specially. Sydenham describes an intestinal plague which in many respects resembles in description intestinal cholera, but which, on careful analysis, is resolved into

bilious cholera. Cullen follows Sydenham, but is more definite. He says ("Practice of Physic," vol. iv., chapter 10), that "in this disease a vomiting and purging concurring together, or frequently alternating with one another, are the chief symptoms. The matter ejected, both upwards and downwards, appears manifestly to consist chiefly of bile. From this last circumstance, he continues, "I conclude that the disease depends upon an increased secretion of bile and its copious effusion into the alimentary canal, and as in this it irritates and excites the motions above mentioned I infer that the bile thus effused in larger quantity is at the same time also of a more acrid quality. This appears also from the violent and very painful gripings that attend the disease, and which we can impute only to the violent spasmodic contributions of the intestines which take place here." Cullen further tells us that this disorder is often rapidly fatal, and that the patient may die in one day.

In England cholera morbus has never been absent for a single year since records of disease have been kept. Sometimes it has assumed a wide endemic range, and has proved extremely fatal. Sydenham, speaking of the disorder, said it was as sure to return in autumn as swallows were sure to return in spring. In the year 1669 Sydenham saw the severe epidemic in London, which he has described. In the year 1800 an outbreak almost as severe occurred, and in 1802 in one London district only forty-two cases in ten days were reported to the *Medical and Physical Journal.*

Without wearying the reader with details of endemic cholera, we may remark that the disease in all its history has shown essential characters which separate it from the intestinal cholera. It is infinitely less fatal, it is attended with severe intestinal pain, it does not seem to be contagious, it is preceded by foul tongue and eructations, it is under the control of simple remedies, the matters excreted are bilious, and there is pain and tenderness over the liver. When it proves fatal—and we ourselves have seen a few fatal cases—it exhibits at last symptoms which are those of spasm, coldness, and collapse; but these symptoms are only an imitation of those of intestinal cholera; they are due, as in the intestinal cholera, to loss of fluid from the body, but the fluid is yielded by hepatic secretion, not by rapid exudation of simple watery fluid derived from the alimentary surface.

The post-mortem appearances—we speak from direct observation—are peculiarly marked; the liver is enormously congested, and soft in structure; the stomach and duodenum are deeply tinged with bile; the gall bladder is distended; the intestines, empty and collapsed, are deeply tinged with bilious secretion; the blood presents a dirty colour, with separations of fibrine extremely yellow in tint, and the lungs are inflated, and pale, with slight ecchymoses.

Such is the endemic hepatic cholera, in this country occurring usually in the months of August and September. Its history generally, if not its pathology and its treatment, are well known by every Practitioner in Physic, except in those times of panic when the intestinal cholera is coincident with it: then it is overlooked, the old malady is thrown in with the new, and too often is treated for the new malady when it had better have been treated in another way.

The cause of hepatic cholera seems to be sufficiently intelligible and local. It is not directly induced by fruit nor by food of any kind, nor by uncleanliness, although these may tend to call it out, but by season. A modified physiological condition of the body lies at the root of the evil. How the malady is influenced by season the following facts will indicate:—

We calculated the mortality from sixteen acute diseases in the districts of London, Devon, and Cornwall, and, in order that no mistake should occur from small numbers, we took into our inquiry eight years, so that we had before us a total of 139,318 deaths. Then we analysed the causes of these deaths, excluding epidemic cholera, and placed the disorders under their respective seasons. As the results came out, we found that the diseases we had in hand obeyed a given law in regard to season, and that fatal diarrhœa, including hepatic cholera, was of all diseases markedly under the influence of law. Thus the facts stood:—

	Per cent.
In the months of January, February, and March the mortality from the cause named rated as . . .	10·196
In April, May, and June	10·717
In July, August, and September	58·519
In October, November, and December	20·567

The disease thus showed year by year a gradual progression from the first to the second quarter, then a rapid rise in the third quarter, a step down in the fourth quarter, and another step down to a minimum in the first quarter. It is worthy of remark that dysentery and jaundice follow the same law, though in a less marked degree.

There is nothing capricious or accidental in natural phenomena, and this tendency of the human body to throw out excretory matter from the hepatic system during the autumnal season is as much in the order of nature as the casting off of the fruit and the foliage of trees. The researches of Mr. Milner, of Wakefield, have proved directly—and those of Dr. Edward Smith have supported Mr. Milner's deductions in an important and singular degree—that when large numbers of persons are considered a great physiological variation, incident on season, is found to be in progress. Thus, during the months of summer there is a gradual increase in the weight of the body, which reaches its height in August, and in September undergoes a sudden and remarkable declination, and this irrespectively either of diet or mode of life. Mr. Milner says, speaking from an experience of ten years' accurate observation on 4000 men living under the same circumstances in the prison at Wakefield:—"Beginning at December, the amount lost per man increases rapidly and steadily till March, but between March and April there is a very abrupt transition from loss to gain. The gains then continue until August, the amount gained increasing on the whole, but by a series of jerks, each alternate month presenting a larger and a smaller gain irrespectively, so that to obtain a steadily increasing series we should have to couple the summer months in pairs. Between August and September a change of sign occurs, about equal in amount, but in the opposite direction to that which took place between March and April."(a)

Thus, in relation to the whole population, it is safe inference that with the occurrence of autumn there is an abrupt loss of corporeal substance, and this independently of any reduction in sustenance, and by virtue of pure physiological law. But if there be loss of substance on the same amount of sustenance, the cause of loss must lie in an increased waste; in other words, in increased excretion. It is so. The waste is naturally ensured by an increase in the amount of carbonic acid thrown off by the lungs and skin, and probably when the natural law is fully carried out the reduction is altogether effected by this means. But the liver, as well as the lung, is an excretory instrument for carbon, and the ultimate destination of the bile is to the lung, to be burned and cast off as carbonic acid. Ergo, a first step towards increased combustion is an increased hepatic secretion to supply carbon. In this manner we have the physiological elements for hepatic cholera; let the excretory function of the lung be reduced by any external cause, or let the hepatic function, already active, be further called forth by some foreign substance, and the natural result in either case is hepatic flux and autumnal cholera. We account, then, for hepatic cholera by natural or physiological causation; and we doubt not that this is the true reading of the malady which, as Sydenham justly says, returns in autumn as surely as the swallow returns in spring.

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(a) See *Sanitary Review* for January, 1859.

We have excluded for the moment all so-called sanitary arguments, in order to arrive at the truth which lies at the root of the phenomenon of autumnal cholera; but it would be unwise not to give these arguments their proper position. The fault of the present day, and the folly of it is, that it tends to connect all the phenomena of endemic and epidemic disorders with bad sanitary measures, as though such measures were the prime factors. In the endemic cholera they are not the prime factors; but the body being prepared for over-action, various agencies which are injurious tend to excite or call forth the over-action. The inhalation of an impure atmosphere, by checking the free evolution of carbonic acid of the lungs, throws an obstacle in the way of the combustion of bile, and by surcharging the hepatic system, leads to irritation of the mucous surface of the intestinal tract from bile, and to reflex action and diarrhœa. In mild cases the diarrhœa, in this manner, relieves the body, and a kind of natural cure is effected. In severe cases the irritation set up is so great that the malady progresses to an extreme degree, and if the over-action be not checked, death is the result.

In other instances, sudden exposure to cold acts in the same manner as bad air; by such exposure the secretions of the skin and lungs are suppressed, and the engorged visceral organs are relieved by flux from the bowels. The diarrhœa which so frequently attacks the badly-clothed, badly-nourished classes, after a sudden fall of the thermometer, is an illustration also in point; and the looseness of the bowels in persons suffering from disease of the lungs is a third illustration equally applicable and true.

Lastly, when the hepatic function is specially active, the consumption of articles of food which tend naturally to create free secretion, such as unripe fruits, starchy foods in excess, uncooked vegetables, and spirituous liquors, one and all help to excite hepatic cholera, and are often, indeed generally, referred to by patients as *the* sole causes of their suffering. And here, indeed, lies a good diagnostic test between the endemic hepatic and the epidemic intestinal cholera. In the endemic variety there is never any difficulty in getting at the excitant of the acute symptoms. By carefully noting the conditions under which the sufferer has been placed, by observing the character of the air he has been breathing, the exposure to cold air to which he has been subjected, or the character of the food or drink he has taken, we may invariably arrive at something that is definite, at least in regard to the agency by which the first symptoms were elicited. In the epidemic variety, on the other hand, it is only by the refined analysis of a vast array of facts that any approach towards a definite truth can be arrived at. In epidemic cholera, you ask patient after patient what induced the malady, and there is no definite answer; neither locality, nor season, nor habit, nor temperature decide anything in respect to individual cases. The most skilled observers, speaking only from their own experience, differ as widely as they are numerous, and the reason for this difference is on the surface: they speak of a malady the exciting cause of which, as we shall see more plainly as we proceed, is not amongst the common order of excitants, but which, probably, like some active medicinal substances, such as elaterium, is sufficiently potent to act on the body while all the functions are normal, and when no element of natural predisposition admits of being considered as a part of the phenomena presented.

Chapter IV.

On Septic Cholera.

Between the ordinary endemic cholera and the epidemic form of the malady there lies another variety of choleraic disease, which may very properly be designated *Septic Cholera*. The term is new, but we believe simple and scientific; it refers, perchance, to an intermediate link between the endemic and the epidemic types of the malady.

Septic cholera is best seen in the dissecting-room; it appears there usually amongst young students who are first commencing to operate on the dead body. In badly-ventilated rooms it is occasionally widely spread amongst the students, but is most commonly present amongst the neophytes only. A late eminent anatomist, who in his day educated large numbers of students, Dr. Deville, told us that he had scarcely ever met with a student who altogether escaped. He also observed that in his own case he could at any time excite the malady by dissecting in a small and close room, for too long a time. This disease is rarely fatal; but our own experience furnishes us with one instance in which it proved fatal. The first symptoms of the disease are a passive diarrhœa, with little pain, but ultimately with sharp pain in the rectum, and with quick exhaustion. The fluid excreted by the bowels is thin, and like dirty soap-water, without shreds and without bile; the excreted matter has a peculiar odour, resembling that of the dead subject. The stomach is not often seriously affected; there may be some nausea, but we have never observed vomiting, and as a rule food and drink can be absorbed without interruption. In the fatal case to which we have referred there was no vomiting. The disease ordinarily goes away of itself, if the process of dissection be suspended, and if the sufferer will indulge himself by inhaling pure air in the country. A peculiarity of this affection is, that after a time it disappears, even though the person who suffers from it continues to dissect—*i.e.*, if he do not carry on his labours too industriously—and the immunity lasts as long as the art of the dissector is practised. The anatomist becomes, in a word, tolerant of the evil; but when he leaves off dissection for a long time and returns to it again he is liable to a repetition of the malady, just as a smoker who bears the habit so long as he sustains it, but suffers when, after long abstinence, he returns to the pipe. In our own case, we never even make a post-mortem examination without suffering more or less from subsequent septic cholera.

Septic cholera is also induced by absorption of organic animal poisons derived from wounds. The purging in pyæmia seems to be of this type.

Septic cholera can be induced synthetically in the lower animals. By making animals live in an air impregnated with sewer gases, Dr. Barker, of Bedford, induced both vomiting and purging, the animals always recovering when removed into the open, pure atmosphere. We have ourselves induced the same symptoms in animals by introducing decomposing matter, derived from wounds, into their bodies by subcutaneous injection.

There can also be no doubt that septic cholera is induced in the human subject by inhalation of air strongly charged with organic impurities. Nightmen and men working in sewers suffer at first from this disorder, as students of anatomy suffer in the dissecting-room, but in time they become inured to, or, as we previously expressed, tolerant of the evil.

Septic cholera is more nearly allied to epidemic than to endemic cholera. It differs from the epidemic variety, however, in the following important particulars:—1. It is not known to be communicable. 2. It is slower in its development. 3. It shows a decided and, indeed, determinate tendency to cease so soon as the patient is removed from the cause of it. 4. The body, in process of time, tolerates the cause, or, to be more definite, it finds a method of disposing of the evil agent to which it is subjected.

The exact nature of the agent that excites septic cholera has not yet been discovered, but it is probably an organic poison, which disseminates through the air, is capable of being absorbed either by the blood in the lungs or by the fluids of the mouth, of impregnating the tissues, and of being eliminated by the excretions. The poison is clearly not very volatile, for if it were it would not remain so long as it does in the living body; it is soluble, otherwise it would not be

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carried away by the fluid excreta; most important of all, it is not reproduced in the economy, either directly or indirectly, if it were recovery from its effects would not be spontaneous after it ceases to be received from without, and tolerance of it would be impossible.

The *modus operandi* of the poison of septic cholera admits of being followed out with more precision than that of most other organic poisons. Absorbed into the blood it is conveyed away freely by excretion from the mucous intestinal surface, to which surface it acts at first as a foreign substance, exciting further excretion, and being eliminated by its own action.

The lesson we learn from septic cholera in relation to its connexion with epidemic cholera is simply this,—that certain decomposing animal organic matters yield a specific poison, which, conveyed into the organism, either through the blood or through the fluid secretions of the mouth and throat, excites a temporary choleraic flux. Here the clue, by this track, to the cause of epidemic cholera abruptly ceases, and we are left simply knowing that to be rigorously exact we may exclude the special poison of septic cholera from our inquiries after the cause of epidemic cholera.

REVIEWS.

The Baths of Nassau, Wiesbaden, Schwalbach, Ems, Schlangenbad, etc. By Edwin Lee, M.D., etc. Being the first portion of "The Baths of Germany." Fourth edition, with alterations and additions. London: John Churchill and Sons. 1865. 8vo. Pp. 99.

In the days of our innocence we were in the habit of travelling about from bath to bath in Germany—staying here a week, there ten days—seeking information as to the therapeutical value of each particular spa. Our plan was to read attentively any pamphlets which had been published on the advantages which the spa afforded: then, having become acquainted with one or more of the resident Physicians, to inspect for ourselves the different appliances in use, to taste the various waters, sometimes to indulge in the baths, and get any other information which we could pick up. Our plan certainly had many advantages. We can bear emphatic testimony to the courtesy and politeness of the majority of the *Bad aertzte*. They took the greatest pains to explain everything; to point out the natural advantages of the place, and show how these advantages had been artificially improved. They told us of wonderful cures, and they explained the chemical and therapeutical nature of the water.

Still, we were not satisfied. We found each Physician thoroughly impressed with the virtues of his own particular spa, but almost utterly sceptical as to those of any other. Wherever we went we were sure to hear of an old lady who had spent her life in trying various mineral waters, and, after years of disappointment, had at length been completely cured when good fortune led her footsteps to *that* spa. That old lady haunted us. When we visited a strong chalybeate the Physician in attendance pointed in triumph to the chemical analysis, and asked whether it was not reasonable that his spa must be more potent for cure than one containing less of the essential ingredient. When we visited a weak chalybeate we were told that only a certain amount of iron could be digested; that digestion was much assisted by the combination of iron with other elements, and that this combination was happily effected in the spring before us.

Utterly conflicting testimony was given as to the comparative value of sulphurous and saline thermal springs, and we were left in doubt as to whether iodine or chloride of sodium were most powerful in the resolution of chronic enlargements.

In the year 1862 Dr. Althaus filled up a gap in British Medical literature by publishing "The Spas of Europe," a volume which we remarked at the time would long be appreciated as a complete and trustworthy book of reference on the mineral waters of Europe. But Dr. Althaus' book cannot be compared with Dr. Lee's. The former is more scientific; it is a laborious work, a guide to the general principles which should direct us in choosing a mineral water for any case. The latter is a capitally written little treatise, describing the scenery and amusements of the baths of Nassau, and giving us a reliable account of the kind of cases which are benefited in each.

The baths of the Duchy of Nassau might almost be looked upon as an epitome of the baths of Europe. Within the little territory are to be found all varieties of mineral waters—salines, hot as in Wiesbaden, warm as in Schlangenbad, cold as in Soden; hot alkalines, as at Ems; chalybeates of various strengths and in varying combinations, as at Schwalbach, Kronthal, and Fachingen; and sparkling beverages, as at Selters.

Dr. Lee has a word to say on each of these baths. And first as to Wiesbaden, the gay capital of the Duchy, with its mild climate, its comfortable hotels, its gorgeous Cursaal, its well-appointed theatre, its crowded gambling-rooms, its lovely environs, its gay society. Do the warm waters of Wiesbaden deserve the reputation which they have acquired in gouty and rheumatic affections? Dr. Lee tells us that they do deserve it, that they are most useful in long-standing atonic cases, in erratic, irregular, or repelled gout, and in persons who, only having had one or two attacks, have still a strong predisposition to rheumatic disease. "On the other hand," he tells us, "where there is a tendency to acute inflammation, and in persons of a plethoric or a highly irritable habit, I should consider Wiesbaden less likely to be beneficial than an alkaline or a slightly mineralised spring, as Vichy, Ems, Töplitz, Wildbad, Bath, or Buxton, or than the internal use of a spring like Carlsbad, Homburg, Kissengen, or Marienbad, combined or not with baths, according to circumstances." A hot, sulphurous or saline thermal spring is, *ceteris paribus*, more likely to succeed in rheumatic cases than a simple thermal; but it does not follow that the former are always to be preferred. In irritable cases, where the symptoms are sub-acute, or when the patient is plethoric and young, Aix or Wiesbaden might be found too stimulating, while great success might attend the use of the weaker springs. In abdominal plethora and in the hæmorrhoidal affections which it often produces, and in those cases of paralysis where there does not exist a high degree of nervous excitability or tendency to fulness in the cerebral vessels, the baths of Wiesbaden may be used with great prospect of advantage. Even in those partial paralyses which remain after apoplectic seizures Wiesbaden baths may be beneficial; but they are especially indicated when the complaint is of a rheumatic origin, or depending upon the presence of poison, whether malarian or metallic. Besides these cases, there are others where Wiesbaden is likely, in common with many other watering-places, to be useful—as, *e.g.*, cases of hypochondria, cachexia Londinensis, and all those complaints which are to be relieved by change of scene and transmission to a mild climate. To young people the climate is often too relaxing.

Langenschwalbach, a small town of 2500 inhabitants, is the chief chalybeate of Nassau. The author of the "Bubbles" has made every one familiar with it. It is Spa without its gaiety, and with considerable need of sanitary reform. The air is bracing, and the surrounding scenery beautiful, and, like most other chalybeates, Schwalbach is not infrequently prescribed as an "after cure," where thermal waters have originally been prescribed. On this point Dr. Fenner gives a word of warning. He tells us to remember that the beneficial effects of the thermal springs is often not experienced till some time after the discontinuing of their use, and that if we immediately follow them with chalybeates we may produce much mischief. It is better that a certain interval should elapse between the two courses.

The water at Schwalbach is taken internally and in baths. Like almost every other bath, Schwalbach has a certain reputation for the cure of sterility. No doubt it may be useful in these cases, provided the sterility be caused by some state which can be remedied by iron.

The springs of Ems are the most efficient alkaline thermals in Germany, resembling in temperature and in the nature of their composition those of Vichy. They are useful in gout and rheumatism, and chiefly in cases which are not likely to be benefited either by the stimulating saline of Wiesbaden, or the mild thermals of Teplitz. "Where patients have pursued an arduous career, if they have exerted at the same time the mind and the body, they sometimes present great excitement of the sensibility, combined with a general prostration of strength; the whole organism is in an excessive state of irritability. In these subjects the gout does not localise itself nor manifest itself in a critical manner. The depression of the vital powers does not then admit of our having recourse to active or energetic means, while the nervous erethism

excludes the employment of tonics. In any similar condition the well-directed administration of the Ems springs, internally and externally, produces the most advantageous results." Ems has a reputation for the cure or amelioration of consumption. It no doubt soothes chronic catarrh, but Dr. Lee quotes Lersch:—"Tuberculous patients go to Ems mostly to their prejudice when the disease is not in its first stage and complicated with abdominal obstruction." Scrofulous children may derive benefit from the use of the Ems water if not kept at Ems during the hot months. At Ems there is a natural ascending douche, which rises in a jet three feet high. This douche has acquired a great reputation for the cure of sterility, and has been christened the "Bubenquelle" (Baby spring). It is a remedy of great power, and in cases of chronic congestion, or *infarct.* of the womb, undoubtedly may do great good. It as undoubtedly, however, may do great harm. The climate of Ems is extremely relaxing. The town, itself agreeable and well built, with stately Curhaus and well-ordered pleasure-grounds, lies in a narrow valley sheltered on almost every side from the wind, and often covered over with a damp fog.

Our space will not allow us to follow Dr. Lee's description of the other baths of Nassau. We have to pass over Schlangenbad, whose rejuvenating powers are so marked that, in speaking of it, a delighted Frenchman exclaimed, "On y devient positivement amoureux de soi même;"—Weilbach, with its mild, cold, sulphurous waters, not unlike those of our own Moffat;—the salt springs of Soden, and the sparkling waters of Fachingen and Selters.

We feel confident that Dr. Lee's book will continue to enjoy the reputation which it has already gained.

GENERAL CORRESPONDENCE.

GRIFFIN TESTIMONIAL FUND.

LETTER FROM DR. ROBT. FOWLER.

[To the Editor of the Medical Times and Gazette.]

SIR,—At the last meeting of the Committee it was resolved that the above fund should be definitely closed.

Intending subscribers will oblige by forwarding their contributions on or before October 31st proximo to

Yours, &c.,

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate-street Without, September 6, 1865.

THE REPUTED FEMALE ARMY SURGEON.

LETTER FROM DEPUTY-INSPECTOR BRADFORD.

[To the Editor of the Medical Times and Gazette.]

SIR,—The annexed notice has reference to the history of an individual recently deceased, and to whom allusion is made in your number of August 26 under the head of "A Female Medical Combatant." There are, no doubt, some who are better acquainted with his early history than I am, but I think it is due not only to the Department in which he was so long permitted to exercise control, but still more to the interests of truth, that the rumours which have been circulated (and, no doubt, believed) concerning him should be contradicted. You are therefore authorised, if you see fit, to publish the enclosed.

I am, &c.

EDWARD BRADFORD, Deputy-Inspector-General of Hospitals.

R. M. College, Sandhurst, September 2.

The late Dr. J. B. was born about the beginning of the present century. He was understood to have been born prematurely, and his mother died in her confinement. His father also died at the same time. He would at times make allusion to these matters, but only in vague terms. He was adopted and reared by persons of high rank, and, for some reason unexplained, the . . . family appeared to maintain an enduring interest in him to such an extent that, in his manifold military irregularities, the influence of members of that family was known to support and protect him. I have learned that the celebrated John Bell was concerned in his nurture, and that, through his instrumentality, he obtained at Edinburgh the degree of M.D. at a very early age. In the year 1813 he was sent to Plymouth in the capacity of Hospital Assistant. The principal Medical officer at that station, who still survives, a venerable and most worthy officer, and who told me the fact, objected to receive him on account of his childish appearance; but on referring the matter to the authorities, he was told that "it was not desirable to agitate the question." He soon after went to the Cape of Good Hope, and was educated with the children of Lord C. Somerset, who was then governor. As he grew older, he obtained rank, and a certain celebrity as a Doctor, and is said to have been much sought after. He attained a knowledge of Latin and French, but he was accustomed to ridicule the idea of being skilled in Medicine, and often boasted that he never had done a day's Hospital duty. I first met him in 1832, in Jamaica. His appearance and manners were then most singular. His stature scarcely reached five feet. He was quite destitute of all the characters of manhood. His voice was that of an aged woman. He sought every opportunity of making himself conspicuous, and wore the longest sword and spurs he could obtain. He was always addicted to pet animals, dogs, monkeys, and parrots. His food consisted at this time of milk and fruit, but in after life he took more solid nutriment. He delighted in scandal and gossip, and told me that on one occasion he had gone out with some one at the Cape, and had shot one of his whiskers off. When suddenly called on for a duty which he disliked, he went to bed, and wept like a child till the danger was passed, when he turned on his persecutors, as he called them, and represented himself to the home authorities as a most injured person. When he was ill he invariably exacted from the officer who attended him a promise that, in the event of his death, strict precautions should be adopted to prevent any examination of his person. When travelling, he carefully secluded himself from observation. From Jamaica he went to St. Helena, and there raised such a storm that Major-General Middlemore ordered him home. After this he was stationed in Antigua (where he nearly died), in Barbadoes, and in Trinidad, where he was again extremely ill. I had, in the last-named island, the misfortune to give him great offence by stating in an official report that he was probably 50 years of age. He had then been thirty-three years in the army, but he called the report a "base attempt to blast his prospects." Yet he forgave me afterwards. The same singular craving for authority and power was here manifest in him as during his whole life. He was gifted with much acuteness, and had a good memory. So long as he was treated with deference he was good humoured, and would enjoy mirth at his own expense; but if anything touched his importance, his anger knew no bounds; there was no authority or station which he (secure in his own importance) would not set at defiance. After this period he was stationed at Malta and at Corfu, and during the Crimean war he appeared with his huge sword and spurs at Balaclava.

He subsequently obtained the rank of Inspector-General, and went to Canada, where he served several years. He finally retired from the service in 1859, and died in London in July last.

Through life his irritable and impatient temper brought him into constant collision with authority; he was, however, very capable of generous feeling, and of gratitude to those who were kind to him.

The stories which have been circulated about him since his death are too absurd to be gravely refuted. There can be no doubt among those who knew him that his real physical condition was that of a male in whom sexual development had been arrested about the sixth month of fœtal life. It is greatly to be regretted that the opportunity of his death was allowed to pass without exact observation of his real condition by a skilled person.

The real marvel of his history is, that a being of a frame so feeble, without domestic resources, with a temper so irritable and even mischievous, in spite of frequent severe sickness in tropical climates, and constantly at variance with authority, should have attained the highest rank in the Medical Department, and have lived to the age of 65 years.

August. EDWARD BRADFORD.

APTHÆ OF THE MOUTH, ETC., IN ADULTS.

LETTER FROM MR. C. F. MAUNDER.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your impression of to-day Dr. Wilks has recorded some instances of apthæ of the mouth in adults. Two cases of a similar nature have lately come under my observation: one a young woman residing at Peckham, whom I had a few

days previously submitted to ovariotomy, and in whom the apthous condition of the mouth was preceded by griping pains in the bowels associated with constipation, and relieved by warm water enemata and small doses of castor oil. Besides these visible white patches on the palate, velum, and pillars of the fauces, there was a sense of constriction about the larynx, with slight difficulty in breathing; but neither cough, nor diarrhœa, nor vomiting. One peculiar feature, however, was present, and persisted for more than a month—indeed, until the patient regained her strength somewhat—a constant and profuse discharge of clear fluid from the mouth, with a somewhat spongy state of the gums, but unattended by pain or swelling in the region of the salivary glands. My colleague, Dr. Down, saw the case with me. Tincture of steel, chlorate of potash, an alum gargle, with a liberal mixed diet, were prescribed, but without any decided immediate benefit. The patient recovered. The second instance was that of a young man, whom I saw with Dr. Floyer, of Bishopsgate. The patient, a few days previously, had sustained a very severe contuso-lacerated wound of the thigh, and on looking into the mouth to note the state of the tongue I observed this apthous condition of the palate, etc., etc. None of the untoward symptoms described by Dr. Wilks were present in either of the above examples, the patients, indeed, being quite ignorant of any morbid condition of the palate and fauces. I have not seen the latter case a second time, but understand that it is progressing favourably. I am, &c.

C. F. Maunder.

29, New Broad-street, E.C., September 2, 1865.

REPORTS OF SOCIETIES.

HARVEIAN SOCIETY OF LONDON.

Thursday, April 20.

Dr. J. C. Langmore, President.

Dr. Royston exhibited a specimen of

MEDULLARY CANCER OF THE UPPER PART OF THE RIGHT FEMUR.

The patient was a widow, aged 48 years, who had wricked her thigh whilst walking in the park in July, 1862. Besides the disease in the right femur, there was a corresponding cancerous affection in the last lumbar vertebra and in the sacrum. A small scirrhous tumour had existed in the left breast for the last five or six years. After death, both thigh bones were found to be fractured at the junction of the upper and middle thirds. The left thigh bone had been broken in moving the body after death.

Mr. Sedgwick remarked that there had been some difference of opinion respecting the diagnosis of the disease in this case. He had seen the patient several times during life, and as there was family history of cancer, a sister having previously died of scirrhus of the breast, and as the patient herself also had a scirrhous tumour in her left breast, he had come to the conclusion that she was suffering from secondary cancer in the femur. He was glad to find that the examination after death had confirmed his diagnosis of the case.

Dr. Boyd Mushet referred to a case of cancer which had come under his observation, in which fracture of both thigh bones had occurred during life.

A paper, by Dr. Boyd Mushet, was read, on

THE ETIOLOGY OF PULMONARY APOPLEXY.

The author commenced by remarking that he had hitherto associated the causation of pulmonary apoplexy with an impaired condition of the valvular apparatus on the left side of the heart. Whilst, however, he was engaged in arranging his autoptical records, he encountered two cases of the affection which directly militated against this view. He was fully impressed that these, from their paucity, were insufficient to support any practical or scientific position, but he thought that they fairly entitled the subject to re-consideration, and more special scrutiny. In case 1, a man of 34, long the subject of bronchitis and dilatation of the pulmonary tubes, death occurred after an aggravated attack in which urgent dyspnœa was the most prominent symptom. During its progress there was not any hæmoptysis. After death, nodular effusions of coagulated blood were detected in the lungs, and there was unusual patency of the tricuspid orifice. In case 2, a woman of 75, there were symptoms chiefly referable to the stomach, with ejection of dark coagulated blood a few days previous to the fatal issue. On examination, circumscribed hæmorrhagic effusions were presented in the pulmonary substance, and in this case also the right auriculo-ventricular orifice was dilated. In neither case was there any trace of tubercular deposit in the lung. Dr. Mushet proceeded to comment on the assertion of Andral, that pulmonary apoplexy was first described by Laennec, and stated that Hohnbaum previously drew attention to it, and Haller also, sixty years before, in his "Opuscula Pathologica" (*Obs.* xiv., Hist. 1 and 2), which were quoted. He next alluded to the meaning attached to the term "peri-pneumonia" by the older writers, as Boerhaave, Ettmuller, Willis, Sydenham, Sauvages, and Cullen. In referring to the etiology of (so-called) apoplexy of the lung, he quoted Drs. Townsend, Laennec, Watson, Burrows, Walshe, Sieveking, and Fuller, and adverted to the omission of the disease from the recent works of Dr. Aitkin and Dr. Maclachlan. He spoke of the occurrence of the attack at any age, and glanced at its connexion with tubercle and ordinary hæmoptysis. Considering the discrepancy of views in reference to the proximate origin of pulmonary apoplexy, he ventured to observe that in the cases he had adduced the only common lesion was enlargement of the tricuspid orifice. Without endeavouring to establish a physiological explanation of the influence of this condition—if it exerted any—in the production of effusion of blood into the lung; he merely mentioned the pathological facts, adding that Bertin, Chomel, Bouillaud, and other French investigators ascribed the affection to hypertrophous disease of the right heart—a change which ultimately entails dilatation and tricuspid incompetency.

OBITUARY.

THE LATE DR. KING, OF ELTHAM.

(From the *Kentish Mercury*, Sept. 2.)

Medical life is ordinarily unseen or unfelt beyond the circle of its immediate influence, and this is especially the case in our towns or cities. In the village, however, it is otherwise. Here, generally speaking, the Doctor is the centre of its existence, social and political, or he shares it with the clergyman or some other authority, or it may be that he divides it to the discomfort of its peace and harmony; still, as a rule, he initiates all important local changes and improvements of a sanitary and a social nature, and, as a rule, directs them for the common good.

Eltham has just lost one of these useful men in the person of Dr. David King, who practised there as a Medical man for the long period of fifty-four years. His history, though extended to an unusual length, is easily told. After an education in the collegiate school of his native town, Ayr, Scotland, he repaired to the University of Edinburgh, where he graduated in 1809, passed the College of Surgeons, London, in 1810, after a year's attendance at the Westminster Hospital, and finally settled in practice at Eltham in 1811, remaining there through his long and useful life. He never married, but he leaves a successor in his nephew, who bears his name. In person the late Dr. King was what the expression "homely" best explains. Although of a generous nature and unselfish in all his social relations, courteous to his equals and kindly to the poor, still he was occasionally brusque and somewhat hasty in manner. He never lost the traces of his northern tongue. His frame was strong; and as such, well fitted for the arduous work of village practice. He was sober and active in his habits, and until the last few years enjoyed uninterrupted health. The immediate cause of death was an ailment to which the aged are liable. It terminated his life on August 23 last, in the 78th year of his age. Without claiming to be highly intellectual, Dr. King possessed a strong will and good common sense that seldom failed him. Credulity, however, which somewhat disturbed these safeguards of conduct, led him more than once into error, and marred his otherwise successful career. He was fairly read, and profited by the labour of others. No man enjoyed a passing joke better than he; neither could any one relate a story with more point or *gusto*.

Dr. King was a member of several learned societies in the metropolis and also of this county. Formerly he was President of the West Kent Medico-Chirurgical Society. He was the author of "The History of Eltham Palace and its Subterranean Passage." He was esteemed and respected by all classes among whom he lived; evidence of which was shown in the testimonial presented to him on his jubilee in 1861,

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when "rich and poor met together" to honour him. On that occasion little short of £300 was raised in sums from 6d. to £10. Writing of him, a valued friend remarks:—"I highly honour the spirit and memory of our departed Doctor, and cherish a most grateful and affectionate remembrance of him. Truly he was not only a skilful Physician, but a tender and loving brother in all the relations of life." It is only necessary to say further of this worthy man that his name will long remain a household word among many who were his neighbours, and among all who were his friends.

JOHN GLOVER LOY, M.D. Edin.

DR. LOY, who died at Whitby on September 4, aged 90, was in practice at Whitby sixty-four years. His talents were of a high order. Great and general was the esteem in which he was held during his long, active, and successful career. His pamphlet, "Experiments on the Origin of Cow-pox," published in 1801, attracted particular notice everywhere, at home and abroad, from those to whom the subject had become a matter of interest, and brought him into correspondence with some distinguished Medical and scientific men, including the late Dr. De Carrs, of Vienna, who published a German translation of it; Sacco, of Milan; Dr. Jenner himself, and others besides, forgotten by the writer. From their first appearance down to the present time, Dr. Loy's work and his experiments have been commonly remarked on by authors when cow-pox has been a subject. He retained his faculties, mental and physical, up to a late period of life. In May last he performed the operation of excision of a cancerous breast. Dr. Loy's rare abilities and just reputation entitle him to far more than a mere passing notice.

MEDICAL NEWS.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ANDREWS, RICHARD J., M.R.C.S. Eng., has been elected Resident Medical Officer to the Norwich Dispensary.

GROSVENOR, G. FOX, M.D. Edin., has been appointed Visiting Surgeon to the London Surgical Home for Diseases of Women, Notting-hill.

HOLMES, TIMOTHY, F.R.C.S. Eng., has been appointed Surgeon-in-Chief to the Metropolitan Police.

MARSH, W. J., M.R.C.S. Eng., has been appointed Assistant Medical Officer to the Nottingham County and Borough Lunatic Asylum.

PARSON, EDWARD, M.D. Lond., has been appointed a Medical Officer to the Out-Patients of Queen Charlotte's Lying-in Hospital.

SPENCE, ALEXANDER J., M.D. Edin., has been appointed Assistant-Physician to the Royal Edinburgh Asylum.

WATTS, HORACE N., M.D. St. And., has been appointed Colonial Surgeon to the Falkland Islands.

WATTS, R. G., M.D., has been appointed Medical Officer for the Workhouse of the Godstone Union.

DEATHS.

CARTWRIGHT, PEPLOE, M.R.C.S. Eng., at Oswestry, Salop, on August 29, aged 65.

CHAPMAN, THOMAS, M.R.C.S. Eng., at Ampthill, Beds., on September 3, aged 94.

DAVISON, JOHN, L.R.C.S. Edin., at Wolsingham, Durham, on August 14, aged 71.

ELSTON, WILLIAM A., M.R.C.S. Eng., at Bugbrooke, Northamptonshire, on August 4, aged 53.

GIBSON, EDWARD T., M.R.C.S. Eng., at Tirril Lodge, near Penrith, on July 30, aged 34, late of Liverpool.

GRANT, JOSEPH B., M.D., at Constantinople, on August 6, aged 31.

KING, RICHARD, L.R.C.P. Edin., at 12, Devonshire-buildings, Bath, on September 2, formerly of Newcastle, Staffordshire.

LOY, JOHN GLOVER, M.D. Edin., at 8, Royal-crescent, Whitby, on September 4, aged 90.

TREW, RICHARD N., L.S.A., at Chantry House, Steyning, Sussex, on August 5.

WALKER, WILLIAM W., M.R.C.S. Eng., Secretary of the Birmingham and Midland Eye Hospital, Birmingham, on August 20, aged 73.

YOUNG, JOHN, L.R.C.S. Edin., of Denholm, Roxburghshire, on August 19, aged 64.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

VACANCIES.

Birmingham Parish.—Mr. Hawkesford has resigned the Fifth District; salary, £155 per annum.

Downham Union.—Mr. J. W. Newman has resigned the Fourth District; area, 16,422; population, 3751; salary £49 per annum.

Hoxne Union.—Mr. Shirley has resigned the Bedfield District; area, 4516; population, 1178; salary, £27 per annum.

Kendal Union.—Dr. Walker has resigned the Burton District; area, 13,448; population, 2714; salary, £32 per annum.

Milton Union.—Dr. Henty has resigned the Rainham District; area, 12,371; population, 3436; salary, £55 per annum.

Norwich Union.—Mr. Charles Drake has resigned the Workhouse; salary, £100 per annum.

Saffron Walden Union.—Mr. Marsh has resigned the First District; area, 5003; population, 1342; salary, £30 per annum.

Sleaford Union.—Mr. Grewcock has resigned the Osbournby District; area, 12,070; population, 1644; salary, £25 per annum.

APPOINTMENTS.

Great Ouseburn Union.—Charles A. Etches, L.R.C.P. Edin., L.R.C.S Edin., to the Helperby District.

Poole Union.—Heber D. Ellis, M.R.C.S.E., L.S.A., to the Longfleet District; Alfred Crabb, M.R.C.S.E., L.S.A., F.R.C.P. Edin., to the Kinson District.

Sherborne Union.—Robert R. Hawkins, M.R.C.S.E., L.S.A., to the Sherborne District.

Skipton Union.—James D. Roberts, M.R.C.S.E., to the Barnoldswick District.

Wycombe Union.—Rowland M. Bowstead, M.D. St. And., M.R.C.S.E., L.S.A., to the Third District.

THE CATTLE PLAGUE.—We are sorry to learn that this pestilence is steadily on the increase. It has appeared in 23 sheds in St. Pancras and in 2 in the parish of St. George, Hanover-square. One cowkeeper has lost 103 cows in less than a week, either by death or by being slaughtered because likely to die.

SANITARY WORKS.—Dr. Buchanan is at present engaged in making an inspection of various towns in the kingdom, under a commission from the Privy Council, with a view to ascertain what have been the effects produced upon the public health by works of drainage, water supply, and other sanitary measures. He has already visited several northern towns, and is at present engaged in conducting a similar inquiry at Carlisle, where much has been done in the way of sanitary reform during the past twenty years.

THE ROAD MURDER.—The following letter appeared in the *Times* of Friday, September 2. It is in reference to the allegation that Mr. Parsons, the Surgeon, examined Constance Kent's night dress after she had washed it in her foot-bath without observing any stains upon it, although, according to her statement, the stains of blood were not entirely removed:—"Sir,—In reference to a remark which occurs in your late leading article on the above crime, allow me to state that I only examined the nightdress which was found on Constance Kent's bed. This appeared to me so much more clean than it would ordinarily have been after a week's wear, that I remarked on its condition to Mr. Foley at the time, and afterwards detailed it in my evidence before the Wiltshire magistrates.—I am, Sir, your obedient servant, JOSHUA PARSONS. Frome, August 30."

NATURAL SCIENCE SCHOLARSHIPS.—There will be an examination at Sidney Sussex College, Cambridge, on October 10, in Natural Science (Electricity, Chemistry, Geology, Anatomy) for two Scholarships, of the annual value of £40 each. It will be open to all students who are not entered at the University, the only requisite being the ability to pass a certain examination in classics and mathematics. Successful candidates will enter at the College, and may pursue their Medical or other studies in the University. Further information may be obtained of the Rev. J. Ellis, Tutor of the College.

NORTH OF SCOTLAND MEDICAL ASSOCIATION.—A meeting took place in Aberdeen on Saturday, in the Hall of the Medical Society, and was largely attended. On the motion of Dr. Keith, Professor Harvey, President of the Aberdeen Society, was called to the chair. A series of resolutions, establishing the Association and the rules for its management, was moved by Drs. Gavin, Keith, Bruce, Brown, Struthers, Mortimer, and Mackie, and unanimously adopted. The Association comprises the members of the Buchan, Garioch, Elgin, and Aberdeen Medical Societies, and other members of the Medical Profession in the North, irrespective of their being connected with any Society. The various Societies are not amalgamated in the new Association, but confederated, each retaining its independent existence in its own district. The meeting included members of the Profession from Kincardineshire and Forfarshire, and the hope was expressed that the Forfarshire Medical Society would be communicated with before next year, and the Chairman and others expressed the pleasure which it would afford them to see their brethren of the Forfarshire Society at this annual gathering. The Association will annually elect a President, the Presidents of the included Societies will be

Vice-Presidents, and the other office-bearers of each Society, together with two members nominated by each, will form the other office-bearers of the Association. The object of the Association is to unite the members of the Medical Profession in friendly intercourse, and to enable them to express their views on questions affecting the Profession. The business on this occasion was, however, confined to the formation of the Association. The meeting then proceeded to elect its first President, when, on the motion of Dr. Harvey, Dr. Kilgour was unanimously and cordially elected President. Dr. Kilgour, on taking the chair, thanked the Association for the high honour it had conferred on him, and remarked that it had always been his object, in seeking to rise in his Profession, to do so by fair means, both towards his Professional brethren and the public. The members re-assembled at three o'clock at Douglas' Hotel, when upwards of sixty sat down to dinner; Dr. Kilgour in the chair, Dr. Harvey vice-chairman. In proposing "the Queen," the Chairman took occasion to refer, among other good examples set by Her Majesty, to the careful manner in which she selected her Medical advisers and acknowledged their services, giving the appointments to men of genuine merit. They all knew the merits of Sir James Clark, whom the Queen still honoured in his retirement. When his much esteemed successor, Dr. Baly, met his untimely death by railway accident, Her Majesty selected one who had won the confidence of the Profession by his laborious scientific researches in pathology, Dr. Jenner. Another good example Her Majesty had set in the trust she placed in the family Practitioner at Windsor, Dr. Brown; and it would perhaps be well for themselves if our aristocracy would follow the example, instead of running after men of fashion in the metropolis. The Chairman mentioned that they had the pleasure of seeing among them to-day one whose recent appointment as one of the Surgeons to Her Majesty—Professor Spence—bore out his remarks as to the care with which the most deserving men were selected. Mr. Spence was called on to return thanks for the reference which had been made to Her Majesty's Medical and Surgical attendants. Among the toasts given were "The New Association;" "The University of Aberdeen," with especial reference to its Medical School (on the efficiency and excellence of which high praise was bestowed), coupled with the name of Dr. Pirrie; "The Medical Officers of the Royal Infirmary of Aberdeen, coupled with the name of Dr. Keith; "The Medical Officers of the other Hospitals of the North of Scotland;" "The Chairman," which was very enthusiastically received; and "The strangers present"—Dr. Farr, Medical Registrar-General of England, and Professor Spence, of Edinburgh. The meeting broke up at six o'clock, after the toast of "Bon-Accord," having enjoyed an excellent dinner and a pleasant evening, all agreeing that the first meeting of the North of Scotland Medical Association had been a great success.

Western Medical Society, Scotland.—An influential meeting of the Medical Practitioners of Anderston, took place on Friday evening last, in Murdoch's Coffee-house, Oswald-street, to consider the propriety of forming themselves into an association, having for its object the cultivation of good feeling and unanimity among its members, the discussion of Professional topics, and for affording mutual protection to each other. The proposal was cordially adopted by all present. The Association is designated the Western Medical Society. The following office-bearers were elected:—Dr. George M'Ewan, President; Dr. T. D. Buchanan, Vice-President; Dr. Hugh Miller, Secretary; Dr. S. Buchanan, Treasurer; Drs. Cassells, Connell, M'Ewan, T. D. Buchanan, S. Buchanan, and Miller, Members of Committee. The meetings are to be held monthly.

Description of the New Eye and Ear Hospital, Bradford, Yorkshire.—This building being one of the first ever erected in this country, for the special treatment of diseases of the eye and ear, considerable care was necessary in its arrangements, so as to obtain the accommodation necessary in the most suitable manner, and to facilitate as much as possible the economical working of the institution. The result has been found to answer the most sanguine expectations, and the building may fairly be considered as a model for erections of a similar character, both from the light and cheerful aspect of its internal arrangements, and for the picturesque effect of its exterior. On the ground plan is an entrance vestibule, opening through glass screen doors into a spacious hall 30 feet by 20 feet. This entrance is for residents, visitors, and the Medical officers, and is a central feature in the front. On the left are placed the rooms devoted to the out-door or non-resident patients and the dispensing. The out-door patients enter by a covered porch on the west side of the building into a waiting-room, 34 feet by 20 feet, communicating with the consultation-room, 27 feet by 20 feet, and in connexion with which is the opthalmoscopic-room, also lavatory, cloak-rooms, and every convenience. After consultation the patients pass into the dispensary waiting-room, and thence from the building by a separate doorway. The dispensing and consultation are thus conducted without confusion and also without entering into that portion of the institution devoted to residents. On the right of the hall are placed in front the convalescents' ward, 35 feet by 20 feet, and at the back the kitchen, scullery, &c., with a distinct entrance for the servants. Lifts are provided for coals and food from the basement and kitchen to the first floor. The principal staircase opens out of the entrance hall, leading to a landing on the first floor, 30 feet by 20 feet. The nurses' rooms are placed in the centre of this floor, and upon each side, and completely separated, are the male and female wards—two large front wards, 35 feet long, 20 feet wide, and 16 feet high, and two smaller wards, 25 feet long, 16 feet wide, and 16 feet high, at the back. Bath and store-rooms are also provided. At the back of the building is placed the operating-room, lighted from the north, and with large top-light, surrounded with deafened walls and doors. Accommodation is given upon this floor for thirty resident patients. The rooms are lofty and well ventilated, and the windows are arranged with hanging shutters, Venetian blinds, and ordinary window blinds, so that the light can be regulated in any part of each room, or altogether excluded, to suit the condition of the patient. Both on the ground and first floor the corridors, hall, and passages are heated with hot water, and the rooms by open fire-places. On the basement are placed the coal cellars, pantries, and larders, and there is also a large washhouse, vaulted in brick, with a separate outside entrance. The exterior of the building has been designed solely to meet its interior requirements, is executed with cut wall stones and ashlar bands, and dressings of light-coloured stone, grouping exceedingly well with the buildings in the neighbourhood. It has been executed from the designs, and under the superintendence of, Messrs. Lockwood and Mawson, of Bradford and London. The total cost of the land building and furnishing is £5500, the whole of which has been subscribed.

NOTES, QUERIES, AND REPLIES.

"He that questioneth much shall learn much."—Bacon.

The Rev. H. A. Simcoe and Dr. T. Aitken.—Early replies shall be given to your questions, but the contributor who supplies the paragraphs in question is out of town.

Dr. Bree.—As we do not wish to sit in judgment on the sins of certain of our Medical contemporaries, we decline to publish the correspondence. Dr. Bree's paper, however, shall appear as soon as the crowded state of our columns will permit.

A Fee Question.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—A short time since I was called on by one of the county police to go and see a woman who had delivered herself of an illegitimate child. On my arrival at the house, both mother and child were dead. Will you oblige by stating in your next number on whom I must make my claim for remuneration? I am, &c.

September 5. T. B.

*** Apply to the Clerk of the Justices at the Petty Sessions where the case would have been heard.

Corrigendum.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I observe in your last week's list of the Medical candidates who recently passed at Netley that you have put me down as studying at Galway and Dublin. I never saw these towns in my life. I took my degrees at Aberdeen, where I received the whole of my education. Curiously enough, too, our second and ninth men (Collins and Andrews) are attributed to Glasgow and Dublin, whereas they both belong to Aberdeen; but they will likely speak for themselves. The necessary correction will oblige Yours, &c.

Wm. Robertson, M.A., M.B., C.M.

Garrison Hospital, Portsmouth, September 4.

The Last Indian Medical Warrant.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your editorial of February 4 last you argue, and I think justly, that the new Medical Warrant for the Indian service is, on the whole, "a great and substantial boon." In commenting upon the advantages of the Warrant, you write, "The injustice of half-batta pay has been abolished." As relates to officers regimentally employed your statement is correct, but officers on staff employ do not derive any benefit. The order abolishing half-batta ruled that it was not applicable to officers of the "staff

corps" or to "officers on staff employ," and this rule has been made applicable to Medical equally with military officers.

Now, this decision vitally affects a large section of the body Medical. In this Presidency, for instance, three of the staff appointments—known as garrison Surgeoncies—are at half-batta stations, and under the above ruling the incumbents are entitled to half-batta rates of pay only, without staff salary of any kind, unless they prefer to draw the old rate of pay, when they are graciously permitted to receive the half-batta pay of a captain with a staff salary of Rs. 500 per mensem. At Madras the garrison Surgeon under the old rules received Rs. 1000 consolidated, but at Bangalore and Trichinopoly half-batta pay of a captain is Rs. 370 plus Rs. 500 staff salary, or Rs. 870 in all. The new rate of pay assigned to them at half-batta rates is Rs. 888 12.

As before remarked, all officers regimentally employed receive full batta rates at all stations, so that we have the anomaly of two officers of equal rank, serving at the same station, the one with his regiment, the other on the staff as a garrison Surgeon—the former drawing Rs. 1093 2, the latter Rs. 888 12—the first having only one Hospital to attend to, the other having three or four Hospitals, the charge and responsibility of a large Medical store, with attendance upon divisional and brigade staff. I do not blame Sir C. Wood for this; it results entirely from the illiberal reading of the Warrant. Sir C. Wood, I feel sure, never intended that the senior Surgeons-Major on staff employ should be worse paid than juniors employed with regiments; and yet such is the case.

The injustice of this ruling has been strongly represented, but to no avail. The sufferers are simply told that full batta rates of pay are not admissible to officers on "staff employ," and that they can only claim the old rates with staff salary or the new at half-batta rates without staff salary, whichever may be most advantageous to them. In fact, they are condemned to perform the laborious and onerous duties of their garrison appointments upon a rate of remuneration which Sir C. Wood himself terms "unemployed."

Civil Surgeons labour under like disabilities. The Government of India recently ruled that officers so employed, provided their standing in the service would, were they in the military department, entitle them to the charge of a regiment, might draw the military pay of their rank, if in excess of their receipts in their civil appointments.

The Warrant fixes Rs. 600 as the pay of an Assistant-Surgeon in charge of a regiment, and civil Surgeons, under the conditions above noted, naturally expect to receive Rs. 600. But no; the authorities have ruled that they are entitled only to the "unemployed" pay of their rank; so that, in point of fact, a large section of the service—that section which, under the denomination of "staff," is supposed to be better off than those regimentally employed—is very considerably worse off.

The Indian *Press* has from time to time assured us that this unsatisfactory state of affairs will speedily be brought to a termination; but it does not appear that anything has yet been done to carry out Sir C. Wood's injunctions in para. 36 of the Warrant. A Commission was talked of, to assemble at Calcutta, to fix the salaries of all staff appointments, and a member named to represent this Presidency, but that Commission has not yet assembled. Surely it is time that something was done to rectify the state of affairs above represented; and the least we can expect is, that when the consolidated salaries of the different staff appointments are fixed, they be made to carry with them retrospective effect from the date of abolition of half-batta rates of pay.

I am, &c.,

Madras, July 30. ONE OF THE SUFFERERS.

Philosophy of Chloroform Accidents.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Mr. W. J. Smith, of the Islington Dispensary, has favoured your readers with his views, *de omnibus*, from the part played by enlarged tonsils in deafness, in which I am happy to perceive, though not very relevant, he and I agree, down to the use of chloroform in Midwifery, in which we might, could, or would agree, but for something which your correspondent has inadvertently lighted upon of his own making, as to these self-same tonsils, not very much unlike a quibble on words—*toujours perdrix*—he can see nothing but tonsils, and he affects to smile at spasm of the glottis or tonsiliary region as in any way bearing upon or influenced by the abdominal muscles in Midwifery; but if he had read more carefully he would have seen that in such obstetric cases over-narcotism (a term of Snow's) of the respiratory muscles is what I conceived as the immediate cause of mischief in Midwifery—not anything belonging to the tonsils or larynx at all.

The chief error of the late Report of the Medico-Chirurgical Society on Chloroform is this adherence to pure or exact physiology, rather than inexact or rude observation in the Hospital theatre, as the best guide to the nature of chloroform accidents. It is easy for Mr. Smith so to fancy what effect enlarged tonsils may or might have in a physiological way. About 250 such deaths are now tabulated; but I still think they are in opposition to the Report, and tonsil theory, and pure physiologists. We would not think of curing typhus or strumous lupus by pure or exact physiology. The experienced man (though Mr. Smith may sneer at such) knows the rude, but specific value of wine in one and arsenic in the other, though physiology will not explain either.

And so is it as to chloroform. The rule of thumb, or as yet inexact experience of the Hospital man, is worth all the precise physiologies. So is it most notably as to chloroform in Midwifery; so much so that the erring and feminine half of the public will now have chloroform in a quack form, as our leading journals deny it to them in any other shape, *omne ignotum*, &c.

I am not anxious to enter into any long controversy with Mr. Smith. His criticisms and typographical corrections are unworthy of the subject. He has evidently not read my little book, in which I have explained how, during sixteen years as Hospital reporter, seeing (far more than three operations per diem for nine years) many years over thirty operations a-week, I have watched chloroform with attention. I am still watching it, but must remain a Pyrrhonist as to these new views as to the tonsils.

I should be very sorry, at the same time, to leave an impression on the reader that I do not value the researches of Mr. W. J. Smith. I find nearly all our most valuable hints in the Hospital theatre, and, most notably, many or all on chloroform, amongst such of our young men as your correspondent, whose histology and physiology and power of reading the journals with delight have not grown rusty. I have found, I grieve to confess it, on the other hand, as Snow did, all my trouble and chief obstacle in the journals themselves, and that sixteen years have been nearly thrown away *quoad* chloroform, for if the man in the moon sent a new quack "sensation" idea, however irksome and unmeaning, to the *Lancet*, it would be received before the well-digested deductions of tens or hundreds of thousands of cases. I do not complain, I merely strive to explain why we have so much inexact writing and so many deaths from chloroform. First-year students or nurses are deemed sufficiently skilful to administer it; the causes of death are plain and palpable, without having recourse to the tonsil theory; mere coincidences by a false philosophy are taken for *vera causa*. Electricity applied to the heart, where it does harm, not to the phrenic, where it does good. Our chiefest hope at present for the success of anæsthetics exists in the educated outer public. It is a sad but humiliating admission, but must partly explain why I do not wish to prolong a purposeless controversy.

I am, &c.

Sackville-street, W., September 3. CHARLES KIDD, M.D.

COMMUNICATIONS have been received from—

Mr. J. W. TURNER; Mr. J. H. RAWNSLEY; The Rev. N. A. SIMCOE; Dr. THOMAS AITKEN; T. B.; Mr. R. HORDLEY; Dr. C. KIDD; Dr. G. H. PHILIPSON; Mr. R. J. ANDREWS; Dr. J. EDMUNDS; Dr. JOHN GAIRDNER; Mr. E. ATKINSON; Mr. W. ROBERTSON; Dr. HUMPHRY; Mr. W. SOUTHALL, jun.; Dr. C. R. BREE; ONE OF THE SUFFERERS; Dr. DYCE BROWN; Mr. CONDY; FACULTY HALL, GLASGOW; THE UNIVERSITY OF ABERDEEN; Mr. F. COXWORTHY; Dr. CARR; Dr. R. BRADFORD; Mr. C. F. MAUNDER; Mr. J. W. TURNER; Dr. ROBERT FOWLER; Dr. JOHN WILSON; Dr. J. N. VINEN.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 2, 1865.

BIRTHS.

Births of Boys, 1092; Girls, 1017; Total, 2019.
Average of 10 corresponding weeks, 1855-64, 1726·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	556	575	1131
Average of the ten years 1855-64	575·2	559·7	1134·9
Average corrected to increased population..	..	..	1248
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	2	5	3	3	2	3	16
North ..	618,210	5	6	10	2	8	21	17
Central ..	378,058	1	..	4	1	2	4	11
East ..	571,158	4	1	10	..	6	15	19
South ..	773,175	..	10	12	2	8	8	32
Total ..	2,803,989	12	22	39	8	26	51	89

QUALITY OF THE METROPOLITAN WATERS IN AUGUST, 1865.

The following are the Returns of the Analyses of these Waters by the Metropolitan Association of Medical Officers of Health:—

	Total Solid Matter per Imperial Gallon.	Loss by Ignition.(a)	Oxydisable Organic Matter.(b)
Thames Water Companies.	Grains.	Grains.	Grains.
Grand Junction	16·7	1·00	0·40
West Middlesex	Not examined.		
Southwark and Vauxhall. .	17·2	1·29	0·56
Chelsea	17·0	1·36	0·39
Lambeth	16·7	1·33	0·64
Other Companies.			
Kent	24·2	1·26	0·16
New River.	15·5	0·93	0·32
East London	15·8	1·17	0·56

(a) This represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxydisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 to 8; and the result is controlled by the examination of the colour of the water when seen through a tube two feet in length.

APPOINTMENTS FOR THE WEEK.

September 9. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

11. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

12. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

13. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

14. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

15. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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Hooper's Brighton Seltzer, and Vichy,

½-pints, 4s.; pints, 5s.; quarts, 7s. per dozen.
PURE SODA, 3s.; PURE POTASH, 3s. 6d. per dozen.
HOOPER'S LITHIA WATER, 5s. 6d. per dozen.
5 grs. in each Bottle.
Six dozen carriage free, assorted or otherwise.

NATURAL SELTZER WATER
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Hamper, as imported, of 25 pints .. .. 14s. 0d. } Hamper
Do. do. 25 quarts .. .. 18s. 9d. } included.
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ELLIS'S, RUTHIN, SELTZER WATER.
ELLIS'S, RUTHIN, LEMONADE.
ELLIS'S LITHIA AND POTASS WATER,
An excellent internal Remedy for Gout.
The public are particularly requested to observe that every cork is branded "R. Ellis and Son, Ruthin," without which none is genuine.
May be obtained from all respectable Chemists, Confectioners, and Hotel-keepers; and, Wholesale only, from R. ELLIS & SON, Ruthin, North Wales.

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"Mr. HOGG'S LITHIA WATER is always uniform, and contains the proportion of 2 and 5 grains of Pure Carbonate of Lithia; it is highly carbonated, very agreeable, and we can confidently recommend it to the Profession as an elegant and carefully-prepared Mineral Water."—Medical Times and Gazette, November 9, 1861.
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BLAKE, SANDFORD, and BLAKE are prepared to supply the LITHIA WATERS (of which they were the original manufacturers under Dr. GARROD'S instruction) of any strength prescribed by the Profession for special cases. Those in constant use contain 2 grains and 5 grains in each bottle, either by itself, or combined with BICARBONATE of POTASH or PHOSPHATE of AMMONIA.
The following Waters as usual:—Potash, containing 18 grains of the Bicarbonate in each bottle; Citrate of Potash, 30 grains; Soda, 15 grains; Ammonia, 10 grains; Seltzer and Vichy from their respective analyses, and a very delicious, as well as useful, MINERAL ACID WATER.
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CAUTION.—Owing to the use of Struve's bottles by other parties attempting imitations, sold as "BRIGHTON Seltzer," "BRIGHTON Vichy," &c., an analysis of some of which has shown an utter disregard of their true chemical composition, please to observe that STRUVE'S name is on the label, and red-ink stamp affixed to every bottle of Struve's manufacture.
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Prepared from the best Maize or Indian Corn.
Guaranteed perfectly pure.
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To two tea-spoonfuls of Brown and Polson's Corn Flour mixed with two table-spoonfuls of cold water, add half-a-pint of boiling milk and water (equal quantities), boil for seven minutes and sweeten very slightly. It should be when warm about the thickness of cream.

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RULES AND REGULATIONS

OF THE

EXAMINING MEDICAL BODIES IN ENGLAND.

SESSION 1865—66.

REGISTRATION OF MEDICAL STUDENTS.

THE following Regulations have been adopted by the General Medical Council in reference to the registration of students of Medicine:—

1. That the registration of Medical students be placed under the charge of the Branch Registrars.

2. That every Medical student shall be registered at the commencement of his Professional study, and not until he has passed the Preliminary Examination.

3. That each of the Branch Registrars shall open a Register of Medical students, according to the subjoined form, and that application for registration be made by every such student within fifteen days after the commencement of Professional study:—

Form for the Registration of Medical Students.

Date of Registration.	Name.	Preliminary Examination in Arts, and Date.	Place of Study.

4. That every person desirous of being registered as a Medical student shall apply (in writing) to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a form to be had on application to the several Qualifying Bodies, Medical Schools, and Hospitals, and shall produce or forward to the Branch Registrar a Certificate of his having passed a Preliminary Examination in Arts recognised by the General Medical Council, and of his place of study; whereupon the said Branch Registrar shall enter the said applicant's name and other particulars in the Students' Register, and the Registrar shall give him a Certificate of such registration accordingly; and that each of the Branch Registrars shall supply to the several Qualifying Bodies, Medical Schools, and Hospitals in that part of the United Kingdom of which he is Registrar a sufficient number of blank forms of application for the registration of Medical students.

5. That a copy of the Register of Medical students so prepared by the Branch Registrars be transmitted to the Registrar of the General Council, who shall, under direction of the Executive Committee, prepare and print an alphabetical list of all registered students, and supply a copy of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Act.

6. That the several Licensing Bodies be requested not to admit to Examination after October, 1869, any Candidate for Licence or Degree whose name does not appear on the authorised list of Medical students, or whose name is not already on the *Medical Register*.

7. That the several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.

8. That the Branch Councils be desired to take means to make these regulations known to the Medical students at the various Medical Schools.

PRELIMINARY EXAMINATIONS IN ARTS RECOGNISED BY THE GENERAL MEDICAL COUNCIL.

Resolved,—"That testimonials of proficiency, granted by the national Educational Bodies according to the subjoined list, may be accepted, the Council reserving the right to add to, or take from, the list."

1. A Degree in Arts of any University of the United Kingdom or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council.
2. Oxford Responsions or Moderations.
3. Cambridge Previous Examinations.
4. Matriculation Examination of the University of London
5. Oxford Middle-Class Examinations (Senior).
6. Cambridge Middle-Class Examinations (Senior).
7. Durham Middle-Class Examinations (Senior).
8. Durham Examinations for Students in Arts in their second and first years.
9. Durham Registration Examination for Medical students.
10. Dublin University Entrance Examination.
11. Queen's University, Ireland, two years' Arts Course for the Diploma of Licentiate in Arts.
12. Preliminary Examinations at the end of A.B. Course.
13. Middle-Class Examinations.
14. Matriculation Examinations.
15. First-Class Certificate of the College of Preceptors.
16. "Testamur" granted by Codrington College, Barbadoes.
17. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a Certificate that the student has been examined in Latin and Mathematics.
18. Resolved,—"That students who cannot produce any of the testimonials referred to in the first recommendation [as above] be required to pass an Examination in Arts, established by any of the Bodies named in Schedule (A) of the Medical Act, and approved by the General Council."

APPLICATION FOR REGISTRATION AS A MEDICAL STUDENT.

I hereby apply to be registered as a student in Medicine, in conformity with the regulations of the General Council of Medical Education and Registration for the United Kingdom, for which purpose I submit the following particulars:—

Name of Applicant. (To be written in words at length.)		Preliminary Examination in Arts.	Date of Preliminary Examination in Arts.	Place of Medical Study.
Surname.	Christian Name.			

Applicant's Signature .....
Address .....
Date of Application .....

To the Registrar of the Medical Council for England,
32, Soho-square, London, W.

N.B.—The above form of application, duly and legibly filled up, must be forwarded to the Registrar, post free, and be accompanied by Certificates, 1st, of the applicant's having passed a Preliminary Examination in Arts, recognised by the General Medical Council; and 2ndly, of his entrance, and the date of it, at a place of Medical study.

Students who shall have commenced their Professional studies more than fifteen days before October 2, 1865, will not be required to be registered by the Registrar of the Medical Council.

UNIVERSITY OF OXFORD.

TERMS REQUIRED FOR DEGREES IN MEDICINE.

Candidates for the Degree of Bachelor of Medicine are required to reside the same number of terms—viz., twelve, or three years—and to pass the same public examination as Candidates for the B.A. Degree; after which, sixteen terms, or four years of Professional study, are necessary.

For a Doctor's Degree, three whole years after the Bachelor's are required.

EXAMINATIONS REQUIRED FOR DEGREES IN MEDICINE.

For the Degree of Bachelor of Medicine all students (besides undergoing the same examination appointed for Bachelors of Arts) must pass two Medical Examinations; the first (in Anatomy, Physiology, Chemistry, Botany, and Mechanical Philosophy) (a) after the expiration of *two* years; the second (in the Theory and Practice of Medicine, Materia Medica and Therapeutics, Pathology, Hygiene, etc.) after the expiration of *four* years, from the date of having passed the B.A. examination in one School.

For a Doctor's Degree in Medicine a dissertation upon some subject, to be approved by the Regius Professor, is to be publicly recited in the Schools, and a copy of it afterwards delivered to the Professor.

UNIVERSITY FEES.

At Matriculation.—For a Servitor, or Bible-Clerk, 10s. For privileged persons (according to stat. tit. vi. 5, § 1), not

(a) Candidates who have already obtained a place in the first or second class in the Natural Science School are excused these last three subjects.

claiming immunity, £5. For all others, £2 10s. And for non-Academicians, £1.

At Graduation.—For the Degree of S. Med., £7 10s.; for B. Med., £6 10s. For the Degree of M.D., £40.

Fees *comitatis causâ*, £1.

Fees at Examination.—All Undergraduates are called upon to pay fees on entering their names for their respective Examinations: viz., for Responsions, 20s.; the First Public Examination, 21s.; the Final Examination, 21s.; for admission into any second school, 10s.; for Examination in Medicine, 20s. An additional fee of £10 for the Examinations in Medicine is paid by Bachelors in that Faculty before admission to that Degree.

UNIVERSITY OF CAMBRIDGE.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

For the *Degree of Bachelor of Medicine* five years of Medical study are required, except in the case of those who have graduated with honours as Bachelors of Arts, four years being then deemed sufficient.

Nine terms (three years) must be spent in the University, the first three in the study of Classics and Mathematics, and the previous examination in the additional subjects must be passed. The last six terms are devoted to Medical study. Four terms only of Medical study, however, in the University are required of a B.A. who has graduated with honours.

There are two Examinations. The first (after three years of Medical study) is in Chemistry, Botany, Comparative Anatomy, Human Anatomy and Physiology, Materia Medica and Pharmacy, Pathology, and selected portions of Celsus, Hippocrates, and Aretæus. Students who have passed in Chemistry, Botany, and Comparative Anatomy, in the examination for the Natural Sciences tripos, are not required to be again examined in them.

The second examination (at the conclusion of the period of Medical study) is in Physiology, Pathology, and the Practice of Physic, Clinical Medicine, Medical Jurisprudence, and the Medical treatment of Surgical and Obstetric Diseases.

The Examinations are partly in writing, partly *viva voce*.

An Act has to be kept, which consists in reading an original Thesis, and a *viva voce* examination on the subject of the thesis, and on other subjects.

Previously to the first Examination, Lectures must have been attended on Chemistry (including manipulations), Botany, Comparative Anatomy, Human Anatomy, and Physiology, Pathology, Materia Medica, and Pharmacy; also Dissections for six months.

Previously to the second Examination, Lectures must have been attended on the Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, Obstetrical Medicine; also Hospital Practice for three years.

The *Degree of Doctor of Medicine* may be taken three years after M.B. An Act has to be kept with *viva voce* Examination. A Master of Arts, proceeding to M.D., is required to produce the same certificates, and pass the same Examinations as for M.B.

For the *Degree of Master in Surgery* the course is the same as for M.B., till the first Examination; and the first Examination is the same as for M.B.

The second Examination (at the completion of the period of study) is in Surgical Anatomy, Pathology, and the Principles of Surgery, Clinical Surgery (at the bed-side), Midwifery, and Medical Jurisprudence.

Previously to the second Examination, Lectures must have been attended on Human Anatomy (a second course), the Principles and Practice of Surgery, Clinical Surgery, Midwifery (with ten cases), Medical Jurisprudence; also a second season of Dissections, three years' Surgical, and one year's Medical Practice at a recognised Hospital, and a House-Surgeoncy or Dressership for six months.

Attendance at the Hospital and Lectures in Cambridge is recognised by the Universities of Cambridge and London, and (for one year) by the College of Surgeons and the Society of Apothecaries.

UNIVERSITY OF LONDON.

BURLINGTON HOUSE, W.

BACHELOR OF MEDICINE.

Candidates for the Degree of Bachelor of Medicine are required—

1. To have passed the Matriculation Examination of his University, or to have taken a Degree in Arts in one of the Universities of the United Kingdom.

2. To have been engaged in their Professional studies during four years subsequently to Matriculation or Graduation in Arts, at one or more of the Medical Institutions or Schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised Institutions or Schools in the United Kingdom.

3. To pass the Preliminary Scientific Examination(a), and two Examinations in Medicine.

PRELIMINARY SCIENTIFIC EXAMINATION.

The Preliminary Scientific Examination takes place once in each year, and commences on the third Monday in July.

No Candidate is admitted to this Examination until he has completed his seventeenth year, and has either passed the Matriculation Examination or taken a Degree in Arts in one of the Universities of the United Kingdom; nor unless he have given notice of his intention to the Registrar at least *fourteen days* before the commencement of the examination.

The fee for this Examination is Five Pounds.

Candidates are examined in the following subjects(b):—Mechanical and Natural Philosophy; Inorganic Chemistry; Botany and Vegetable Physiology; Zoology and Comparative Anatomy.

EXAMINATION FOR HONOURS.

Any Candidate who has passed the Preliminary Scientific Examination may be examined for Honours in (1) Chemistry and Natural Philosophy, (2) Biology. If in the opinion of the Examiners any Candidate of not more than twenty-two years of age who has passed either the Preliminary Scientific M.B. Examination or the First B.Sc. Examination possesses sufficient merit, the Candidate who distinguishes himself the most of all the Candidates who have passed either of the said Examinations, and who are not more than twenty-two years of age, in Chemistry and Natural Philosophy, and the Candidate who distinguishes himself the most of all the Candidates who have passed either of said examinations, and who are not more than twenty-two years of age, in Biology, shall each receive an Exhibition of Forty Pounds per annum for the next Two Years, payable in quarterly instalments (it being intended that one Exhibition only shall be given in each case among all the candidates, although some of such Candidates may have passed the Preliminary Scientific M.B. Examination, and others the First B.Sc. Examination); provided that on receiving each instalment he declares his intention of presenting himself at the first M.B. Examination within three years from the time of his passing the Preliminary Scientific Examination, or at the Second B.Sc. Examination within two years from the time of his passing the First B.Sc. Examination.

FIRST M.B. EXAMINATION.

The First M.B. Examination takes place once in each year, and commences on the last Monday in July. No Candidate is admitted to this Examination unless he have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having passed the Preliminary Scientific Examination at least one year previously (c). 3. Of having subsequently to having taken a Degree in Arts or passed the Matriculation Examination been a Student during two years at one or more of the Medical Institutions or Schools recognised by this University, and of having attended a Course of Lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, General Anatomy and Physiology, Comparative Anatomy, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Midwifery and Diseases peculiar to Women and Infants, Surgery, Medicine. 4. Of having, subsequently to having taken a Degree in Arts or passed the Matriculation Examination, dissected during two Winter Sessions. 5. Of having subsequently to having taken a Degree in Arts or passed the Matriculation Examination attended a Course of Practical Chemistry, comprehending Practical Exercises in conducting the more important processes of General and Pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of Mineral Waters,

(a) Candidates who matriculated previously to January, 1861, will not be required to pass the Preliminary Scientific Examination in any other subjects than Chemistry and Botany; and they will be allowed to pass the Preliminary Scientific Examination and the First M.B. Examination in the same year, if they so prefer.

(b) Candidates who pass in all the subjects of the Preliminary Scientific Examination, and also in the Mathematics of the First B.Sc. Examination, are considered as having passed both the Preliminary Scientific Examination and also the First Bachelor of Science Examination, without the payment of any additional fee.

(c) See Note (a).

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Animal Secretions, Urinary Deposits, Calculi, &c. 6. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the Preparation of Medicines.

These certificates must be transmitted to the Registrar at least fourteen days before the commencement of the Examination.

The fee for this Examination is Five Pounds.

Candidates are examined in the following subjects:—Anatomy, Physiology,(d) Materia Medica, and Pharmaceutical Chemistry, Organic Chemistry.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the First M.B. Examination may be examined for Honours in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, and (3) Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry.

If in the opinion of the Examiners sufficient merit be evinced, the Candidates who distinguish themselves most in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, (3) Materia Medica, Pharmaceutical Chemistry, and Organic Chemistry, respectively, shall each receive an Exhibition of forty pounds per annum for the next two years; provided that on receiving each instalment he declares his intention of presenting himself at the Second M.B. Examination within three years from the time of his passing the First M.B. Examination.

Under the same circumstances, the First and Second Candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

SECOND M.B. EXAMINATION.(e)

The Second M.B. Examination takes place once in each year, and commences on the first Monday in November.

No Candidate is admitted to this Examination within two academical years of the time of his passing the First Examination, nor unless he have produced Certificates to the following effect:—

1. Of having passed the First M.B. Examination.

2. Of having subsequently to having passed the First M.B. Examination attended a Course of Lectures on each of two of the subjects comprehended in the foregoing list, and for which the Candidate had not presented Certificates at the First M.B. Examination.

3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally-qualified Practitioner in Medicine.

4. Of having attended the Surgical Practice of a recognised Hospital or Hospitals, during two years, with Clinical Instruction and Lectures on Clinical Surgery.

5. Of having attended the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Medicine. N.B.—The Student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5 may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the First M.B. Examination.

6. Of having subsequently to the completion of his attendance on Surgical and Medical Hospital Practice attended to Practical Medicine or Midwifery, with special charge of patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months.

The Candidate must also produce a Certificate of Moral Character from a teacher in the last School or Institution at which he has studied, as far as the Teacher's opportunity of knowledge has extended.

These Certificates must be transmitted to the Registrar at least *fourteen days* before the Examination begius.

The fee for this Examination is £5.

Candidates are examined in the following subjects:—General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine.

Such Candidates only as are placed in the First Division are admissible to the Examination for Honours.

The Senate desire it to be understood that Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the Second M.B. Examination may be examined for Honours in (1) Medicine, (2) Midwifery, and (3) Forensic Medicine. If in the opinion of the Examiners sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine shall receive £50 per annum for the next two years, with the style of University Scholar in Medicine. Under the same circumstances, the Candidate who distinguishes himself the most in Midwifery shall receive £30 per annum for the next two years, with the style of University Scholar in Midwifery. Under the same circumstances, the Candidate who distinguishes himself the most in Forensic Medicine shall receive £30 per annum for the next two years, with the style of University Scholar in Forensic Medicine. Under the same circumstances, the First and Second Candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

MASTER IN SURGERY.

The Examination for the Degree of Master in Surgery takes place once in each year, and commences on the first Monday in March. No Candidate is admitted to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended a Course of Instruction in Operative Surgery, and of having operated on the Dead Subject. 3. Of having, subsequently to having passed the first M.B. Examination, attended to Practical Surgery, with special charge of Patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months.

These Certificates must be transmitted to the Registrar at least fourteen days before the Examination begins.

The Fee for this Examination is £5.

The Examination includes Surgical Anatomy; performance of Surgical Operations upon the Dead Subject; application of Surgical apparatus; and a report on Cases of Surgical Patients.

EXAMINATION FOR HONOURS.

Any Candidate who has passed the M.S. Examination may be examined for Honours in Surgery.

If in the opinion of the Examiners sufficient merit be evinced, the Candidate who distinguishes himself the most in Surgery shall receive £50 per annum for the next two years, with the style of University Scholar in Surgery.

Under the same circumstances, the First and Second Candidates shall each receive a Gold Medal of the value of £5.

DOCTOR OF MEDICINE.

The Examination for the Degree of Doctor of Medicine takes place once in each year, and commences on the fourth Monday in November. No Candidate is admitted to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the Degree of Bachelor of Medicine in this University; *a.* To Clinical or Practical Medicine during two years in a Hospital or Medical Institution recognised by this University; *b.* Or, to Clinical or Practical Medicine during one year in a Hospital or Medical Institution recognised by this University, and of having been engaged during three years in the practice of his Profession; *c.* Or, of having been engaged during five years in the practice of his Profession, either before or after taking the Degree of Bachelor of Medicine in this University. One year of attendance on Clinical or Practical Medicine, or two years of Practice will be dispensed with in the case of those Candidates, who at the Second Examination have been placed in the First Division. 3. Of moral character, signed by two persons of respectability.

These Certificates must be transmitted to the Registrar at least fourteen days before the examination begins.

The fee for the Degree of Doctor of Medicine is £5.

Candidates are examined in the following subjects:—1. Logic and Moral Philosophy. (Candidates who have taken a Degree in Arts or in Science in this University, or in a University the Degrees granted by which are recognised by the

(d) Any Candidate is allowed, if he so prefer, to postpone his Examination in Physiology from the First M.B. Examination at which he presents himself for examination in the remaining subjects until the First M.B. Examination in the next or any subsequent year; but such Candidate is not admitted to compete for Honours on either occasion; and is not admitted as a Candidate at the Second M.B. Examination until after the lapse of at least twelve months after having passed his Examination in Physiology.

(e) Any Candidate for the second M.B. Examination who has passed the First M.B. Examination under the former Regulations, will be required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present Regulations; at which Examination he is not allowed to compete for Honours.

Senate of this University, are exempted from this part of the Examination.) 2. Medicine.

If in the opinion of the Examiners sufficient merit be evinced, the Candidate who distinguishes himself the most at the Examination for the Degree of Doctor of Medicine shall receive a Gold Medal of the value of £20.

UNIVERSITY OF DURHAM.

REGULATIONS RELATING TO MEDICAL STUDENTS.

1. No one shall be held to be a Student in Medicine who has not been registered in a register kept for that purpose. No one shall be so registered unless he has passed the Registration Examination, or such other examination as the Warden and Senate shall deem equivalent. The Registration Examination shall be directed to the Rudiments of Religion, Literature, and Science; and shall be conducted by two or more Examiners nominated by the Warden.

2. No Grace for a License in Medicine shall be granted, unless the petitioner is of the age of 21 years, has spent four years in Medical study since his registration at one or more of the schools recognised by the licensing bodies named in Schedule A of the Medical Act, 1858. No Grace for a License in Medicine shall be granted unless the petitioner has passed two public examinations. No one shall be admissible to the first of these examinations unless he has spent two years at least in Medical study as above prescribed. No one shall be admissible to the second of these examinations unless he has spent four years at least in Medical study as above prescribed, and has passed the first examination. No one shall be admissible to either of these examinations unless he has produced satisfactory testimonials of conduct, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require. Each of these examinations shall be conducted by three or more Examiners, nominated by the Warden and approved by Convocation, and shall be directed to such subjects of Medical science and practice as shall have been fixed on by the Warden and Senate.

3. No Grace for the Degree of Bachelor in Medicine shall be granted unless the petitioner is a Licentiate in Medicine, and is of the standing of eighteen terms (six years) at least from the date of his registration or matriculation. No one who is not a Bachelor of Arts shall be admissible to the Degree of Bachelor of Medicine unless he has kept three terms by residence at Durham, and has passed both the final examination for the Degree of Bachelor of Arts, or an equivalent to it, and also the examination for the Degree of Bachelor of Medicine. The examination for the Degree of Bachelor of Medicine shall be directed chiefly to the practice of Medicine. The details shall be arranged by the Warden and Senate. The Warden and Senate shall have authority to arrange for Medical Students an examination equivalent to that for the Degree of Bachelor of Arts, by substituting for the theological part of it an examination in Hippocrates, Galen, or such other ancient Medical author or authors as they may think fit.

4. No Grace for the Degree of Doctor of Medicine shall be granted unless the petitioner is a Bachelor of Medicine of twenty-one terms at least (seven years) standing from his registration or matriculation, nor unless he has performed such exercises as the Warden and Senate require.

5. No Grace for the Degree of Master in Surgery shall be granted unless the petitioner is of the age of 21 years, has spent four years in Medical and Surgical study since his registration as a student in Medicine, in some one or more of the schools recognised by the Licensing Bodies named in Schedule A of the Medical Act, 1858. No Grace for the Degree of Master in Surgery shall be granted unless the petitioner has passed two public examinations. The first of these examinations shall be the first examination appointed for Students in Medicine. No one shall be admissible to it who has not spent two years in Medical and Surgical study, as above prescribed. The second of these examinations shall be partly the same as that appointed for Students in Medicine, and shall be partly in Surgical subjects. No one shall be admissible to it who has not spent four years at least in Medical and Surgical study as above prescribed, and passed the first examination. No one shall be admissible to either of these examinations unless he has produced satisfactory testimonials of conduct, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require. Each of these examinations shall be conducted by three or more Examiners nominated by the Warden, and approved by Convocation, and shall be directed to such subjects as shall have been fixed on by the Warden and Senate. The second examination for the Degree of Master in Surgery may or may not be passed at the same time with the second examination for a License in Medicine. Any Student in Medicine who commenced his studies before the year 1861 shall be entitled to be admitted to the Degree of Master in Surgery on the same conditions as those which are required for a License in Medicine, provided that he passes also the special examination appointed for the Degree of Master in Surgery.

Order of Senate relating to the Registration of Students in Medicine:—

1. The name of every Student in Medicine shall be placed on a Register kept by the Registrar of the University of Durham.

2. No one shall be registered unless he has produced to the Warden the requisite Certificates of Examination and character.

The requisite Certificate of Examination shall be a Certificate of his having passed either the Registration Examination appointed by the University of Durham, or any one of the examinations named in the Minutes of the Medical Council for England.

The Regiatration Examination in Sacred and English History, English Grammar, Arithmetic, Geography, Latin, Euclid, French, Greek (the last three at the option of the candidate), will take place on September 19, 1865, and on April 24, and Sept. 18, 1866, at 9 A.M.

The Examination Fee, 1*l.*, with a testimonial of character and statement of age, is to be sent to A. Beanland, Esq., Durham, fourteen days before the Examination.

ROYAL COLLEGE OF PHYSICIANS, LONDON,

PALL-MALL EAST.

EXTRACTS FROM BYE-LAWS AND REGULATIONS.

Members.

Members of the College are alone eligible to the Fellowship.

All Candidates for the Membership of the College who have commenced their Professional studies after September, 1861, must satisfy the Censors' Board that previously to the commencement of their Professional studies they have obtained a degree in Arts from some University of the United Kingdom or of the colonies, or from some other University specially recognised by the Medical Council, or that they have passed examinations equivalent to those required for a degree in Arts. All other Candidates for Membership are, before admission to the Professional Examination, examined on the subjects of general education by the President and Censors of the College.

Any person who does not dispense or supply medicine, and who shall have satisfied the College touching his knowledge of Medical and general science and literature, and who shall comply with the Bye-laws and regulations of the College, may be proposed to the College to be admitted a Member of the College.

Every Candidate for Membership under the last Bye-law shall furnish proof that he has attained the age of twenty-five years.

Every such Candidate shall produce a testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a Member of the College.

(Section 8.)—Every such Candidate shall produce proof of having passed an examination in the subjects of general education; and in the case of Candidates who shall have commenced their Professional studies after September, 1861, the examination in general education must have been passed before they commenced their Professional studies.

(Section 9.)—Every such Candidate (except such as shall be admissible under the provisions of Section 18) shall produce proof of his having been engaged in the study of Physic during a period of five years, of which four years at least shall have been passed at a Medical school or schools recognised by the College.

(Section 10.)—Every such Candidate (except such as shall be admissible under the provisions of Section 18) shall produce evidence satisfactory to the Censors' Board of his having studied the following subjects:—Anatomy, with Dissections; Physiology; Chemistry, with Practical Chemistry; Materia

Medica and Botany; Morbid Anatomy; Principles and Practice of Medicine: Principles and Practice of Surgery; Midwifery, and the diseases peculiar to Women and Children; Forensic Medicine; of his having attended diligently, during three years, the Medical practice, and during one year, the Surgical practice, of an Hospital, containing at least 100 beds, and of his having served the office of clinical clerk during at least six months.

Every such Candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding Bye-law (except such as shall be admissible under the provisions of Section 18), shall, nevertheless, bring proof of his having attended, during at least twelve months, the Medical practice of an Hospital in the United Kingdom containing 100 beds.

No such Candidate shall be admitted to Examination who is engaged in trade, or who dispenses medicine, or makes any engagement with a chemist, or any other person, for the supply of medicine, or who practises Medicine or Surgery in partnership, by deed or otherwise, so long as that partnership continues.

Every such Candidate (except in cases specially exempted under Sections 17 and 18) shall have given proof of his acquirements by written answers to questions placed before him, and shall have been examined *viva voce* at three separate meetings of the Censors' Board, and shall have been approved by the President and Censors, or by the major part of them, at each Examination.

Except so far as otherwise provided by Bye-law, the Candidate for Membership shall be examined in Physiology, in Pathology, and in Therapeutics, in three separate Examinations, by written questions, as well as *viva voce* at three meetings of the Censors' Board. At, or in connection with, the second examination before the Censors' Board, the Candidate's knowledge of Practical Medicine shall be tested, by requiring him to examine persons labouring under disease, and to describe morbid specimens. At the commencement of the first *viva voce* examination, the Candidate may, if he think fit, declare in writing what honours have been conferred upon him, in regard to his knowledge of Literature, Science, or Medicine; and such declaration shall, if it seem fit to the Censors' Board, be recorded in the annals of the College.

(Section 17.)—Any such Candidate who has already obtained the Degree of Doctor or Bachelor of Medicine at a University in the United Kingdom, wherein the courses of study, and the Examinations to be undergone by the students previously to graduation, shall have been adjudged by the Censor's Board to be entirely satisfactory, shall be exempt (if the Censors shall think fit) from all or any parts of the Examinations hereinbefore described, except such as relate to Pathology and Therapeutics. Every candidate for the Membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages.

(Section 18.)—If any such Candidate who has attained the age of forty years, but has not fulfilled all the conditions required by Sections 8, 9, and 10, shall produce testimonials, not merely satisfactory as to his moral character and conduct and his general and Professional acquirements, but further, showing that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a Medical Practitioner; the Censors' Board, having well weighed and considered these testimonials, may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the Candidate shall be admitted to Examination, which shall, in every such case, be as full and complete as the Censors may deem sufficient.

REGULATION RELATING TO CANDIDATES FOR THE MEMBERSHIP.

In the case of Candidates for Membership, who shall have commenced their Professional studies after September, 1864, the first Examination, comprising Anatomy, Physiology, Chemistry, and Materia Medica, shall not be undergone until after the termination of two years of Professional study at a recognised Medical School or Schools. Testimonial of proficiency in the subjects comprised in the first Examination granted by any Corporation or University, after a course of study and an Examination satisfactory to the Censors' Board, will be accepted in lieu of the first Examination conducted at the College.

The second and third Examinations, comprising Pathology and Therapeutics, shall not be undergone until after the completion of the required course of Professional study, and at least two years after the Candidate has passed the first Examination.

LICENTIATES.

The College, under its Charter, grants licences (which are not to extend to make the Licentiates Members of the Corporation) to persons who shall conform to the following Bye-laws and Regulations:—

Every Candidate for the College Licence (except in cases specially exempted) is required to produce satisfactory evidence to the following effect:—1. Of having attained the age of twenty-one years. 2. Of moral character. 3. Of having passed a preliminary Examination in the subjects of general education. 4. Of having been registered as a Medical Student. 5, Of having been engaged in Professional studies during four years, of which the first two years and one other year shall have been passed at a recognised Medical School or Schools, and of having attended the Medical Practice at a recognised Hospital or Hospitals, during two years of that period; and the Surgical Practice during twelve months; and of having been engaged during twelve months in the Clinical Study of Diseases peculiar to Women. The last of the four years of Professional study must be passed at a Medical School, Hospital, Infirmary, or Dispensary recognised by the College. 6. Of having studied the following subjects:—Anatomy (with dissections) during two Winter Sessions of six months each; Physiology during two Winter Sessions of six months each; Chemistry during six months; Practical Chemistry during three months; Materia Medica during three months; Practical Pharmacy during three months; Botany during three months; Morbid Anatomy during six months, or certified attendance in the Post-mortem Room during the period of Clinical Study; Principles or Practice of Medicine during two Winter Sessions of six months each; Principles and Practice of Surgery during six months; Clinical Medicine during one Winter Session and one Summer Session, or nine months; Clinical Surgery during six months; Midwifery and the Diseases peculiar to Women during three months. A Certificate must also be produced by having attended not less than twenty Labours; Forensic Medicine during three months. 7. Of having passed the Professional Examinations.

Any Candidate, being a "Registered Medical Practitioner," whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been, with the consent of the College, admitted a candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the Professional Examinations as his qualifications may seem to the Examiners to render in his case unnecessary.

Any Candidate, who has already obtained the Degree of Doctor or Bachelor of Medicine at a University, approved and recognised by the College, after a course of Study and an Examination satisfactory to the College, or who has already obtained the Licence of the Royal College of Physicians of Edinburgh, or of the King and Queen's College of Physicians in Ireland, after a course of study and an Examinotion satisfactory to the Examiners appointed by the College, shall be exempt from the First Part of the Professional Examination for the Licence.

The fee to be paid for the Licence to practice Physic as a Licentiate of the College is fifteen guineas.

No Fellow, Member, or Licentiate of the College shall assume the title of Doctor of Medicine, or use any other name, title, designation, or distinction implying that he is a Graduate in medicine of a University, unless he be a Graduate in Medicine of a University.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

No Licentiate of this College shall, by virtue of his Licence, represent himself as being a Fellow or Member of a College of Physicians.

THE PROFESSIONAL EXAMINATION.

Every Candidate, before he is admitted to examination, will be required to sign a declaration, stating whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) of the Medical Act.

The examination is divided into two parts.(a) The first

(a) Examinations of candidates for the College licence will take place as follows:—1865. First part, commencing Tuesday, October 3 and December 5. Second part, commencing October 10 and December 12. 1866. First part, commencing February 6, April 3, June 5, July 3, October 2, and December 4. Second part, commencing February 13, April 10, June 12 July 10, October 9, and December 11.

part, or primary examination, will be conducted as follows:—On the first day, evening, from seven to ten, by written questions on Anatomy and Physiology. Second day, afternoon, from one to four, by written questions on Chemistry, Materia Medica, and Practical Pharmacy. Evening, commencing at seven o'clock, *viva voce*, on the subjects stated above. The second part, or pass examination, will be conducted as follows:—On the first day, evening, from seven to ten, by written questions on the Principles and Practice of Medicine. Second day, morning—The Candidate's practical knowledge will be tested, by requiring him to examine persons labouring under Disease, either at the College or in the Medical Wards of an Hospital. Evening, from seven to ten, by written questions on Midwifery and the Diseases peculiar to Women, and on the Principles and Practice of Surgery. Third day, morning—The Candidate's practical knowledge will be tested, by requiring him to examine persons labouring under disease in the Surgical Wards of an Hospital. Evening, commencing at seven o'clock, *viva voce*, on the subjects stated above.

The first part of the Professional Examination shall not be undergone until after the termination of two years of Professional study at a recognised Medical School, and the second part not until after the termination of four years' of Professional study, and at least eighteen months after the Candidate has passed the First Examination, except in the case of Students who have commenced their Professional Education before October, 1851.

Any Candidate who shall fail to pass any of these Examination will not be re-admitted to Examination until after the lapse of six months.

Every Candidate intending to present himself for Examination is required to give fourteen days' notice in writing to the Registrar of the College, at the same time transmitting the following certificates:—*For the first part.*—Evidence of having passed an Arts Examination; of having been duly registered as a Medical Student; and of having completed two years of Professional Study. *For the second part.*—Evidence of having completed four years of Professional Study; of having attended not less than twenty labours; and of having attained the age of 21 years. A testimonial of moral character is required of every Candidate.

Blank forms of the required Certificates of attendance on Hospital Practice and on Lectures may be obtained on application at the College.

The fee for admission to the first part of the Examination is £5 5s.; the fee for admission to the second part of the Examination is £10 10s.; and there is no further fee for the Licence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND,

LINCOLN'S-INN-FIELDS.

ADMISSION TO THE FELLOWSHIP BY EXAMINATION.

1. Except in the cases and instances hereinafter provided for to the contrary, every Candidate for the Fellowship, whether a Member of the College or not, is required to produce Certificates satisfactory to the Court of Examiners—That he is twenty-five years of age. That he is (if found qualified upon examination) a fit and proper person to be admitted to the Fellowship, which Certificate must be signed by three Fellows. That he has passed the preliminary Examination in Classics, Mathematics, and French appointed by the Council; or that he has passed in the University of Oxford, or Cambridge, or London, the Examination in Arts required in those Universities, respectively, of Candidates for their Degrees in Medicine. That he has been engaged for six years in the acquirement of Professional knowledge in recognised Hospitals or Schools, and that not less than three Winter and three Summer Sessions thereof have been passed in one or more of such Hospitals in London. That he has studied Anatomy and Physiology by attendance on Lectures and Demonstrations, and by Dissections, during three Winter Sessions of not less six months each, at a recognised School or Schools. That he has attended Lectures on the Theory and Practice of Medicine and on Clinical Medicine; and also on the Theory and Practice of Surgery and on Clinical Surgery, during two sessions of not less than six months each, at recognised Schools and Hospitals. That he has attended one course of Lectures on each of the following subjects—viz., Chemistry, Materia Medica, Midwifery, with attendance on Cases, Medical Jurisprudence, and Comparative Anatomy, at one or more recognised School or Schools. That he has attended the Surgical Practice of a recognised Hospital or Hospitals during four Winter and four Summer Sessions, and the Medical Practice of a recognised Hospital or Hospitals during one Winter and one Summer Session. And that he has served the office of House-Surgeon or Dresser in a recognised Hospital in the United Kingdom. He is also required to present Clinical Reports with observations thereon of six Surgical Cases taken by himself at one or more recognised Hospital or Hospitals in the United Kingdom, with satisfactory evidence of their authenticity and genuineness.

2. In the case of a Candidate who has taken by Examination the Degree of Bachelor or Master of Arts in any University in the United Kingdom, it will be sufficient to produce a Certificate that he has been engaged for five years (instead of six years) in the acquirement of Professional knowledge in recognised Hospitals or Schools, but in all other respects he must produce the Certificates of the foregoing course of study.

3. Any person who was a Member of the College on the 14th of September, 1844, will be admitted to examination for the Fellowship upon the production of a Certificate signed by three Fellows, that he has been eight years in the practice of the Profession of Surgery, and that he is a fit and proper person to be admitted a Fellow, if upon examination he shall be found qualified.

4. Any person who shall have become a Member of the College after the said 14th of September, 1844, will, after the expiration of twelve years from the date of the Diploma, be admitted to examination for the Fellowship upon the production of a Certificate, signed by three Fellows, that he has been for twelve years in the practice of the Profession of Surgery, and that he is a fit and proper person to be admitted a Fellow, if upon examination he shall be found qualified.

The Preliminary Examination in Classics, Mathematics, and French is held in the month of October, and, if required, in the month of April; to which Candidates are admitted upon having completed the eighteenth year of their age, and on the payment of the fee of Ten Guineas. The Professional Examination is held in the months of May and November, and occupies two days, either successive, or at such interval as the Court of Examiners may appoint. The subjects of the first day's Examination are Anatomy and Physiology; those of the second day, Pathology, Therapeutics, and Surgery: the Candidate has to perform dissections or operations on the dead body. A Candidate whose qualifications shall be found insufficient upon his Professional Examination, will not be allowed to present himself a second time until after the expiration of one year from such Examination.

The following are the Subjects of the Preliminary Examination of the Candidates for the Fellowship of this College during the year 1865, viz.:—

Classics.—Demosthenes, De Corona, down to the end of Chapter 205; Sophocles; Antigone and Ajax; Tacitus, Histories, Books I. and II.; Virgil, Æneid, Books V. and VI. Each Candidate is required to bring up one of the above Greek and one of the above Latin authors; one prose writer, and one poet.

Mathematics.—Arithmetic; Algebra, as far as to include the doctrine of Proportion; and Simple Equations with one or two unknown quantities; Euclid, Books I., II., and III. Statics, Hydrostatics, Optics, and Acoustics.

French.—Translation and parsing of a passage in two of the following works, at the option of the Candidate:—"La Henriade," Voltaire; "Etudes de la Nature," Bernardin de St. Pierre; "Les Girondins," Lamartine.

REGULATIONS RESPECTING THE EDUCATION OF CANDIDATES FOR THE DIPLOMA OF MEMBER OF THE COLLEGE.

1. *Preliminary General Education and Examination.*—Candidates who commenced their Professional education on or after January 1, 1861, will be required to produce a Certificate of Graduation in Arts at a University recognised for this purpose. Candidates who shall not be able to produce such a Certificate will be required to pass an Examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of the Council of this College.

The following are the subjects of the Examination (No. 12) during the years 1864 and 1865—viz., Part I.—Compulsory Subjects.—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English grammar. 4. Writing a short English composition. 5. Arithmetic. 6. Geography. 7. Questions on the outlines of English history. 8. Euclid, Books I. and II. 9. Translation of a passage from the first book of Cæsar's Commentaries, "De Bello Gallico." Part II.—Papers will also be set on the following seven subjects; and each Candidate will

be required to offer himself for examination on one subject at least, at the option of the Candidate; but no Candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from St. John's Gospel in Greek. 2. Translation of a passage from Voltaire's "Histoire de Charles XII." 3. Translation of a passage from the first two books of Schiller's "Geschichte des dreissigjährigen Krieges." Besides these translations into English, the Candidate will be required to answer questions on the Grammar of each subject, whether compulsory or selected. 4. Mathematics. Algebra to Simple Equations inclusive. 5. Mechanics. The questions will be chiefly of an elementary character. 6. Chemistry. The questions will be on the elementary facts of Chemistry. 7. Botany and Zoology. The questions will be on the classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account.

2. *Professional Education.*—I. Professional studies are not recognised prior to the date at which the Candidate shall have passed an Examination in General Knowledge in conformity with the Regulation in the preceding Section.(a)

II.—The following will be considered as the commencement of Professional Education:—1. Attendance on the Practice of a Hospital, or other Public Institution recognised by this College for that purpose. 2. Instruction as the Pupil of a legally-qualified Surgeon, *holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.* 3. Attendance on Lectures on Anatomy, Physiology, or Chemistry, by Lecturers recognised by this College. *The commencement of Professional study, otherwise than by attendance on Lectures in recognised Medical Schools, or by attendance on the Practice of recognised Hospitals, will not be admitted until a Certificate thereof shall be furnished to the Secretary for registration at the College by the Practitioner whose Pupil the Candidate shall have become, or by the Medical Superintendent of the Hospital or other Institution to the practice of which he shall have entered; and will, consequently, date only from the reception of such Certificate by the Secretary, the Certificate to be accompanied by proof of having passed the necessary Preliminary Examination in General Knowledge.*

III. Candidates will be required to produce the following other Certificates—viz., 1. Of being twenty-one years of age. 2. Of having been engaged during four years in the acquirement of Professional knowledge. 3. Of having studied Practical Pharmacy during three months. 4. Of having attended Lectures on Anatomy, delivered not less frequently than four times in each week, during two Winter Sessions. 5. Of having performed Dissections during not less than two Winter Sessions. 6. Of having attended Lectures on Physiology delivered not less frequently than twice in each week, during two Winter Sessions. 7. Of having attended Lectures on Surgery during two Winter Sessions, *of which one Course must not be earlier than the third Winter Session at a recognised Medical School.* 8. Of having attended one Course of Lectures on each of the following subjects, viz., Chemistry, Materia Medica, Medicine, and Midwifery. 9. Of Instruction and Proficiency in the Practice of Vaccination. 10. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Surgery, and Clinical Lectures on Surgery, during three Winter (b) and two Summer(c) Sessions. 11. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Medicine, and Clinical Lectures on Medicine, during one Winter and one Summer Session. 12. *Of having subsequently to the completion of two years' Professional Education taken charge of Patients under the superintendence of a Surgeon during not less than Six Months, at a Hospital, General Dispensary, or Parochial or Union Infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery.*

N.B.—Blank forms of the required Certificates may be obtained on application to the Secretary, and all such Certificates will be retained at the College.

III.—1. Certificates will not be received on more than one branch of Science from one and the same Lecturer; but Anatomy and Dissections will be considered as one branch of Science.

2. Certificates will not be recognised from any Hospital in the United Kingdom unless the Surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the Teachers in such School be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any School of Surgery, unless the Teachers in such School be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

3. No Metropolitan Hospital will be recognised by this College which contains less than 150, and no Provincial or Colonial Hospital which contains less than 100 patients.

4. The recognition of Colonial Hospitals and Schools is governed by the same Regulations, with respect to number of Patients and to Courses of Lectures, as apply to the recognition of Provincial Hospitals and Schools in England.

5. Certificates of Attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital Attendance required by the Regulations of this College; and in such cases Clinical Lectures will not be necessary, *but a Certificate of having acted as Dresser for the period of at least Six months will be required.*

6. Certificates will not be received from Candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on Lectures and Hospital Practice within fifteen days from the commencement of the Session; nor from Candidates who have studied in the Provincial Schools of England, unless their names shall be duly returned from their respective Schools.

N.B.—At the registration in October, Candidates who shall have commenced their Professional Education subsequently to the 1st of October, 1862, will be required to produce a Certificate of having passed one or other of the Preliminary Examinations in General Knowledge recognised by this College.

NOTE.—*The Regulations in italics apply to Candidates in the United Kingdom who commenced their Professional Education on or after the 1st of October, 1863; and to Candidates who shall commence their Professional Education in the Colonies on or after the 1st of October, 1864.*

7. Those Candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several Certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland from Candidates for their Diploma, together with a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied at least four entire years in the acquirement of Professional knowledge; and in the case of Candidates who shall have pursued the whole of their studies at recognised Foreign or Colonial Universities, upon the production of the several Certificates required for their Degree by the authorities of such Universities, together with a Certificate of Instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied at least four entire years in the acquirement of Professional knowledge.

8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and Graduates in Surgery of any University recognised for this purpose by this College, will be admitted to examination on producing their Diploma, Licence, or Degree, together with proof of being twenty-one years of age, a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied at least four entire years in the acquirement of Professional knowledge.

9. Graduates in Medicine of any legally constituted College or University recognised by this purpose by this College, will be admitted to examination on adducing, together with their Diploma or Degree, proof of being twenty-one years of age, a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied at least four entire years in the acquirement of Professional knowledge.

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IV. *Professional Examination.* — This Examination is

(a) This Regulation applies to Candidates who commenced their Professional Education on or after October 1, 1862.

(b) The Winter Session comprises a period of six months, and, in England, commences on the 1st of October, and terminates on the 31st of March.

(c) The Summer Session comprises a period of three months, and, in England, commences on the 1st of May, and terminates on the 31st of July.

divided into two parts. 1. The First, or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected Subject, and on prepared parts of the Human body. 2. The Second or Pass Examination, on Pathology, Surgery, and Surgical Anatomy, is partly written and partly oral. 3. The Primary Examinations are held in the months of January, April, May, July, and November, and the Pass Examinations generally in the ensuing week respectively. 4. Candidates will not be admitted to the Primary or Anatomical and Physiological Examination until after the termination of the second Winter Session of their attendance at a recognised School or Schools; nor to the Pass, or Pathological and Surgical Examination, until after the termination of the fourth year of their Professional education. 5. The fee of Five Guineas paid by each Candidate Prior to his Primary Examination will not be returned, but will be allowed in the fee on his admission as a member. 6. A Candidate having entered his name for either the Primary or Pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within the period of three months from the date at which he shall have so failed to attend. 7. A Candidate referred on the Primary Examination is required, prior to his admission to re-examination, to produce a Certificate of the performance of dissections during not less than three months, subsequently to the date of his residence. 8. A Candidate referred on the Pass Examination is required, prior to his admission to re-examination, to produce a Certificate of at least six months' further attendance on the Surgical Practice of a recognised Hospital, together with Lectures on Clinical Surgery, subsequently to the date of his reference.

THE SOCIETY OF APOTHECARIES,

BLACKFRIARS, E.C.

REGULATIONS, ETC.

Every Candidate for a certificate of qualification to practise as an Apothecary will be required to produce testimonials.

1. Of having passed a Preliminary Examination in Arts as a test of General Education.

This Examination must be passed before the commencement of Professional studies, which is defined by the Medical Council "to be the time of commencing studies at a Medical School."

2. Of having served an apprenticeship or pupilage of not less than five years to a Practitioner qualified by the Act of 1815. N.B.—This period may include the time spent in attending Lectures and Hospital Practice.

3. Of having attained the full age of twenty-one years:—As evidence of age, a copy of the baptismal register will be required in every case where it can possibly be procured.

4. Of good moral conduct.

5. And of having pursued a course of Medical study in conformity with the regulations of the Court.

COURSE OF STUDY.

Every Candidate whose attendance on Lectures shall commence on or after the 1st October, 1863, must attend the following Lectures and Medical Practice during not less than three winter and two summer sessions: each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from May 1 to July 31.

First Year.—Winter Session.—Chemistry; Anatomy and Physiology; Dissections. Summer Session.—Botany; Materia Medica and Therapeutics; Practical Chemistry.(a)

Second Year.—Winter Session.—Anatomy and Physiology, including Dissections and Demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. Summer Session.—Midwifery and Diseases of Women and Children and Vaccination (b); Forensic Medicine and Toxicology; Clinical Medical Practice.

Third Year.—Winter Session.—Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.

Registration of Testimonials.—All testimonials must be given on a printed schedule, and the blanks therein must be filled up by the Lecturers themselves. Students will be supplied with schedules at the time of their first registration:—In London, at the Hall. In the Provincial towns, from the gentlemen who keep the Registers of the Medical Schools, and whose names may be known by application to the Secretary of this Court. All Students, in London, are required personally to register the several classes for which they have taken tickets; and those only will be considered as complying with the regulations of the Court whose names and classes in the Register correspond with their schedules. Tickets of admission to Lectures and Medical Practice must be registered in the months of October and May. Due notice of the days and hours of such registrations will be given from time to time. The Court also require Students at the Provincial Medical Schools to register their names, in their own handwriting, with the Registrar of each respective School, within the first fifteen days of October and first fifteen days of May.

Examination in Arts.—An Examination in Arts will take place at the Hall three times in the year—viz., on the last Friday and Saturday in the months of January, April, and September. N.B.—By order of the Medical Council, an Examination in Arts is compulsory on all gentlemen commencing their studies on or after October 1, 1861, and must be passed previous to registration. Testimonials of proficiency in General Education will be received, as exempting from the Examination in Arts at the Hall from the Educational Bodies recognised by the General Council, and also from any of the Licensing Bodies under the Medical Act of 1858.

Professional Examinations.—The Court of Examiners meet in the Hall every Thursday, where Candidates are required to attend at a quarter before four o'clock. Every person intending to offer himself for Examination must give notice in writing to the Clerk of the Society on or before the Monday previous to the day of Examination, and must at the same time deposit all the required testimonials (as before specified) with the fee at the office of the Beadle, where attendance is given every day, except Sunday, from ten to four o'clock; Saturday, ten to two o'clock. The examination of Candidates is divided into two parts, and is conducted partly in writing and partly *viva voce*.

First Examination, which may be passed after the Second Winter Session, embraces the following subjects:—The British Pharmacopœia; Latin of Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany and Materia Medica.

Second Examination, after the Third Winter Session (the five years' pupilage being completed):—Practice of Medicine and Pathology; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

The Court of Examiners have determined that all Graduates in Medicine of a British University be in future admitted to a practical examination in the Practice of Medicine and Midwifery only.

The Examination of Candidates for certificates of qualification to act as Assistant, in compounding and dispensing medicines will be as follows:—In translating Physicians' Prescriptions; on the British Pharmacopœia; in Pharmacy and Materia Medica.

By the 22nd Section of the Act of Parliament, no rejected Candidate can be re-examined until the expiration of six months from his former examination; and no rejected Candidate as an Assistant until the expiration of three months.

Fees.—For a Certificate of Qualification to practise, six guineas; for an Assistant's Certificate, two guineas.

Students' Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry.

The prizes consist of a Gold Medal awarded to the Candidate who distinguishes himself the most in the examination; and of a Silver Medal and a Book to the Candidate who does so in the next degree.

(a) By Practical Chemistry is intended a *specific* course of Instruction in the Laboratory, with an opportunity of Personal Manipulation in the ordinary processes of Chemistry, and of acquiring a knowledge of the various Reagents for Poisons

(b) A Certificate of attendance on not less than twenty cases will be received from a legally qualified Practitioner, also instruction in Vaccination.

ARMY MEDICAL DEPARTMENT.

WHITEHALL-YARD.

QUALIFICATIONS AND EXAMINATION OF CANDIDATES FOR COMMISSIONS IN THE ARMY MEDICAL SERVICE.

1. Every Candidate desirous of presenting himself for admission to the Competitive Examination required for the Army Medical Service must be unmarried. He must produce a birth certificate from the District Registrar, or a certificate of baptism in which the date of birth is stated; or if neither of

these can be obtained, an affidavit from one of the parents, or from some other near relative who can attest the date of birth, will be accepted. The certificate or affidavit must show that the Candidate is not above 28 nor under 21 years of age. He must also produce certificates of moral conduct and character, one of them from the parochial minister if possible.

2. The Candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical officer in any climate. He must also attest his readiness to engage for general service immediately on being gazetted.

3. The Candidate must possess a Diploma in Surgery, or a licence to practise it, as well as a Degree in Medicine, or a licence to practise it, in Great Britain or Ireland.

4. Certificate of registration in accordance with the Medical Act of 1858, and of age and character, must be lodged at the Army Medical Department for examination and registry, at least one week before the Candidate appears for examination.

5. On producing the foregoing qualifications, the Candidate will be examined by the Examining Board in the following subjects:—Anatomy and Physiology, Surgery, Medicine, including Therapeutics, the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of drugs, (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of Surgical Apparatus, and the examination of Medical and Surgical patients at the bedside.) The eligibility of each Candidate for the Army Medical Service will be determined by the result of the examinations in these subjects only. Candidates *who desire* it will be examined in Comparative Anatomy, Zoology, and Botany, with special reference to Materia Medica, and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the Examination by Candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of Science.

6. The names of Candidates who pass the Preliminary Examination of the Examining Board will be sent to the Director-General and communicated to the Professors of the Army Medical School. The names will be arranged in the order of merit.

7. After passing his Preliminary Examination, every Candidate will be required to attend one entire Course of Practical Instruction at the Army Medical School before being admitted to his examination for a Commission, on (1) Hygiene, (2) Clinical and Military Medicine, (3) Clinical and Military Surgery, (4) Pathology of Diseases and Injuries incident to Military Service. These Courses to be of not less than four months' duration.

8. At their conclusion the Candidate will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any Medical officer deputed by him, may be present and take part in the examination. If the Candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical officer he will be eligible for a Commission as Assistant-Surgeon.

9. During the period of his residence at the Army Medical School each Candidate will receive an allowance of 5s. per diem, with quarters, or 7s. per diem without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the regulation undress uniform of an Assistant-Surgeon, but without the sword).

10. All Candidates will be required to conform to such rules of discipline as the Senate may from time to time enact.

The Assistant-Surgeon is subjected to three separate Examinations within the first ten years of his service, each Examination having a definite object. The first, to ascertain, previous to his admission into the Service as a Candidate, his scientific and Professional education, and to test his acquirements in the various branches of Professional knowledge. The second, after having passed through a course of special instruction in the Army Medical School, to test his knowledge of the special duties of an Army Medical Officer; and the third, previous to his promotion, to ascertain that he has kept pace with the progress of Medical Science.

ARMY MEDICAL SCHOOL.

President of the Senate.—Sir James B. Gibson, K.C.B., Director-General of the Army Medical Department.

Members of the Senate.—Sir Ranald Martin, C.B., Physician to the Indian Council; Inspector-General Ross Jameson, Principal Medical Officer, Royal Victoria Hospital; Deputy-Inspector-General T. Longmore, Professor of Military Surgery; Deputy-Inspector-General W. C. Maclean, Professor of Military Medicine; William Aitken, M.D., Professor of Pathology; E. I. Parkes, M.D., F.R.S., Professor of Military Hygiene.

Assistant Professors.—Surgeon-Major W. Morehead, Staff-Surgeon W. Fyffe, P. Davidson, F. Francois de Chaumont.

Candidates for Commissions in the Medical Hygiene Department of the Army, and in the Queen's Indian Service, proceed to Netley after passing the Competitive Examination at Chelsea. At Netley they attend the Medical and Surgical Practice of the Royal Victoria Hospital and learn the system and arrangements of Military Hospitals. During four months they attend the Lectures given by the Professors and Assistant Professors, and go through a course of Practical Instruction in the Hygienic Laboratory and Microscopical Room. The Lectures and Practical Instruction are intended to explain the specialties of Military Medical Practice, attention being directed to gun-shot and other wounds, Surgical arrangements in the field during action and sieges, means of transport, field Hospitals; tropical diseases and their means of investigation, service in India and in the various colonies, the sanitary arrangements in peace and war, and the means of carrying out the sanitary regulations. Every opportunity is taken of practising operations on the dead body and practical points of a like kind. During their attendance at Netley, the candidates receive 5s. per diem; they are also provided with quarters and attendance, they wear uniforms, are obliged to attend mess, and are under the ordinary military discipline. At the end of the four months they undergo an examination on the various subjects taught in the School, after which they receive their commissions, which are antedated to the day when they reported themselves at Netley, and are eligible for general service.

NAVY MEDICAL DEPARTMENT.

ADMIRALTY, SOMERSET HOUSE.

REGULATIONS FOR CANDIDATES FOR THE OFFICE OF ASSISTANT-SURGEON IN THE ROYAL NAVY.

A Candidate for entry into the Royal Navy shall make a written application to that effect, addressed to the Secretary of the Admiralty; on the receipt of which application he will be furnished with the Regulations and a printed form, to be filled up by him, to show if he possesses the required qualifications.

As vacancies occur, the number of Candidates required will be ordered to attend at the Admiralty Office, bringing with them the requisite certificates, showing that they are fully qualified by age, Professional ability, etc., when they will be examined by a Board of Medical officers, to be named by their Lordships.

That no person be admitted as an Assistant-Surgeon in the Royal Navy who shall not produce a certificate of being registered under the Medical Act, and a Diploma from one of the Royal Colleges of Surgeons of England, Edinburgh, or Dublin, from the Faculty of Physicians and Surgeons of Glasgow, from Trinity College, Dublin, or from other Corporate Body legally entitled to grant a Diploma in Surgery; nor as a Surgeon unless he shall produce a certificate from one of the said Colleges, Faculty, or Corporate Body, founded on an examination to be passed subsequent to his appointment of Assistant-Surgeon as to his fitness for the situation of Surgeon in the Navy; and in every case the person producing such Diploma and Certificate shall also undergo a further examination, touching his qualifications in all the necessary branches and points of Medicine and Surgery, both at the time of his entry and after serving three years to render himself eligible for Surgeon; and that previously to the admission of Assistant-Surgeons into the Navy, it will be required that they produce proof of having received a preliminary classical education, and that they possess, in particular, a competent knowledge of Latin; also

That they are of good moral character; the certificate of which must be signed by the clergyman of the parish, or by a magistrate of the district.

That they have served an apprenticeship, or have been engaged for not less than six months in Practical Pharmacy.

That their age be not less than twenty years, or more than twenty-six years.

That they have actually attended a recognised Hospital for eighteen months subsequently to the age of eighteen, in which

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Hospital the average number of patients is not less than one hundred.

That they have been engaged in actual dissections of the human body twelve months, the certificate of which from the teacher must state the number of subjects or parts dissected by the Candidate.

That they have attended lectures, etc., on the following subjects, at established schools of eminence, by Physicians or Surgeons of the recognised Colleges of Physicians and Surgeons, in the United Kingdom, for periods not less than hereunder stated; observing, however, that such Lectures will not be admitted if the teacher shall lecture on more than one branch of science, or if the Lectures on Anatomy, Surgery, and Medicine be not attended during Winter Sessions of six months each:—Anatomy 18 months; or General Anatomy 12 months, and comparative Anatomy 6 months, General Surgery 12 months, or Military Surgery 6 months, and General Surgery 6 months. Theory of Medicine 6 months, Practice of Medicine 6 months; if the Lectures on the Theory and Practice of Medicine be given in conjunction, then the period required is 12 months. Clinical Lectures (at an Hospital as above) 12 months; on the Practice of Medicine 6 months, on the practice of Surgery 6 months, Chemistry 6 months; or Lectures on Chemistry 3 months, and Practical Chemistry 3 months. Materia Medica, 6 months. Midwifery 6 months, accompanied by certificates stating the number of Midwifery cases personally attended. Botany 3 months.

A favourable consideration will be given to Candidates who have obtained the degree of M.D. at either of the Universities of Oxford, Cambridge, Edinburgh, Dublin, Glasgow, London, or Aberdeen; or who, by possessing a knowledge of the diseases of the eye, and of any branch of science connected with the Profession, such as Medical Jurisprudence, Natural History, Natural Philosophy, etc., appear to be more peculiarly eligible for admission into the service.

By the rules of the service, no Assistant-Surgeon can be promoted to the rank of Surgeon until he shall have served five years (two years of which must be in a ship actually employed at sea), and can produce a certificate from one of the before-mentioned Colleges, Faculty, or Corporate Body; and it is resolved that not any certificate of examination from any of the aforesaid Institutions shall be admitted toward the qualification for Surgeon, unless the certificate shall be obtained on an Examination passed after a period of not less than three years' actual service; observing, that no one can be admitted to an Examination for Surgeon, unless, as hereinbefore mentioned, he can produce a certificate, together with the most satisfactory proof, that he has performed, on the dead body, under the superintendence of a professor or teacher of known eminence, all the capital operations of Surgery, and is perfectly competent to perform any operation with skill and dexterity, and thoroughly acquainted with the anatomy of the parts involved in such operation; without which qualification no one hereafter can be promoted to the higher branches of the service; and whenever Assistant-Surgeons already in the service (whose Professional education may not be in accordance with the above) obtain leave to study previously to their passing for Surgeon, they will be required, on their Examination, to produce testimonials of their having availed themselves of the period of leave to complete their education agreeably to these regulations generally.

RULES AND REGULATIONS
OF THE
EXAMINING MEDICAL BODIES IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

STATUTES RELATIVE TO GRADUATION IN MEDICINE.

THREE Medical Degrees are conferred by the University of Edinburgh, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The Degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

I. The branches of extra-Professional education and Preliminary Examination are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics.

II. No Candidate is admitted to a Professional Examination who has not passed a satisfactory Examination on at least two of the following subjects (in addition to the subjects mentioned above):—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the Examination on these latter subjects also takes place, as far as possible, before the Candidate has entered on his Medical Curriculum.

III. A Degree in Arts (not being an Honorary Degree) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University, specially recognised for this purpose by the University Court, exempts from all Preliminary Examination.

IV. No one is admitted to the Degree of Bachelor of Medicine or Master in Surgery who has not been engaged in Medical and Surgical Study for four years—the Medical Session of each year, or *Annus Medicus*, being constituted by at least two courses of not less than 100 Lectures each, or by one such course, and two courses of not less than fifty Lectures each; with the exception of the Clinical Courses, in which Lectures are to be given at least twice a week during the prescribed periods.

V. Every Candidate for the Degrees of M.B. and C.M. must give sufficient evidence by Certificates—

1. That he has studied each of the following departments of Medical Science during Courses including not less than 100 Lectures, viz.:—Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery, and the Diseases peculiar to Women and Children (two Courses of Midwifery of three months each being reckoned equivalent to a six months' Course, provided different departments of Obstetric Medicine be taught in each of the Courses), General Pathology (or, in Schools where there is no such Course, a three months' Course of Lectures on Morbid Anatomy, together with a Supplemental Course of Practice of Medicine, or Clinical Medicine), and Practical Anatomy; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or a Certificate of attendance on six cases from a registered Medical Practitioner; Clinical Medicine and Clinical Surgery during Courses of not less than 100 Lectures, or two Courses of three months, Lectures being given at least twice a week; Medical Jurisprudence, Botany, and Natural History (including Zoology), during Courses including not less than fifty Lectures.

2. That he has attended for at least two years the Medical and Surgical Practice of a General Hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons.

3. That he has been engaged, for at least three months, by apprenticeship or otherwise, in compounding and dispensing drugs at the Laboratory of an Hospital, Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.

4. That he has attended, for at least six months, by apprenticeship or otherwise, the out-practice of an Hospital, or the practice of a Dispensary, Physician, Surgeon, or Member of the London or Dublin Society of Apothecaries.

VI. The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to the following regulations:—

1. One of the four years of Medical and Surgical study required by Section IV. must be in the University of Edinburgh.

2. Another of such four years of Medical and Surgical study must be either in the University of Edinburgh, or in some other University entitled to give the Degree of Doctor of Medicine.

3. Attendance during at least six winter months on the Medical or Surgical Practice of a General Hospital, which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on Courses of Lectures, as above prescribed.

4. One year's attendance on the lectures of teachers of Medicine in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh, or elsewhere, as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on Courses of Lectures, as above prescribed.

5. Candidates may, to the extent of four of the departments of Medical study required by Section V., sub-Section 1, attend in such year or years of their Medical and Surgical studies, as

may be most convenient to them, the lectures of the teachers of Medicine specified in the foregoing sub-Section 4.

6. All Candidates, not students of the University, availing themselves of the permission to attend the lectures of extra-Academical teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation Fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University.

7. The Fee for attendance on the lectures of an extra-Academical teacher in Edinburgh, with a view to graduation, must be of the same amount as that exigible by Medical Professors in the University.

8. No teacher is recognised who is at the same time a teacher of more than one of the prescribed branches of study, except in those cases where Professors in the University are at liberty to teach two branches.

VII. Every Candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—

1. A declaration, in his own handwriting, that he has completed his twenty-first year, and that he will not be, on the day of graduation, under articles of apprenticeship to any Surgeon or other master.

2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

3. A Thesis composed by himself, to be approved by the Medical Faculty.

VIII. Each Candidate is examined, both in writing and *viva voce*,—First, on Chemistry, Botany, and Natural History; secondly, on Anatomy, Institutes of Medicine, and Surgery; and thirdly, on Materia Medica, Pathology, Practice of Medicine, Clinical Medicine, Midwifery, and Medical Jurisprudence. The Examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, and Natural History, are conducted, as far as possible, by demonstrations of objects placed before the Candidates; and those on Medicine and Surgery, in part by clinical demonstrations in the Hospital.

IX. Students who profess themselves ready to submit to an Examination, on the first division of these subjects, at the end of their second year, may be admitted to Examination at that time.

X. Students who have passed their Examination on the first division of these subjects may be admitted to Examination on the second division at the end of their third year.

XI. The Examination on the third division cannot take place until the Candidate has completed his fourth *Annus Medicus*.

XII. Candidates may, if they choose, be admitted to Examination on the first two of these divisions at the end of their third year, or to the three Examinations at the end of their fourth year.

XIII. If any Candidate, at these Examinations, be found unqualified, he cannot be again admitted to Examination unless he has studied during another year two of the prescribed subjects, either in the University, or in some other School of Medicine.

XVII. The Degree of Doctor of Medicine may be conferred on any Candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to his having received the Degree of Bachelor of Medicine, for at least two years in attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice: provided always that the Degree of Doctor of Medicine shall not be conferred on any person unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as are above specified, or unless he shall, before or at the time of his obtaining the Degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory Examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects, namely, French, German, Higher Mathematics, and Natural Philosophy.

XIX. The Provisions of these Statutes came into operation on the 4th of February, 1861.

XX. Persons who began their Medical Studies before the 4th of February, 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

PRELIMINARY EXAMINATION IN ARTS—PROGRAMME FOR 1865-66.

I. Examinations on the Preliminary Branches of Extra-Professional Education will take place on Wednesday, 25th October, 1865, and on Tuesday, 3rd April, 1866:—

1. English.—Writing out a narrative, with strict attention to correct spelling, the proper selection of words, the form of the sentences, and punctuation. 2. Latin.—Fifth Æneid of Virgil, and an easy passage from a Latin Prose author. 3. Arithmetic.—The Common Rules, including Decimals. 4. Elements of Mathematics.—Euclid, Books i., ii., and iii., and the Rudiments of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. Elements of Mechanics.—Lardner's Mechanics

II. At the same dates Examinations will take place in conformity with Section II. of the said Statutes (p. 1), which enacts that no Candidate shall be admitted to a Professional Examination who has not passed a satisfactory Examination on at least two of the following subjects (in addition to the subjects mentioned above):—

1. Greek.—First three Books of the Cyropædia of Xenophon. 2. French.—Histoire de la Litterature Française par J. Demogeot. From Chapter xxxvii. to the end. 3. German.—Goethe's Egmont, and Schiller's Braut von Messina. 4. Higher Mathematics.—Euclid, Books i. to vi. Algebra, Trigonometry, and Conic Sections. 5. Natural Philosophy.—Elements of Natural Philosophy by Golding Bird and Brooke. 6. Logic.—Port Royal Logic, Part i., ch. 6, 7; Part ii., ch. 3, 4, 15, 16; Part iii., ch. 1, 19, 20. 7. Moral Philosophy.—Springs of Action—Duties—Ethical Theories, as, *e.g.*, in Stewart's Outlines, part ii.

Examinations in Latin for Students who come under the old Statutes, in consequence of having commenced their Medical Curriculum, by attendance on Classes before 4th February, 1861, will take place on Wednesday, 25th October, 1865, and on Tuesday, 3rd April, 1866.

UNIVERSITY OF ABERDEEN.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners, dated March 16, 1861, and approved by Her Majesty in Council.

The following are the Degrees in Medicine granted by this University, namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examination for the Degrees of M.B., C.M., and M.D., being in conformity with the Ordinances of the Scotch Universities' Commissioners, are the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of Medical and Surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University or in some other University entitled to give the Degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each Candidate for the Degree of M.B. shall pay a fee of five guineas in respect of each of the three Professional Examinations.

2. If the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such Degree, pay a further fee of five guineas.

3. And every Candidate for the Degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their Medical studies before the first Tuesday of November, 1861, are entitled to appear for examination for the Degree of M.D. after four years' study, one of which must have been at the University of Aberdeen.

Further information may be obtained from the Dean of the Medical Faculty, Professor Macrobin, M.D.

UNIVERSITY OF ST. ANDREWS.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners; they therefore generally correspond with those of the Universities of Edinburgh, Aberdeen, and Glasgow.

The Degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examinations for these Degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for Candidates

for the Degrees of Bachelor of Medicine and Master of Surgery present some difference :—

No one shall be received as a Candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of Medical and Surgical Study shall have been in one or more of the following Universities and Colleges, viz. :—The University of St. Andrews ; the University of Glasgow ; the University of Aberdeen ; the University of Edinburgh ; the University of Oxford ; the University of Cambridge ; Trinity College, Dublin ; Queen's College, Belfast ; Queen's College, Cork ; and Queen's College, Galway.

The remaining years of Medical and Surgical Study, other than those for which provision is made by the Ninth Section, may be either in one or more of the Universities and Colleges above specified, or in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of Medicine as may from time to time receive recognition from the University Court.

Attendance on the Lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen, shall not be reckoned for graduation in St. Andrews, if the Fee for such Lectures be of less amount than is charged for the like Course of Lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberdeen.

Every Candidate for the Degrees of Bachelor of Medicine and Master in Surgery shall be examined both in writing and *viva voce*,—First, On Chemistry, Botany, Elementary Anatomy, and Materia Medica. Secondly, On advanced Anatomy, Zoology, with Comparative Anatomy, Physiology, and Surgery. And, thirdly, On Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, General Pathology, and Medical Jurisprudence.

FEES FOR GRADUATION.

For the Degree of Bachelor of Medicine five guineas in respect of each of the three divisions of the Examination on Professional subjects ; and if the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him ; but, if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of five guineas ; and every Candidate for the Degree of Doctor of Medicine, who has previously obtained the Degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a Candidate for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

N.B.—The Degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered Medical Practitioner above the age of forty years, whose Professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his Professional knowledge ; provided always, that Degrees shall not be conferred under this Section to a greater number than ten in any one year. Fee £52 10s.

Further information may be obtained on application to the Secretary to the University.

UNIVERSITY OF GLASGOW.

Three Degrees in Medicine are granted, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) [The Preliminary Examination, Curriculum, and Professional Examinations for these Degrees being in conformity with the Ordinance of the Scottish University Commissioners, are the same as for the Universities of Edinburgh, St. Andrews, and Aberdeen.]

Of the four years constituting the Curriculum, one at least shall have been passed in the University of Glasgow, and another either in that University or some other University entitled to give Degrees in Medicine.

These Statutes apply to all Candidates who commenced their Medical studies on or after October 1, 1861. Candidates who began their Medical studies before that date are entitled to obtain their Degrees according to the regulations existing at the time when they commenced their studies.

The annual terms for conferring Medical and Surgical Degrees are the last Wednesday in April and the first day of August.

The fees for the Degrees are as follow :—For the Degree of M.B. (for each of three examinations, £5 5s.), £15 15s. ; for that of C.M. (in addition to the fee for M.B.), £5 5s. ; for the Degree of M.D. (in addition to the fee for M.B.), £5 5s. ; and the Government stamp for the Diploma, &c., £10 3s.

The Preliminary Examinations of Medical Students in branches of General Education take place at the beginning and at the end of the winter session.

The regulations under which the above Degrees are granted, and the notices of the subjects of Examination, will be obtained by application to the Registrar of the University.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENSE, 1865-66.

These are the same as those for the Double Qualification in Medicine and Surgery conferred by the Colleges of Physicians and Surgeons (see below) with the following exceptions in Professional education :—Anatomy, 1 Course, six months ; Practical Anatomy, 1 Course, six months ; or 2 Courses, three months each ; Botany (unless taken as a branch of preliminary study), 1 Course, three months ; Physiology or Institutes of Medicine, 1 Course, six months ; no Third Course of Medicine ; Clinical Surgery, 1 Course, three months ; no Third Course of Surgery ; Pathological Anatomy, 1 Course, three months ; or General Pathology, 1 Course, three months ; Practical Pharmacy, 1 Course, three months.

Candidates for the License of the College who already possess a qualification from a recognised Licensing Body, or who have passed the First Professional Examination before a Qualifying Body, will not be required to be re-examined on Anatomy, Physiology, and Chemistry, but will be at once admitted to the Second Part of the Examination.

No Candidate is admissible to Examination who has been rejected by any other Licensing Board within three months previous to his Examination.

The fee payable by a Licentiate is Ten Guineas. In the event of a Candidate being unsuccessful at his Examination, the sum of Two Guineas will be retained to defray expenses.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR THE LICENSE.

These are the same as those given below for the conjoined qualification in Medicine and Surgery conferred by the Colleges of Physicians and Surgeons, with the following exceptions in Professional education :—

No third course of Medicine and no course of Pathological Anatomy are required.

A certificate of three months' instruction in Pathological Anatomy at the post-mortem room of a recognised Hospital will be required from Candidates commencing Professional study after October 1, 1861.

Candidates for the Diploma of the College are subjected to two Professional Examinations, to be conducted at separate sittings, partly in writing and partly orally.

The First Examination embraces Anatomy, Physiology, and Chemistry. The Second Examination embraces Surgery and Surgical Anatomy ; also Medicine, Midwifery, Materia Medica, and Medical Jurisprudence.

Opportunities for both Examinations will be presented six times in each year.

Registered Medical Practitioners whose Degree or License in Medicine is dated prior to October 1, 1861, are exempt from the first Professional Examination. The Examinations under this regulation may take place on the first and third Tuesdays of each month.

FEES.

1. For the Diploma of the College, £10. 2. For a Certificate of Qualification to act as Assistant-Surgeon in the Navy, when no previous Qualification has been received from the College, £5 5s. 3. For a Certificate to an Assistant-Surgeon of the Royal Navy of Qualification to act as full Surgeon, £5 5s.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, while they still continue to give their Diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the Student may obtain the Diplomas of both Colleges.

The object of the joint examination is to give to Students

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facilities for obtaining from two separate bodies, and at less expense, a qualification in Medicine and a qualification in Surgery. Students passing that examination successfully will be enabled to register two qualifications under the Medical Act,—Licentiate of the Royal College of Physicians of Edinburgh and Licentiate of the Royal College of Surgeons of Edinburgh.

The arrangement for thus conferring a double qualification by the co-operation of the two Colleges is in conformity with Section XIX of the Medical Act, and received the special sanction of the General Council of Medical Education and Registration, at a meeting held on the 7th of August, 1859.

PROFESSIONAL EDUCATION.

Candidates commencing Professional study after October 1, 1865, must have been engaged in Professional Study during four years after the examination in General Education, which shall include not less than four Winter Sessions', or three Winter and two Summer Sessions' attendance at a recognised Medical School.(a)

The Candidate must have attended the following separate and distinct courses of lectures:—

Anatomy: Two Courses, Six Months each (b). Practical Anatomy: Twelve Months; or, in the option of the Candidate, Anatomy: One Course, Six Months; Practical Anatomy: Eighteen Months. Chemistry: One Course, Six Months. Practical or Analytical Chemistry: One Course, Three Months. Materia Medica: One Course, Three Months. Physiology: Not less than Fifty Lectures (c). Practice of Medicine: One Course, Six Months. Clinical Medicine, Six Months (d). A Third Course of Medicine, which may be either Practice of Medicine or Clinical Medicine, at the option of the Student: One Course, Six Months. Principles and Practice of Surgery: One Course, Six Months. Clinical Surgery: One Course, Six Months. A Third Course of Surgery, which may either be Principles and Practice of Surgery or Clinical Surgery, at the option of the Student: One Course, Six Months (d). Midwifery and the Diseases of Women and Children: One Course, Three Months. Medical Jurisprudence: One Course, Three Months. Pathological Anatomy: Three Months. (e)

Besides the above-mentioned Courses of Lectures, the Candidate must have attended at least six cases of labour under the superintendence of a qualified Medical Practitioner, either in a recognised maternity Hospital, or a Dispensary where Midwifery cases are admitted, or in private practice; and must produce a certificate to that effect from the Practitioner under whom he attended. He must also have attended, for three months, a course of instruction in Practical Pharmacy at the Laboratory of an Apothecary, or of a Member of the Pharmaceutical Society of Great Britain, or of a Chemist and Druggist recognised by either College on special application, or of a public Hospital or Dispensary, or as Assistant to a registered Practitioner who dispenses medicines to his own patients.

The Candidate must also have attended, for twenty-four months, a public general Hospital containing, on an average, at least eighty patients. He must also have attended, for six months, the practice of a public Dispensary specially recognised by either College; or have been engaged for six months as visiting Assistant to a registered Practitioner.

A Certificate of Proficiency in Vaccination, signed by a registered Practitioner, will be required of every Candidate. (f)

The six months' Courses delivered in Scotland must consist of not fewer than 100 Lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' Courses must consist of not fewer than 50 Lectures.

(a) Candidates commencing study prior to the above date will be admitted to examination after four Winter Sessions' or three Winter and two Summer Sessions' attendance on classes at a regular Medical School.

(b) The two Courses must not be simultaneous.

(c) In those Schools of England and Ireland in which two separate Courses of Lectures are delivered at separate hours, one on Anatomy, the other on Anatomy and Physiology, the former of these Courses will be received as a Course of Anatomy, and the other as a Course of Physiology.

(d) Two Courses of Clinical Medicine, of three months each, if not simultaneous, will be held as equivalent to one Course of six months. They must be attended during the period of attendance at the Hospital where they are delivered. The same rules will apply to Clinical Surgery.

(e) A Certificate of attendance on the post-mortem examinations at a general Hospital will be accepted in lieu of this Course.

(f) By a regulation of the Privy Council, of date 1st December, 1859, no one can be appointed as a contractor for Vaccination under the English Poor-Law who does not produce a Certificate of Proficiency in Vaccination from a person authorised by the Privy Council to grant the same. A Certificator in Vaccination has been appointed in Edinburgh by the Privy Council.

The following order of study is recommended as a guide to the Student, though not enjoined:—First Year: Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital. Second Year: Anatomy, Practical Anatomy, Physiology, Surgery, Materia Medica (the last either in this or the third year), Hospital. Third Year: Practice of Medicine, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Clinical Medicine, Pathological Anatomy, Hospital. Fourth Year: Surgery or Clinical Surgery, Midwifery and the Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Hospital.

REGISTRATION.

1. A book shall be kept in the hall of each College for the registration of all Medical Students who may apply. In one or other of these books, all Edinburgh Students who desire to possess Diplomas of the Colleges must be registered, whether they attend Professors in the University or other qualified teachers.

2. No Student beginning Professional study after September, 1865, can be registered who has not passed the Preliminary Examination in General Education of the Colleges, or one of the equivalent examinations recognised by the Colleges.

3. The Register shall be closed within fifteen days after the commencement of each Session or Term.

5. Every Student shall pay annually, on his first registration for the year, the sum of 5s., and shall receive a Certificate of Registration, duly attested by the Registrar.

PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

1. The subjects of the Preliminary Examination in General Education during the year 1865-66 shall be as follows, namely:—1. English Grammar and Composition, including Meanings and Derivation of Words. 2. Latin: The Fourth Book of Cæsar's Commentaries De Bello Gallico, — The Sixth Book of the Æneid of Virgil,—Exercises in Parsing, and in rendering English correctly into Latin, the Latin words being supplied. 3. Arithmetic: The Common Rules —Vulgar and Decimal Fractions. 4 and 5. Any two of the following, at the option of the Candidate: (1) Algebra: To Simple Equations, inclusive; (2) Geometry: Euclid, Books I., II., and III.; (3) Natural Philosophy: Hydrostatics and Pneumatics (Lardner's Handbook); (4) Greek: St. Mark's Gospel—Anabasis of Xenophon, Book II.; (5) French: Voltaire, Histoire de Charles XII.; (6) German: The Third Book of Schiller's "Geschichte des dreissigjährigen Kriegs;" (7) Botany: Vegetable Anatomy and Organography—Natural Orders Cruciferæ, Umbelliferæ, Leguminosæ, and Liliaceæ; (8) Zoology: General Classification of the Animal Kingdom—Characters and Subdivisions of the Vertebrata. N.B. In Greek, French, and German, parsing of the words in the passages given to be translated will be required.

2. Testimonials of proficiency granted by certain Educational bodies will be accepted as sufficient evidence of general education, and will exempt from the Preliminary Examination.

3. After September, 1865, all Students who intend becoming Candidates for the Diplomas of the Colleges must have passed the complete Examination in General Education, and have had their names inscribed in the Register of Medical Students instituted by the General Medical Council, before they commence their Professional studies.

4. The Preliminary Examinations shall take place at stated periods, and shall be conducted by a special Board of Examiners in Arts.

5. Candidates, the commencement of whose Professional Studies was prior to October 1st, 1865, may pass the Preliminary Examination in General Education at any of the periods previous to the first Professional Examination, but are recommended to do so at the earliest possible period. Candidates under this regulation, who have not passed a Preliminary Examination in General Education, will be required to undergo that examination on the day before the first Professional Examination, and shall pay a fee of 1*l*.

6. Students who intend to undergo the Preliminary Examination shall give in their names, addresses, and places of birth to the officer of either College, not later than three days before the day of examination, and shall pay a fee of 10s., not to be returned in case of rejection.

PROFESSIONAL EXAMINATIONS.

1. Candidates for the double qualification shall be subjected to two Professional Examinations, to be conducted at separate times, partly in writing and partly orally.

2. The first Examination shall embrace Anatomy, Physi-

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ology, and Chemistry, and take place not sooner than the end of the Second Winter Session.

3. Opportunities for both Examinations will be presented six times in each year. On each of those occasions the Candidates shall assemble for the purpose of writing answers to the questions proposed. The Oral Examinations will be conducted on the days immediately succeeding.

4. Candidates who desire to pass the first Professional Examination must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination, and must produce tickets, and also certificates of attendance in regard to all those courses of study which have reference to the subjects of that examination. They must also produce a certificate of having passed the Preliminary Examination.

5. The sum of 6*l.* must be paid to the Inspector of Certificates for this examination, not later than 10 A.M. of the day preceding it. This sum will be considered as paid to account of the entire fee of 16*l.* payable for the two Diplomas.

6. In the case of a Candidate being unsuccessful at this examination, 4*l.* will be returned to him; the remaining 2*l.* being retained to meet the expense of examination.

7. Candidates who have passed the first Professional Examination of any of the Licensing Boards recognised by the Medical Act, will be admissible to the second Professional Examination on producing certificates of the whole Course of Study prescribed, and paying the fee of 16*l.* In conducting the examination, none of the subjects set down in § 8 will be omitted, even if some of them should have formed part of the first Examination by another Board. Unsuccessful Candidates under this regulation will receive back 14*l.* of the 16*l.* paid by them.

8. The Second Examination shall embrace Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and shall not take place before the termination of the Winter Session of the last year of study.

9. Applications for examination must be made to the Inspector of Certificates not later than the Saturday previous to the day of examination.

10. Every Candidate must produce to the Inspector,—1st, Satisfactory evidence of his having attained the age of 21 years; 2nd, Tickets and certificates of his classes; 3rd, A certificate of having passed the first Professional Examination; and 4th, A tabular statement (for which a printed form will be furnished by the Inspector), exhibiting the full amount of his Professional Education, and distinguishing the Classes, Hospitals, and Dispensaries attended during each Session of his Studies. The tabular statement, accurately filled up, must be attested by his signature, and will be preserved by the Colleges as a record.

11. The fee payable for this examination, which shall be 10*l.*, must be lodged with the Inspector not later than 10 A.M. of the day preceding the examination day.

12. On the production of the above documents, and after receiving the fees, the Inspector shall give the Candidate a letter authorising the Examiners to take him on trial.

13. Unsuccessful Candidates at either the first or second Examination shall be remitted to their studies for a period to be determined by the judgment of the Examiners, but not in any case less than three months.

14. In case of a Candidate being unsuccessful at the second Examination, 8*l.* will be returned to him; the remaining 2*l.* being retained to meet the expense of the examination.

15. In order to test more effectually the practical knowledge of Candidates, recent dissections and anatomical specimens, articles of the Materia Medica, chemical tests, the microscope, surgical apparatus, and pathological specimens, will be employed during the examinations; and every Candidate will be required to write out formulæ of prescription. The examination may also consist, in part, of the actual examination of persons labouring under disease.

16. Candidates, on showing sufficient reason for it, may be admitted to a special examination, on days other than those appointed above, on paying an extra fee of 5*l.*, which will not be returned in the event of their not being successful.

17. No Candidate shall be admissible to examination who has been rejected by any other Licensing Board within the three months preceding his examination.

The following will be the periods of examination for the double qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, for the year 1865-66:—I. Preliminary Examinations in General Education: On Saturday, October 28, 1865; On Saturday, November 11, 1865; On Saturday, April 28, 1866; On Saturday, July 28, 1866. II. First Professional Examinations: On Wednesday, November 1, 1865; On Tuesday, January 30, 1866; On Tuesday, April 10, 1866; On Tuesday, May 8, 1866; On Tuesday, July 17, 1866; On Tuesday, July 31, 1866; On Tuesday, October 30, 1866. III. The Second Professional Examinations will take place immediately after the conclusion of the First Professional Examinations at each of the above-mentioned periods.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS RELATING TO ADMISSION TO THE FELLOWSHIP.

The Faculty embraces in its Fellowship both Physicians and Surgeons, and Candidates for admission may apply in either capacity, according to their qualifications. The proposal of a Candidate requires to be made at an ordinary meeting by two Fellows, but no proposal is received till the Candidate has, by letter, intimated to the President the Medical or Surgical qualification (as the case may be) on which he desires admission.

The Fee to be paid by a Fellow is £50. In case of a non-resident, in consideration of his inability to participate in all the privileges of the Fellowship, the Fee is £25, subject to the condition that the full Fee shall be payable should he at any subsequent time come to reside within five miles of the Faculty Hall.

ABSTRACT OF REGULATIONS FOR THE LICENSE, 1865-66.

Course of Study.—(1). Anatomy, two courses, six months each. (2). Practical Anatomy, twelve months. (3). Chemistry, one course, six months. (4). Practical or Analytical Chemistry, one course, three months. (5). Materia Medica, one course, three months. (6). Physiology, not less than fifty Lectures. (7). Practice of Medicine, one course, six months. (8). Clinical Medicine, one course, six months. (9). Principles and Practice of Surgery, one course, six months. (10). Clinical Surgery, one course, six months. (11). In addition to the above courses of Surgery and Clinical Surgery, one six months' course of either of these at the option of the student: (12). Midwifery and the Diseases of Women and Children, one course, three months. (13). Medical Jurisprudence, one course, three months. (14). Practical Midwifery, attendance on at least six cases of labour. (15). Pathological Anatomy, three months' instruction in the post-mortem room of a recognised Hospital. (16). Practical Pharmacy, three months' practical instruction. (17). Hospital and Dispensary Practice, twenty-four months' attendance on the practice of a public General Hospital, containing on the average at least eighty patients; and also six months' attendance on the practice of a public Dispensary, specially recognised by the Faculty, or an engagement of six months as visiting assistant to a Registered Practitioner.

A Certificate of Proficiency in Vaccination, signed by a Registered Practitioner, will be required of every Candidate. Candidates for the Diploma of the Faculty must produce satisfactory evidence of being twenty-one years of age. Candidates commencing Professional study after October 1, 1861, must have been engaged in Professional study during four years, which shall include not less than four Winter Sessions, or three Winter and two Summer Sessions' attendance at a recognised Medical School.

The Examination for the Diploma is divided into two parts. Anatomy, Physiology, and Chemistry are the subjects of the First Division of the Examination. The Second Examination embraces all the other subjects of the Course. The Fee for the Diploma is £10—£4 for the First and £6 for the Second Examination.

All applicants for the License must pass a Preliminary Examination in General Education before commencing their Professional studies. The Examination shall embrace the following subjects:—1, English; 2, Latin; 3, Arithmetic; 4 and 5, any two of the following, at the option of the Candidate: (1) Algebra, (2) Geometry, (3) Natural Philosophy, (4) Greek, (5) French, (6) German, (7) Botany, (8) Zoology.

Testimonials of proficiency granted by the National Educational bodies specified in the recommendations of the General Council will exempt from the Preliminary Examinations.

All necessary particulars may be obtained on application to the Secretary.

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FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW, AND ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

The Faculty of Physicians and Surgeons of Glasgow and the Royal College of Physicians of Edinburgh conjointly grant their Diplomas to Candidates after one series of Examinations before a Board of Examiners, in which each body is represented. The Regulations as to the Curriculum of Study are similar to those for the separate Diploma of the Faculty of Physicians and Surgeons of Glasgow, with the addition of a three months' Course of Botany and a second six months' Course of Medicine.

The Fee for the two Diplomas granted conjointly is £16.

FACULTY OF MEDICINE IN IRELAND.

UNIVERSITIES, COLLEGES, COURSES OF STUDY, DEGREES, AND LICENCES TO PRACTISE.

THE following Bodies grant one or more Degrees or Licences to practise Medicine or Surgery, and provide courses of instruction in the Medical Sciences:—The University of Dublin grants the Degrees of M.B. or Bachelor of Medicine; M.D. or Doctor of Medicine; M.C. or Master of Surgery; also Licences in Medicine (L.M.) and Surgery (L.S.). The Queen's University in Ireland, with its Provincial Colleges at Belfast, Cork, and Galway; this University confers the Degrees of M.D. and M.Ch. The King and Queen's College of Physicians in Ireland, granting a Licence and Fellowship. This Institution, in connexion with the Medical Faculty of the University of Dublin, constitutes the School of Physic in Ireland. The Royal College of Surgeons in Ireland, which grants Letters Testimonial qualifying to practise Surgery as a Licentiate, and also confers a Fellowship. Fellows and Licentiates of the Colleges of Physicians and Surgeons may obtain from their respective Colleges a Diploma in Midwifery. The Rotunda and Coombe Lying-in Hospitals grant Diplomas in Midwifery, which are, however, not recognised under the Medical Act. The Governor and Company of the Apothecaries' Hall of Ireland also confer a Diploma.

The Medical Session in Ireland commences about the first week in November.

UNIVERSITY OF DUBLIN.

TRINITY COLLEGE.

SCHOOL OF MEDICINE AND SURGERY.

The following Degrees and Licences in Medicine and Surgery are granted by the University of Dublin, in conformity with the Charter of Queen Elizabeth, and are entitled to be registered under the Medical Act, 21 and 22 Vict. cap. 90:—1. Bachelor in Medicine. 2. Doctor in Medicine. 3. Master in Surgery. 4. Licentiate in Medicine. 5. Licentiate in Surgery.

The qualifications requisite for these Licences and Degrees are the following:—

I. BACHELOR IN MEDICINE.

A. *Qualification in Arts.*—The Bachelor in Medicine must be a Bachelor in Arts of Dublin, Oxford, or Cambridge.

B. *Qualification in Medicine.*—Four years, at least, spent in the study of Medicine, including the following Courses of Lectures:—1. Anatomy and Physiology. 2. Practical Anatomy. 3. Surgery. 4. Chemistry. 5. Materia Medica and Pharmacy. 6. Institutes of Medicine and Pathology. 7. Practice of Medicine. 8. Midwifery. Each of these eight Courses is of six months' duration. 9. Botany. 10. Practical Chemistry. 11. Medical Jurisprudence. Each of these Courses is of three months' duration. 12. Nine months' attendance on the Clinical Instruction given in the Hospital of Sir Patrick Dunn. 13. Nine months' attendance on the Clinical Instruction of any Medico-Chirurgical Hospital approved by the Board of Trinity College. Fee payable for the Degree of M.B., £10.

After the completion of the foregoing Courses, the Candidates for the Degree of Bachelor in Medicine must pass a public Examination, of at least two days' duration, partly written and partly oral.

The Lectures of the Professors of the School of Physic, Trinity College, are recognised by the Royal College of Surgeons of Ireland, by the King and Queen's College of Physicians, and by all the other Licensing Corporations in the United Kingdom.

II. DOCTOR IN MEDICINE.

A. *Qualification in Arts.*—The Doctor in Medicine must be a Bachelor in Arts of Dublin, Oxford, or Cambridge, of three years' standing.

B. *Qualification in Medicine.*—The Doctor in Medicine requires no qualification in Medicine, additional to that necessary for the Bachelor in Medicine. Fee payable for Degree of M.D., £12.

III. MASTER IN SURGERY.

A. *Qualification in Arts.*—The Master in Surgery must be a Bachelor of Arts of Dublin, Oxford, or Cambridge.

B. *Qualification in Surgery.*—Four years' study of Surgery and attendance on the following courses:—1. Anatomy and Physiology, two courses, each of six months. 2. Theory and Practice of Surgery, two courses, each of six months. 3. Demonstrations and Dissections, three courses, each of six months. 4. Practice of Medicine. 5. Chemistry. 6. Materia Medica. 7. Midwifery, one course each, of six months' duration. 8. Practical Chemistry. 9. Botany. 10. Medical Jurisprudence, one course each, of three months' duration. 11. Attendance on the Clinical Instruction of three Sessions, of nine months each, in any of the recognised Medico-Chirurgical Hospitals.

Having completed the foregoing courses, the Candidate for this Degree must pass a public Examination, partly written and partly oral. Fee payable for Degree of M.C., £10.

IV. LICENTIATE IN MEDICINE.

A. *Qualification in Arts.*—The Licentiate in Medicine must have kept one full year in Arts.

B. *Qualification in Medicine.*—Same as the qualification for the Degree of Bachelor in Medicine—viz., attendance on the prescribed courses of instruction, and the passing of a similar public Examination. Fee payable for the Licence in Medicine, £5.

V. LICENTIATE IN SURGERY.

A. *Qualification in Arts.*—The Licentiate in Surgery must have kept one full year in Arts.

B. *Qualification in Surgery.*—Same as for the Degree of Master in Surgery—viz., attendance on the prescribed courses of instruction, and the passing of a similar public Examination. Fee payable for the Licence in Surgery, £5.

MEDICAL SCHOLARSHIPS.

Two Medical Scholarships are given annually by the Board of Trinity College, value £20 per annum each, tenable for two years; the Examinations for which are held each year in June, in the following subjects:—Anatomy, Chemistry, Materia Medica, and Botany.

MEDICAL SCHOOL EXHIBITIONS.

The Professors of the University School give three Exhibitions annually, two senior, value £15 and £10, open to all Students who have been three years attending the School. The subjects being,—Practice of Medicine, Surgery, Pathology, Midwifery, and Forensic Medicine.

One Junior, value £15.—The time and subjects of Examination being the same as those for the Medical Scholarships.

Expense of obtaining the Degrees of Bachelor in Medicine and Master in Surgery in the University of Dublin.

I. Lectures	£47	5	0
II. Hospitals	31	10	0
III. Degree Fees	20	0	0
IV. Examination Fees	10	0	0
	£108	15	0
Private Tuition, say	20	0	0
	£128	15	0

The courses of Lectures may be attended in any of the following Schools, provided always that one *Annus Medicus* be kept in the School of Physic of the University:—1. School of Physic, Trinity College; 2. Royal College of Surgeons; 3. Richmond Hospital School; 4. Dr. Steeven's Hospital School; 5. Peter-street School; 6. Catholic University School.

Four Courses—viz., Anatomy, Chemistry, Botany, and Surgery, are free to Students in Arts, matriculated in Medicine, having their names on the College books.

The Hospitals recognised by Trinity College are,—1. Richmond, Whitworth, and Hardwicke; 2. Meath Hospital; 3. Dr. Steeven's Hospital; 4. Jervis-street Infirmary; 5. City of Dublin Hospital; 6. Mercer's Hospital; 7. St. Vincent's Hospital; 8. Adelaide Hospital; 9. Mater Misericordiæ Hospital.

N.B.—As no Degrees in Medicine or Surgery are conferred except upon Graduates in Arts, the expense of the Degree of Bachelor in Arts, amounting altogether to £82 4s., should be

added to the foregoing, making the total cost something over £200.

THE QUEEN'S UNIVERSITY IN IRELAND,

granting the Degrees of Doctor in Medicine and Master in Surgery, is the centre or head of the Queen's Colleges of Belfast, Cork, and Galway, each of which possesses a Faculty of Medicine. The curriculum of Medical study extends over a period of four years; and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica, and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery, and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above Courses of Lectures must be attended in some one of the Queen's Colleges; the remainder may be taken, at the option of the Candidate, in any University, College, or School recognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the Colleges of the Queen's University Lectures on Natural Philosophy, and on one Modern Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised Laboratory, and the Practice during six months of a Medico-Chirurgical Hospital, containing at least sixty beds, together with Clinical Lectures delivered therein; during the second period, three months' Practical Midwifery in a recognised Hospital with not less than thirty beds, or six months' Practical Midwifery in a recognised Hospital with fifteen beds; and eighteen months' Practice of a Medico-Chirurgical Hospital, containing at least sixty beds, and in which Clinical Instruction is delivered. There are two University Examinations: one comprising the subjects of study in the first period, the other the subjects of the second period. Candidates may, if they prefer to do so, pass both these Examinations at the same time. The University Examinations are held twice in each year, in June and September. Further information will be found in the "Queen's University Calendar," or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RESPECTING THE EDUCATION, EXAMINATION, AND ADMISSION OF CANDIDATES FOR THE LICENTIATESHIP IN MEDICINE.

Candidates for the Licentiateship in Medicine are required to give proof of their having attained the age of 21 years, of having been engaged during a period of four years in the study of Medicine at a School or Schools recognised by the College, and shall also produce evidence of having studied the following subjects, viz.:—Anatomy, Physiology, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica, and Botany, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery, and of having attended a Medico-Chirurgical Hospital, in which regular Courses of Clinical Lectures are delivered, together with Clinical Instruction for twenty-seven months, or such Hospital for eighteen months, with nine months' attendance on a Medical Hospital, and similar courses of Clinical Lectures and Clinical Instruction; the attendance in each case being for not more than nine months in any year,—namely, for six winter and three summer months, and the attendance on a Medico-Chirurgical Hospital and Medical Hospital not being taken out in the same year, and of having attended Practical Midwifery for six months.

Candidates who are not personally known to any Fellow of the College are required to transmit testimonials of character from registered Physicians or Surgeons.

The Examination is divided into two parts:—

First Part.—Anatomy, Physiology, Botany, and Chemistry.

Second Part.—Materia Medica, Practice of Medicine, Medical Jurisprudence, and Midwifery.

Students may be examined in the subjects of the first part at the termination of the first period of study; or in all the subjects of their education, on the completion of their Medical studies.

Candidates are required to have passed an Examination in the following subjects of preliminary education before the Board of Examiners of this College, previous to or within the first two years of their Professional studies; or to have passed, within the period specified, an Examination in General Education, held by some of the qualifying Bodies, or by some one of the National Education Bodies approved by the College:—

English—Composition. Modern Languages—French or German. Greek. Latin. Mathematics—Euclid, First and Second Books. Arithmetic.

Students in Arts, of one year's standing, of any University in the United Kingdom, requiring Examinations in the first year; Graduates or Licentiates in Medicine or Surgery of any University or College in Great Britain or Ireland, will be exempted from the Preliminary Examination.

The above regulations respecting Preliminary Examination will not apply to Candidates who commenced their Professional education previously to January 1, 1861.

Candidates qualified as follows are required to undergo the second part of the Professional Examination only, viz.:—1. Graduates in Medicine of a University in the United Kingdom, or of any foreign University approved by the College. 2. Fellows, Members, or Licentiates of the Royal Colleges of Physicians of London or Edinburgh. 3. Graduates or Licentiates in Surgery.

Licence in Midwifery. Members of the College who may desire to obtain the Licence in Midwifery will be required to undergo a special Examination.

Candidates for the Licence in Midwifery, who are not Members of the College, will be admitted to Examination for such Licence in Midwifery on the following qualifications:—The Degree or Licence in Medicine or Surgery from any University or College of Physicians or Surgeons in the United Kingdom, together with a certificate of having attended a six months' Course of Lectures on Midwifery, with the attendance for six months at a recognised Lying-in-Hospital, or of having attended Practical Midwifery for six months.

Fees for Licence and Examinations.—The fee for the Licence is £15 15s., which may be divided as follows, viz.:—For Examination at the termination of the first period of study, £5 5s. The Final Examination for the Licence, £10 10s. Fee for the Midwifery Diploma, £3 3s. Fee for the Licences in Medicine and Midwifery, if taken out at the same time, £16. Fee for the Preliminary Examination, 5s.

The Admission fee, with the exception of two guineas deducted to meet the expense of Examination, will be returned to any Candidate who may be rejected.

ROYAL COLLEGE OF SURGEONS, IRELAND.

Fellows of the College are Members of the Corporation, and are admitted by examination. Letters Testimonial are granted to Licentiates, and a Diploma in Midwifery to Fellows and Licentiates educated and examined in that branch of Surgery.

Candidates for the Fellowship must be 25 years of age, and must give proof of liberal preliminary education and good conduct during Professional education. They are required to produce certificates of Surgical studies for six years (three of which must be for exercises in Dublin), and also of practice as House-Surgeon or Dresser in an Hospital; as well as certificates of attendance on Hospitals, Lectures, and Dissections, as required from Licentiates; with the addition of Botany, Comparative Anatomy, and Natural Philosophy. Fee, £26 5s.; if the Candidate be a Licentiate, £10 10s.

Candidates for Letters Testimonial are required to produce certificates of preliminary classical education, of four years' Professional study (three of them in Metropolitan Schools), also three years' attendance on Hospital Practice and Dissections. Fee, £21.

Candidates for the Midwifery Diploma must be Fellows or Licentiates of the College, are required to produce certificates of attendance on Midwifery Lectures and Practice, with proof of having attended thirty cases of parturition.

Candidates for the Fellowship and Letters Testimonial are publicly examined on two separate days in Anatomy, Physiology, Surgery, Practice of Medicine, and Pharmacy. The Examiners are elected by a sworn jury of the Council appointed by lot, Teachers being ineligible.

By a new Bye-law it is enacted that—"Certificates of attendance on Lectures and of the performance of Dissections shall be received from Professors and Lecturers in all Universities, Colleges, and recognised Schools in Her Majesty's dominions, as qualifications for the Fellowship and Letters Testimonial of this College; and also certificates of attendance on all Hospitals recognised by the Council, where Clinical instruction is given."

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THE APOTHECARIES' HALL OF IRELAND.

BYE-LAWS AND REGULATIONS REGARDING THE LICENCE TO PRACTISE AS AN APOTHECARY.

Every Candidate is required to undergo a Preliminary and a Professional Examination.

THE PRELIMINARY EDUCATION AND EXAMINATION include—1. English; 2. Mathematics; 3. French; 4. Latin; 5. Greek; 6. Natural Philosophy; 7. Natural History.

A Preliminary Examination will be held at the Hall four times in the year, viz., on the third Friday in the months of January, April, July, and October, at the hour of Two o'clock p.m. This Examination will be conducted by Graduates in Arts of the University of Dublin, with Assessors from the Court of the Hall.

Unsuccessful Candidates will not be re-admitted to Examination until after the lapse of six months.

Certificates in Arts granted by any of the Bodies named in Schedule (A) of the Medical Act, or by any Educational Institution approved of by the Medical Council, will be recognised by the Hall.

THE PROFESSIONAL EDUCATION AND EXAMINATION.

Every Candidate for the Licence to practise must produce Certificates to the following effect:—

1. Of having passed an Examination in Arts previously to entering on Professional study.

2. Of being registered as a Student in Medicine by one of the Bodies named in Schedule (A) of the Medical Act.

3. Of being at least twenty-one years of age, and of good moral character.

4. Of Apprenticeship to a qualified Apothecary, or of having been engaged at practical Pharmacy with an Apothecary for a period of three years subsequent to having passed the Examination in Arts.

5. Of having spent four years in Professional study.

6. Of having attended the following Courses, viz.:—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Materia Medica and Therapeutics, during one summer session; Practical Chemistry (in a recognised Laboratory), during three months; Principles and Practice of Medicine, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (attendance upon twenty cases); Surgery, during one winter session; Medical Jurisprudence, during one summer session; Instruction in the Practice of Vaccination.

7. Of having attended, at a recognised Hospital or Hospitals, the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session.

The Examination for the Licence to practise is divided into two parts.

The First Part comprehends Chemistry, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy.

The Second—Medicine, Surgery (Principles of), Pathology, Midwifery, Forensic Medicine, and Hygiene.

The First Part may be undergone at the close of the second winter session, and after the Candidate has attended the Courses upon the several subjects named for this Examination, and the second not before the completion of the fourth winter session.

The Licence of the Apothecaries' Hall, Dublin, entitles its possessor to be registered as a Medical Practitioner, under the Medical Act, and to practise Medicine and Pharmacy in Great Britain and Ireland.

The Governor and Court of Examiners meet at the Hall upon the first two Fridays in every month for the Examination of Candidates, at the hour of Two o'clock p.m.

Candidates for the Licence must lodge their testimonials, and enrol their names and address with the Clerk at the Hall, in Dublin, a week prior to the day of Examination.

A rejected Candidate cannot be re-admitted to Examination until after the expiration of six months.

Candidates for the Certificate of Assistant to an Apothecary, in Compounding and Dispensing Medicine, must have completed at least three years of his Apprenticeship with an Apothecary, or have a Certificate from an Apothecary of having been engaged at practical Pharmacy for a period of three years, together with a Certificate of good moral character.

The Examination of the intended Assistant will be restricted to the British Pharmacopœia and to Pharmacy, scientific and practical, including the history and character of Medicines, their preparation, combination, and doses, and the translation of Latin Prescriptions.

An Examination of Apprentices is held at the Hall in the first week in May annually, upon some subject of Medical Chemistry, which is announced by the Council of the Hall at the commencement of the previous Winter Session, and a Prize of Five Guineas is awarded to the successful competitor.

In reference to the foregoing Education and Examinations it is required by the Council of the Hall that every Candidate for the Preliminary Examination, or Certificate of Apprentice, shall have read all the Books in the prescribed Course, and shall pass such Examination as will satisfactorily test his grammatical Knowledge of the Languages, his acquaintance with the working of the several problems and calculations, and his familiarity with the leading events of English History, and with the elements of Physical and Natural Science.

In each department numerical values will be attached to the answers, and only Candidates who attain a certain proficiency will obtain "the Certificate in Arts" or "Certificate of Apprentice."

This Examination will be conducted by printed papers, and the answers will be required in writing.

In the first part of the Examination for "the Licence" the Candidate is required to recognise and describe samples of Drugs and Plants used in Medicine, and to indicate the chemical and Physical means of distinguishing them; to enumerate and explain the Pharmaceutic preparations of the Pharmacopœia, with their uses and doses; to translate Latin prescriptions correctly; and to answer questions in Human Anatomy, and in Vegetable and Animal Physiology.

This Examination will be partly written and partly oral.

In the Second part, the Candidate, having passed the first part satisfactorily, must answer questions in the several departments of Practical Medicine, and demonstrate and define diseased structure and injuries from pathological illustration, and give also the appropriate treatment and the form of prescription suitable in each case.

This Examination will be also partly written and partly oral.

Doctors of Medicine of any of the Universities in the United Kingdom, or Surgeons of any of the Royal Colleges of Surgeons, whose qualifications as such appear in the Medical Register, and who, having first passed an Examination in Arts, have also served an Apprenticeship, or the required Term at Practical Pharmacy, to a qualified Apothecary, may obtain the Licence of the Hall by undergoing an Examination—the former in Pharmacy, and the latter in Medicine and Pharmacy; in either case the Examination of the Candidate will be confined to one day's Examination.

DAYS AND HOURS OF INTRODUCTORY LECTURES

TO BE DELIVERED AT THE DIFFERENT MEDICAL SCHOOLS IN THE METROPOLIS.

	Days and Hours.	
St. Bartholomew's Hospital Medical Coll.	Oct. 2, 5	Dr. Andrew.
Charing-cross Hospital and College ..	,, 2, 3	Dr. Chowne.
St. George's Hospital Medical School ..	,, 2, 2	Mr. G. D. Pollock.
Guy's Hospital	,, 2, 2	Mr. T. Bryant.
King's College Medical Department ..	,, 2, 8	Dr. Priestley.
London Hospital Medical and Surgical College	,, 2, 3	Mr. Rivington.
St. Mary's Hospital Medical School ..	,, 2, 8	Dr. Handfield Jones.
Middlesex Hospital Medical College .	,, 2, 8	Mr. Hulke.
St. Thomas's Hospital Medical and Surgical College	,, 2, 3	Mr. Ord, M.B.
University College Faculty of Medicine..	,, 2, 3	Mr. Marshall.
Westminster Hospital and Medical School	,, 2, 8	Mr. Barnard Holt

PRIVATE TEACHERS IN LONDON.

Dr. STEGGALL gives instructions to Medical Students in all the branches of their studies, at his residence, 2, Southampton-street, Bloomsbury-sq.

The Drs. POWER continue daily their Lectures and Examinations for the Competitive and Pass Examinations at the Junior Medical College, 32, Queen-square, Bloomsbury, W.C.

Mr. T. P. LOVELL prepares gentlemen for the Examinations in Arts at the College of Surgeons and Apothecaries' Hall. Address, 3, Regent-place West, Regent-square, W.C.

Mr. COALES, B.A., prepares gentlemen for the B.A., 1st B.Sc., and matriculation examinations of the University of London, and for the Medical examinations in arts. Address, 10, Trinity-square, Borough, or 107, Gower-street, Bedford-square.

Dr. BARRON gives courses of Medical and Surgical tuition adapted to Students for Professional Examination, at his Class-rooms, Millikin's Chambers, Southwark-street, Borough.

Mr. G. HIND, F.R.C.S., gives, daily, Demonstrations and Examinations at 29, Newman-street, Oxford-street. Hours, from 10 to 11½ a.m. and 6 to 8 p.m.

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TO CORRESPONDENTS.

We beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

In order to confine the whole of this week's Number to information specially important to Students, we are compelled to defer answers to several Correspondents, together with all notices of passing events, until next week.

Medical Times and Gazette.

SATURDAY, SEPTEMBER 16.

HINTS TO BEGINNERS.

Again time has brought round a new Medical Session; again the English Medical Schools are thronged with new students, eager to learn the mysteries of life and organisation, and it becomes once more the duty of the Medical journalist to offer a few words of friendly counsel to the beginner.

We would say to the student at starting: Look well to the real nature of the Profession that you have chosen before it be too late. Don't underrate the painful drudgery you will have to undergo in attending the poor in early life, if ever you are to gain an experience that will give you reputation with the rich. You may have to go through scenes loathsome and dangerous. Modern chemical science has robbed the dissecting-room of much of its offensiveness and danger, and the post-mortem examination soon ceases to be an object of disgust; worse than these is that corruption of the living engendered by poverty and vice. A hard-working Roman Catholic priest once told us that on the day of his ordination at Edinburgh his Bishop said,—"Gentlemen, you will know what your life really is the first time that you put your head under the blanket to receive the confession of a typhus patient." The hard-working Medical attendant of the poor fares not much better in any part of the world. Here is a specimen from the other side of the Atlantic:—"An amount of self-denial is required on the part of the Physician," who attends midwifery cases amongst the poor, "which few can appreciate who have not been similarly situated. To stay hour after hour, perhaps all night, in a shanty, or in the close room of a tenant-house, inspiring an atmosphere which is poisonous, obliged to answer perpetual questions in reference to the patient, afraid to lie or almost to sit through regard for personal cleanliness, and that, too, when sleep is greatly needed, requires an amount of patience and benevolence which everyone does not possess."(a)

Such are some of the sources of disgust which you will have to encounter, and to do this will need all your love of science, all your desire to benefit your fellow creatures, and that staunch determination to do your duty at all hazards, and die at your post if need be, which, we are proud to say, has ever distinguished the votaries of Medicine.

Then the vast extent of knowledge which must be attained may well appal you at the first glance.

To begin with, there is the good general education—that acquaintance with the Latin language and with other parts of liberal knowledge which every gentleman ought to possess. And here we most earnestly advise the student to see that he possess this before he attempts Professional study. It is too late to be doing schoolboy's work; to be hobbling through a passage in Celsus with the aid of grammars and dictionaries and interlined translations, when the serious business of life has begun. We say the same of French and German; get them early; there is little room for acquiring them later in life.

With regard to the studies purely Medical, we urge again and again the advice we have given in these pages. No man ever plays well who hurries to play tunes on an instrument before he has learned his notes and scales. So no man becomes a great Practitioner who does not begin with the alphabet—with anatomy and chemistry. True, a person may get to strum half-a-dozen tunes very agreeably (to himself), if he have a good ear, though he may not know a note; and so may any man or woman, with a shrewd talent for observation, practise with a certain degree of usefulness and vogue, though he begins before he knows even one fact in anatomy or physiology. But what false notes would be avoided, what groping in the dark after the meaning of morbid phenomena, if the Practitioner had begun with the knowledge which anatomy and chemistry can give! And not only knowledge, but method; that power of analysis, of observation, of noticing small facts and grouping them, and seeing their import, which a training in science affords.

On this point we are at issue with some of our contemporaries, who advise the student not to grapple at once with the exacter departments of Medical study, but rather to spend a year in an "apprenticeship"—that is, in hanging about the house of a Practitioner, assisting to make up medicines, to see how business is carried on, and how slight cases are treated.

We affirm that the student who has mastered the elements of his Profession in a Medical School, who has been taught what he sees, and how to look at things, will be a more efficient assistant to the Practitioner, and will derive more benefit himself from his apprenticeship, than the boy who goes fresh from a grammar school into the Surgery;—too often to acquire desultory habits, and to forget the very art of learning.

Again, some persons advise the student at once to enter the Hospital wards, and to add to the crowds who get in each other's light whilst the Physicians and Surgeons are paying their visits. We object to this, on every ground; and to the arguments we have used heretofore, would add now the highest possible example. Any parent who accompanies his son to town cannot do better than give him, as a parting present, the "Autobiography of Sir Benjamin Brodie." Let the youth see the touching simplicity with which that great man gives the record of his own career, step by step;—the modesty, the diligence, the thoroughness. Brodie was two years studying anatomy and chemistry, before he entered St. George's Hospital.

In giving his attention, however, to these, and to some other branches of knowledge which do not make a man a Practitioner, though they give him the means to become one, the good sense of the student will sometimes be required to correct even the laudable zeal of his teachers. Students have described to us the bewilderment they experienced at listening to the "introductories" of the various courses at their first session. As Dean Swift makes each servant act as if the master's whole income was to be spent in his own department, so the various Professors: each put his own subject forward as the one on which the student's future welfare depended. The Professor of Anatomy depicted in glowing colours the horrible fate of a patient on whom any one should operate if ignorant of Anatomy. The Professor of Chemistry spoke of the mishaps arising from the compounding of incompatible drugs in a prescription. The Obstetrician dwelt with pathos on the claims of the weaker and more helpless half of humanity to the undivided study of her ailments; and the Professor of Forensic Medicine showed that whatever the skill, or devotion, or humanity, or experience of the Practitioner, he would inevitably be damned in reputation if his evidence broke down in a court of law. It is said that some Anatomical Pro-

(a) "Report of the Council of Hygiene and Public Health." New York: D. Appleton and Co. 1865.

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fessors condemn their students to the minutest and most useless details in human Anatomy: exacting an exhausting amount of attention to minutiæ which are neither valuable in themselves, nor for the training they give in habits of observation, but which are mere loads to the memory. It is further said that this system of things is injuriously felt in certain examinations, where students are required to answer such questions as might be well put if they were going to devote their lives to the dissecting-room, but not if they are going to be Practitioners of Medicine. Again, Anatomy is scarcely taught in a sufficiently wide and comprehensive spirit; or, rather, Anatomy in its noblest sense is not taught at all. Anthropotomy, or the study of the human frame, is taught with almost superfluous minuteness; whilst General Anatomy or Philosophical Anatomy, that which would give the student a view of the structure of all animated beings, and with it a key to the peculiarities of man,—to whatever may seem enigmatical or useless in his framework,—is scarcely taught at all. It is as if the Chemical lectures were entirely on *Medical* Chemistry. In each of these sciences the good sense of the student will aim at such a measure of study as shall secure to him a good broad view of the whole field, whilst concentrating his attention chiefly on those parts of it that are most useful as a preparation for practice.

But whilst thus giving a caution against certain tendencies, we most unhesitatingly advise the student during his first year to make the dissecting-room his head quarters, and the anatomical Professors and demonstrators his best friends. No body of teachers more zealous and self devoted exists than the anatomical teachers in the various British Schools. Here, again, we refer to the "Autobiography of Sir Benjamin Brodie." Anatomy as a *science* was unknown to the last generation. Hence a man may be a most accomplished and experienced *Surgeon;* for in that practical branch of his art he is continually learning; and, as Sir B. Brodie says, a well-informed and experienced Surgeon cannot be a bad examiner in Surgery. But the details of Anatomy, and those newer methods both of exploring structure and of tracing the philosophical relations between the various parts of the vertebrate skeleton, are scarcely well known to the seniors, and they are responsible for whatever there may be of an insufficiently high and philosophical method of teaching in the Schools. "My own view of the matter," says Sir B. Brodie, "is that, while Hospital Surgeons, somewhat advanced in their Profession, should be the principal element in a Court of Examiners, it will be well to have conjoined with them a certain number of younger men fresh from their anatomical studies, who, not being much engaged in practice, would have more leisure to bestow on the anatomical part of the examination."

We will not, however, set the student the bad example of blaming the "Regulations" issued by authority. Whatever their defects, there is nothing which the common sense and energy of the student may not overcome.

It is needless to tell any person who has his eyes open to the actual state of the world that our Profession is one in which there is the severest competition. It is most difficult to find openings for lucrative employment. Spite of that, anyone who takes us as a whole will find us a pretty thriving, respected, useful, and happy set of men. The student who does not waste his health in dissipation, nor yet in forced and unnatural midnight studies; who cultivates the friendship of the best amongst his fellow students; who gains the notice of his teachers by diligence, and who keeps his eyes open and his fingers employed, learning by objects more than from books; and who uses the natural faculties of shrewdness and observation, is sure to find an opening, and to get on well in time. As the best preparation, we again say, work hard at Anatomy during your first winter, and read the "Autobiography of Sir Benjamin Brodie."

HOSPITALS, ETC., FOR SPECIAL INSTRUCTION.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 17, BLOOMSBURY-SQUARE, W.C.—SCHOOL OF PHARMACY.—SESSION 1865-66.—The Session will commence on Monday, October 2, and extend to the end of July. Chemistry and Pharmacy, Dr. Redwood; Botany and Materia Medica, Professor Bentley. The first and second parts of this course, extending over the winter months, will be delivered at 17, Bloomsbury-square. The third part of the course, on Systematic Botany, will be delivered at the Royal Botanic Gardens, Regent's-park. Fee—For Registered Apprentices and Associates of the Society, for either of the above courses, One Guinea; for either part separately, Half a-Guinea. For those not connected with the Society, Two Guineas for either of the above courses: One Guinea for either part separately. Laboratory—The suite of Laboratories for Practical Instruction in General and Pharmaceutical Chemistry will be opened on Monday, October 2, under the direction of Dr. Attfield. Fee for the entire Session of ten months, Twenty-five Guineas. The Laboratories are open from half-past nine a.m. till five p.m. Students can enter at any period during the Session. Two Scholarships (the Jacob Bell Memorial Scholarship), of Thirty Pounds a-year each, are open to competition annually in July. The Board of Examiners meet monthly to grant Certificates of Competency. For further information, apply to Mr. Bremridge, Secretary and Registrar.

THE ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—A Fifth Course of Ophthalmic Demonstrations will commence on Tuesday, October 6, 1865, at half-past seven in the Evening, under the superintendence of Mr. Streatfeild, Mr. Hulke, and Mr. Hutchinson, and will be continued weekly at the same hour until Christmas. Certificates will be given. Terms—For a single course, one guinea. Pupils of the Hospital, free. Terms for the Hospital Practice—Three months, three guineas; perpetual, five guineas. Attendance every morning at nine. Operations daily at eleven.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK.—Consulting Physicians: Dr. Babington, F.R.S.; Dr. Henry Jeaffreson. Consulting Surgeon: Mr. Hilton, F.R.S. Physicians: Dr. Peacock, Dr. J. R. Bennett, Dr. E. L. Birkett, Dr. G. N. Edwards, Dr. Stephen H. Ward. Assistant-Physicians: Dr. J. Andrew, Dr. J. C. Thorowgood, Dr. H. G. Sutton, Dr. S. Fenwick, Dr. W. S. Church. Resident Medical Officer: Arthur R. Graham, Esq., M.B. The Hospital affords accommodation for 120 in-patients. During the last year 436 cases were under treatment in the wards, and 11,274 were relieved as out-patients. Information respecting Medical instruction at the Hospital may be obtained on application to the Physicians.

ROYAL ORTHOPÆDIC HOSPITAL, 315, OXFORD-STREET.—Operations, Thursdays, 2 p.m. Lectures are regularly given to Medical Practitioners and Students.

ST. LUKE'S HOSPITAL FOR LUNATICS, OLD-STREET, E.C.—Resident Physician and Superintendent, Dr. James Ellis, who will admit gentlemen to the Medical Practice of the Hospital and give any information respecting the admission of patients. Fee for the Session of three months, £2 2s.

HOSPITAL FOR SICK CHILDREN, 48 AND 49, GREAT ORMOND-STREET, W.C.—Physicians, Dr. West and Dr. Hillier; Assistant-Physicians, Dr. Buchanan, Dr. Dickinson, Dr. Sidney Ringer, Dr. Samuel Gee; Surgeon, Mr. Timothy Holmes; Assistant-Surgeon, Mr. Thomas Smith; Surgeon-Dentist, Mr. Samuel Cartwright. Clinical Lectures on cases attending or in the Hospital are delivered by the Medical Officers before their visit to the patients during the Winter and Summer Sessions. The Lectures are free to Practitioners on presenting their cards, and to Students after their first year by tickets, to be obtained on application, by letter, to the Secretary, at the Hospital. The Practice of the Hospital, in both In- and Out-patient Departments, is open at 9 every morning. Fee for Six Months' Attendance, £3 3s. Perpetual, £5 5s.

HOSPITAL SHIP "DREADNOUGHT," OFF GREENWICH.—Office, 86, King William-street, E.C.—This institution contains 200 beds, and is established for the relief of seamen of all nations. Casualties from the shore are also received. Residence is provided on board for Students and others who may be desirous of studying diseases incidental to tropical climates before entering the service or going abroad. Constant opportunities also occur for the performance of Surgical operations.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE-ROAD.—Instituted 1752. Rebuilt 1856.—Consulting-Physician, Dr. Roget. Consulting-Surgeon, Charles Hawkins, Esq., Medical Officers for the In-Patients, Dr. Blakely Brown, Dr. Brodie. Medical Officers for Out-Patients, J. Cholmondely, Esq., Dr. Parsons. Secretary, Mr. A. S. Boodle, who attends at the Hospital on Monday, from ten to two. Pupils are admitted to reside and board in the Hospital (after having been examined by the Physicians) for periods of not less than six weeks. In 1864, in-patients delivered, 384; out-patients delivered, 374; total, 758. Terms on application at the Hospital.

THE DENTAL HOSPITAL OF LONDON AND THE LONDON SCHOOL OF DENTAL SURGERY, 32, SOHO-SQUARE.—Dental Surgeons: Messrs. Ibbetson, Samuel Cartwright, John Tomes, Thomas Underwood, Charles Rogers, Robert Hepburn. Fee for the two years' attendance required by the Curriculum. £15 15s. Dental School: Dental Anatomy and Physiology (Human and Comparative), Mr. G. A. Ibbetson. Dental Surgery and Pathology, Mr. Samuel Cartwright. Mechanical Dentistry, Mr Robert Hepburn. Metallurgy in its application to Dental Purposes, Mr. G. H. Makins. General Fee for the special Lectures required by the Curriculum: Two Courses on Dental Anatomy, Dental Surgery, Mechanical Dentistry, and One Course of Metallurgy, £15 15s. Further particulars may be obtained on application to the Dental Officer of the day or the Treasurer, Mr. S. Cartwright.

METROPOLITAN SCHOOL OF DENTAL SCIENCE.—Winter Session.—Lectures: Dental Surgery, Tuesdays, at 7 p.m.; Dental Mechanics, Thursdays, at 7 p.m. Summer Session.—Dental Anatomy and Physiology, Mr. Fuller; Metallurgy, Mr. Tribe. The National Dental Hospital is open daily (Sundays excepted) from 9 to 11 a.m.

QUEEN'S COLLEGE, LIVERPOOL.—The Session will commence on Monday, October 2. The College is in connection with the University of London, and its classes comprise the subjects required for the Matriculation, B.A., B.Sc., and preliminary scientific M.B. examinations of that University. Instruction in Practical Chemistry is given in the College laboratory by Professor Hamilton. Provincial examinations of the London University are held at Queen's College. Fees: Separate classes, £2 2s. to £4 4s. per Session; Practical Chemistry, £5 5s.; course students, £20 per Session.

TABLES

GIVING THE NAMES OF LECTURERS, HOURS OF LECTURE, DAYS OF ATTENDANCE, AND FEES IN THE METROPOLITAN MEDICAL SCHOOLS AND HOSPITALS.

LECTURES.	ST. BARTHOLOMEW'S.					CHARING CROSS.					ST. GEORGE'S.				
	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Black	M 2.30 Tu and Th 3.30	5 5	..	7 7	Dr. Chowne Dr. Willshire	M W F 2.30	4 4	6 6	7 7	Dr. Pitman	..	6 6	..	6 6
SURGERY	Mr. Paget Mr. Coote	M F 3.30 W 9	5 5	8 8	7 7	Mr. Hancock	M Th F 12.30	3 3	5 5	6 6	Mr. Tatum	..	4 4	..	6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Holden Mr. Callender	Tu W Th F 2.30	5 5	7 7	10 10	Mr. Canton	M Tu W Th F 9	4 4	6 6	7 7	Mr. Holmes Mr. Rouse	..	6 6	..	8 8
ANATOMICAL DEMONSTRATIONS.	Mr. Smith Mr. M. Baker	Daily 10.15 till 2	3 3	5 5	..	Dr. Goldsbro'	Daily exc. Sat.	2 2	4 4	4 4	Mr. Pick	..	..	..	..
GENERAL ANATOMY AND PHYSIOLOGY	Mr. Savory	M Tu Th F 9	5 5	7 7	10 10	Dr. Salter	M Tu W Th F 3.30	4 4	6 6	7 7	Dr. W. Ogle	..	6 6	..	8 8
CHEMISTRY	Dr. Odling	M F 10.30 W 10.15	5 5	..	7 7	Mr. Heaton	M W F 10.30	5 5	6 6	7 7	Dr. Noad	..	6 6	..	8 8
NATURAL PHILOSOPHY ..	..	..	..	..	..	..	W Th F 11.15	3 3	..	..	..	..	..	..	..
HOSPITAL PRACTICE—															
Physicians	Dr. Farre	MWF 10.30	12 12	18 18	26 5	Dr. Chowne	Daily 1	10 10	15 15	21 0	Dr. Page	Daily 1	8 8	16 16	25 4
	Dr. Jeaffreson	M W F 8 Th 1	6 mths	2 yrs.		Dr. Willshire		6 mths	12 mths		Dr. Pitman Dr. Fuller Dr. Barclay Dr. R. Lee, *obs.*		6 mths	1 year	
	Dr. Black	M Tu Th 1													
	Dr. Martin	MTu F 1.30													
Assistant-Physicians ..	Dr. Edwards	Tu F 11	..	..	..	Dr. H. Salter Dr. Headland	12 to 2	..	..	..	Dr. J. Ogle Dr. Wadham	..	..	..	..
	Dr. Harris	W 11													
	Dr. Andrew	Th 11													
	Dr. Southey	M 11													
Surgeons	Mr. Wormald	Tu F S 1.30	15 15	21 0	26 5	Mr. Hancock Mr. Canton	Daily 1	10 10 6 mths	15 15 12 mths	21 0	Mr. Tatum Mr. P. Hewett Mr. Pollock Mr. H. Lee	Daily 1	15 15 6 mths	21 0 1 year	42 0
	Mr. Paget	M Th S 1.30	6 mths	1 year											
	Mr. Coote	M Tu Th F S 1.30													
	Mr. Holden	M W F S 1.30													
Assistant-Surgeons	Mr. Savory	M Th 12	..	..	..	Mr. Hird Mr. Barwell	12 to 2	..	..	..	Mr. Holmes Mr. Brodhurst	..	..	..	..
	Mr. Callender	W S 12													
	Mr. T. Smith	Tu 12													
	Mr. Willett	F 12													
Physician-Accoucheur ..	Dr. Greenhalgh	W 1.30 S 9	..	..	..	..	..	..	..	..	..	..	..	..	..
CLINICAL MEDICINE ..	Dr. Farre Dr. Black Dr. Martin	Tu 12	..	..	..	By the Physicians	..	..	..	..	By the Physicians	..	..	..	..
CLINICAL SURGERY ..	Mr. Skey Mr. Paget Mr. Coote Mr. Holden	M 1 Th 1.30 S 9	..	..	..	By the Surgeons	..	..	..	..	By the Surgeons	..	..	..	..
DISEASES OF WOMEN ..	Dr. Greenhalgh	Alt W 3.30	..	..	..	..	..	..	..	..	..	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Andrew The Surgeons	12	..	..	..	..	..	..	..	..	Dr. Ogle Mr. Lee	..	..	..	..
SUMMER SESSION.															
MATERIA MEDICA	Dr. Farre	Tu W Th S 10	5 5	..	6 6	Dr. Headland	Tu Th S 12	3 3	5 5	6 6	Dr. Barclay	..	5 5	..	6 6
BOTANY	Dr. F. Harris	M W S 9	3 3	..	4 4	Mr. H. Coultas	Tu Th S 10.30	2 2	3 3	4 4	Dr. M. Masters	..	3 3	..	4 4
FORENSIC MEDICINE ..	Dr. Edwards	M F 10 Th 11	3 3	..	4 4	Mr. Hird Mr. Tuson	M W F 3.30	2 2	3 3	4 4	Dr. Wadham	..	3 3	..	4 4
MIDWIFERY	Dr. Greenhalgh	Tu W F S 8.30	5 5	..	6 6	Dr. Chowne	M W Th 2.30	3 3	5 5	6 6	Dr. R. Lee	..	5 5	..	6
PRACTICAL CHEMISTRY ..	Dr. Odling	M Tu Th F 10.15 to 1	2 2	..	3 3	Mr. Heaton	M W 10	2 2	..	..	Dr. Noad	..	4 4	..	..
EXPERIMENTAL PHILOSOPHY	..	..	..	..	..	..	..	..	..	..	..	..	4 4	..	..
COMPARATIVE ANATOMY..	Mr. Callender	Tu F 2.30 *Summer*	2 2	..	3 3	Mr. Barwell	Tu Th S 3.30	3 3	..	4 4	..	..	..	..	..
DRESSERSHIPS	..	..	12 12 3 mths	18 18 6 mths	26 5 1 year	..	..	..	..	..	..	..	..	..	..
DENTAL SURGERY	..	..	..	..	..	..	..	..	..	..	Mr. Vasey	..	1 1	..	..
PSYCHOLOGICAL MEDICINE	..	..	..	..	..	..	..	..	..	..	Dr. Blandford	..	..	..	..
OPERATIVE SURGERY ..	Mr. Smith Mr. M. Baker	..	2 2	..	..	..	..	..	..	..	Mr. Holmes	..	4 4	..	..
PRACTICAL PHARMACY ..	Mr. Wood	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Entrance to the Lectures and Hospital Practice for the Licences of the Col. of Phys. and Soc. of Apoth., and the M.R.C.S. Exam.	..	..	..	..	99 15	..	..	..	..	70 7	Compounding Fee	..	..	..	100 0
To the Hospital Practice only	..	..	..	..	..	..	..	..	..	26 5	..	..	..	..	90 0
To the Lectures only	..	..	..	..	54 12	..	..	..	..	44 2	..	..	..	..	37 16
Unlimited to all Lectures ..	..	..	..	..	65 2	..	..	..	..	..	..	..	..	..	..

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LECTURES.	GUY'S. Lecturers.	Days and Hours.	Fees. 1 Course £ s.	2 Courses £ s.	Perpetual. £ s.	KING'S COLLEGE AND HOSPITAL. Lecturers.	Days and Hours.	Fees. 1 Course £ s.	2 Courses £ s.	Perpetual. £ s.	LONDON. Lecturers.	Days and Hours.	Fees. 1 Course £ s.	2 Courses £ s.	Perpetual. £ s.
WINTER SESSION.															
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Owen Rees Dr. Wilks	M W F 3	5 5	..	..	Dr. G. Johnson	Tu S 4 Th 5	7 7	..	7 7	Dr. H. Davies Dr. A. Clark Dr. Ramskill	M W Th 9	5 5	..	6 6
SURGERY	Mr. Birkett Mr. Poland	Tu Th S 3.30	5 5	..	..	Mr. Fergusson	M W F 5	5 5	..	7 7	Mr. Hutchinson	Tu F S 9	5 5	..	6 6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. C. Forster Mr. Durham	Tu W Th F 9	5 5	..	..	Mr. Partridge	Daily 9	6 6	..	9 9	Mr. Adams Mr. L. S. Little	M Tu Th F 3	5 5	..	8 8
ANATOMICAL DEMONSTRATIONS	Mr. Bankart Dr. Fagge	Daily 9 to 4	5 5	..	..	Mr. Wood *Ass.-Demonst.* Mr. Bellamy	..	..	..	..	Mr. Rivington	Daily exc. S 10 to 3	5 5	..	8 8
GENERAL ANATOMY AND PHYSIOLOGY	Dr. Pavy	M W F 4.15	5 5	..	..	Dr. L. Beale	M W Th F 4	6 6	..	9 9	Mr. J. Couper Dr. Hughlings Jackson	M W Th 4	4 4	..	6 6
CHEMISTRY	Dr. Alf. Taylor	Tu Th S 11	5 5	..	..	Dr. Miller Mr. Hadow *dem*	M W Th S 10.15	7 7	..	9 9	Dr. Letheby	M W F 10.30	7 7	..	7 7
HOSPITAL PRACTICE—															
Physicians	Dr. Barlow Dr. Owen Rees Dr. Gull Dr. Oldham *obs.*	M F 1.30 W S 1.30 Tu F 1.30 Tu Th 1.30	10 10 3 mths	15 15 6 mths	26 5	*In-patients*— Dr. Johnson Dr. Beale Dr. Garrod *Out-patients*— Dr. Guy Dr. Priestley, *obs.*	M W F 1.30 Tu Th S 9 Tu Th S 1.30 M W F 1 Tu Th S 1.30	10 10 6 mths	15 15 18 mths	21 0	Dr. Fraser Dr. Davies Dr. Parker Dr. Head, *obs.*	Daily 8 or 1 Tu 2, W S 1	6 6 Period reqd. by Apoth. H.	12 12	20 0
Assistant-Physicians ..	Dr. Habershon Dr. Wilks Dr. Pavy Dr. J. B. Hicks *obs.*	M 12 W 12 F 12 Th S 12 M F 1.30	..	..	..	Dr. C. Evans Dr. A. Duffin Dr. Harley Dr. Playfair *obs.*	M W F 1 win M W F 1 Tu Th S 1 M W F 12.30	..	..	..	Dr. A. Clark Dr. Ramskill Dr. Down Dr. Hughlings Jackson Dr. Palfrey, *obs*	Daily 1 W S 1	..	..	..
Surgeons	Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland	M Th S 1.30 M Th 1.30 M F 1.30 W S 1.30	10 10 3 mths	15 15 6 mths	26 5	Mr. Fergusson Mr. Partridge Mr. Wells, *oph.*	Tu Th S 1.30 M W F 1.30 Tu Th S 1	15 15 6 mths	21 0 21 mths	26 5	Mr. Adams Mr. Curling Mr. Hutchinson	Daily 1	8 8 6 mths	18 18 18 mths	25 3 years
Assistant-Surgeons	Mr. C. Forster Mr. Bryant Mr. A. Durham Mr. Bader *oph.* Mr. Hinton *aur* Eye Wards	S 12 M Th 12 W 12 Tu F 12 Tu 12 M Th 1.30	..	..	..	Mr. Wood Mr. H. Smith Mr. Watson	Th Th S 1 sum M W F 1 Tu Th S 1	..	..	..	Mr. Maunder Mr. Couper Mr. Little Mr. Rivington	Daily 1	..	..	..
CLINICAL MEDICINE ..	*Winter*— Dr. Barlow Dr. O. Rees Dr. Gull *Summer*— Dr. Habershon Dr. Wilks Dr. Pavy	Weekly Weekly	..	..	..	Dr. Johnson Dr. Beale Dr. Garrod Dr. Priestley *obs.*	Every alt. M 2 p.m. S 9 Every alt. Tu 2 p.m. Every alt. Th 3	..	..	..	By the Physicians	..	..	..	..
CLINICAL SURGERY ..	*Winter*— Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland *Summer*— Mr. C. Forster Mr. Bryant Mr. Durham	Weekly Weekly	..	..	..	Mr. Fergusson Mr. Partridge Mr. Wells, *oph.*	Every alt. Th 2 p.m. Every alt. F 2 p.m. Every W 1	..	..	..	By the Surgeons	..	..	..	..
DISEASES OF WOMEN ..	Dr. Oldham Dr. Hicks	Weekly	..	..	..	..	..	..	..	..	..	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Moxon	Daily 2.30 S 8.45 sum	..	..	..	Dr. Beale, Physicians & Surgeons	Tu 4 sum	2 2	..	..	Mr. Little	2.30	..	..	..
SUMMER SESSION.															
MATERIA MEDICA	Dr. Habershon	Tu Th S 3	4 4	..	..	Dr. A. B. Garrod	Tu W Th F 8 a.m.	4 4	..	6 6	Dr. J. L. Down	Tu Th F 4	3 3	..	4 4
BOTANY	Mr. Johnson	Tu Th S 11.30	4 4	..	..	Mr. Bentley	M Tu Th F 12.15	3 3	..	4 4	Dr. Dresser	M W F 10	3 3	..	4 4
FORENSIC MEDICINE ..	Dr. A. Taylor	Tu Th S 10	4 4	..	..	Dr. Guy	M Tu W F 3	3 3	..	4 4	Dr. Ramsbotham Mr. Rodgers	Daily exc. Sat 10.15	3 3	..	4 4
MIDWIFERY	Dr. Oldham Dr. B. Hicks	Tu W Th F 8.45 a.m.	5 5	..	..	Dr. W. O. Priestley	Tu W Th F 9	6 6	..	6 6	Dr. Ramsbotham	M Tu W Th F 3	4 4	..	6 6
PRACTICAL CHEMISTRY ..	Dr. Stevenson	M W F 10 to 1	4 4	..	..	Mr. C. L. Bloxam	M W F 10.15	4 4	..	8 8	Dr. Letheby	M Th S 9	2 2	..	..
COMPARATIVE ANATOMY..	Dr. Pye-Smith	Tu S 12.15	4 4	..	..	Mr. R. Jones	M W F 4	3 3	..	4 4	Mr. W. Rivington	Tu Th 11.30	3 3	..	..
PRACTICAL HISTOLOGY ..	..	..	..	..	..	..	..	..	..	..	Mr. Couper Dr. Hughlings Jackson	..	..	..	..
NATURAL PHILOSOPHY ..	Dr. Fagge	W 12 win.	..	..	..	..	..	..	..	..	..	..	..	..	..
OPERATIVE SURGERY ..	Mr. Bryant	W 3	..	..	..	..	..	..	..	..	Mr. Maunder	..	..	..	..
DENTAL SURGERY	Mr. Salter	..	..	..	..	Mr. Cartwright	Tu F 9	6 6	..	8 8	Mr. Barrett	..	2 2	..	..
AURAL SURGERY	Mr. Hinton	..	..	..	..	..	..	..	..	..	..	..	..	..	..
CUTANEOUS DISEASES ..	Dr. Habershon	M 1	..	..	..	..	..	..	..	..	..	..	..	..	..
OPHTHALMIC SURGERY ..	Mr. Poland Mr. Bader	M 8.45 a.m.	..	..	..	Mr. J. S. Wells	..	..	..	..	Mr. J. Hutchinson	Tu W F 9 in June	..	..	..
USE OF MICROSCOPE ..	Mr. Durham	M 12.30	..	..	..	..	..	..	..	..	..	..	..	..	..
TUTOR'S CLASS	Dr. Moxon Mr. Bankart Dr. Hilton Fagge	..	..	..	..	Mr. J. B. Yeo	Daily exc. S 5 win	3 3	..	..	Mr N. Heckford Mr J. R. B. Dove	..	2 2	..	..

Fee for Hospital Practice and Lectures, first year, £40; second year, £40; and £10 for each succeeding year. A Perpetual Ticket, £100.

Fee for Lectures required by College and Hall 61 19
Ditto, including Hospital Practice and Matriculation.. .. £99 6s. 6d.

Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons.. .. 88
To the Lectures alone.. .. .. 50 4 0

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LECTURES.	ST. MARY'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	MIDDLESEX. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	ST. THOMAS'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. Chambers Dr. Handfield Jones	M W Th 4	4 4	..	6 6	Dr. Stewart Dr. Goodfellow	Tu Th S 9	6 6	..	6 6	Dr. Peacock	Tu F S 2	..	..	..
SURGERY	Mr. Lane Mr. Spencer Smith	Tu F 4 W 3	4 4	..	6 6	Mr. Shaw	M W F 9	4 4	..	6 6	Mr. Le Gros Clark	Tu W F 3	..	..	..
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Gascoyen	M Tu Th F 2.45	6 6	..	8 8	Mr. Moore	Daily exc. S 12	6 6	..	10 10	Mr. S. Jones	M F S 1 W 12·30	..	..	..
ANATOMICAL DEMONSTRATIONS	Mr. Norton Mr. Ockender	Daily 9 to 5	3 3	..	..	Dr. R. Liveing	Tu Th 3	4 4	..	6 6	Mr. Rainey Mr. Croft Mr. W. Wagstaffe	Daily 9 to 3	..	..	..
PHYSIOLOGY	Dr. Broadbent Dr. Lawson	M Tu Th F 9 W S 12	6 6	..	8 8	Mr. de Morgan	M W F 4	4 4	..	6 6	Dr. Bristow Mr. Ord	M W Th 4	..	..	..
CHEMISTRY	Dr. Matthiessen	Tu Th S 10.15	5 5	..	7 7	Mr. T. Taylor Mr. Heisch	M W F S 11	6 6	..	8 8	Dr. Bernays	Tu Th S 11	..	..	..
HOSPITAL PRACTICE:															
Physicians	*In-patients*— Dr. Alderson Dr. Sibson Dr. H. Jones *Out-patients*— Dr. Sieveking Dr. Markham Dr. T. Smith, *obs.*	M Th 1.15 Tu F 1.15 W S 1.15 Tu F 1 W S 1 Tu S 1.30	7 7 6 mths	12 12 1 year	21 0	Dr. Stewart Dr. Goodfellow Dr. H. Thompson Dr. J. Hall Davis, *obs.*	Daily 1 W S 1	10 10 6 mths	16 16 18 mths	21 0	Dr. Barker Dr. J. R. Bennett Dr. Goolden Dr. Peacock Dr. Bristowe Dr. Barnes, *obs*	Physicians' visits, 8.30 to 9.30 a.m.	..	..	..
Assistant-Physicians	Dr. Broadbent	M Th 1	..	..	..	Dr. Murchison Dr. Greenhow Dr. J. B. Sanderson	..	..	..	..	Dr. Clapton Dr. Gervis, *obs.*	..	..	..	..
Surgeons	*In-patients*— Mr. Lane Mr. Ure Mr. Spencer Smith *Out-patients*— Mr. H. Walton Mr. J. Lane Mr. Ernest Hart, *opht.*	Tu F 1.15 M Th 1.15 W S 1.15 W S 1 Tu F 1 Tu S 1.30	9 9 6 mths	21 0 1 year	31 10	Mr. Shaw Mr. de Morgan Mr. Moore Mr. Nunn Mr. Hulke, *opht.*	Daily 1 T F 8.30 & 1.30	12 12 12 mths	18 18 3 years	21 0	Mr. Solly Mr. Le Gros Clark Mr. Simon	Surgeons' visits, 8.30 to 9.30 a.m.	..	..	..
Assistant-Surgeons	Mr. Gascoyen	M Th 1.30	..	..	..	Mr. Hulke Mr. Lawson	..	..	..	..	Mr. S. Jones Mr. J. Croft	..	..	..	..
CLINICAL MEDICINE	Dr. Alderson Dr. Sibson Dr. H. Jones	M 2 Every alt. Tu 2 Every alt. S 2	..	..	..	The Physicians The Phys-Acc.	bi-wkly 3 M 10	..	..	..	Dr. Barker Dr. Bennett Dr. Goolden Dr. Peacock Dr. Bristowe	*Winter*— M 3 W 2 W 2 *Summer*— M W 2	..	..	..
CLINICAL SURGERY	Mr. Lane Mr. Ure Mr. Spencer Smith	Every alt. Tu 2 Th 2 Every alt. S 2	..	..	..	The Surgeons. The Oph-Surg.	bi-wkly 3 and 12.15 (Sat) Tu 3	..	..	..	By the Surgeons	F 2	..	..	..
DISEASES OF WOMEN	Dr. T. Smith	..	..	..	..	..	..	..	..	..	Dr. Barnes Dr. Gervis	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	With Physiology & pst. m. ex., Mr. Naylor	..	..	..	..	Mr. Sibley Dr. Murchison	Tu Th 4	2 2	..	3 3	Dr. J. Wale Hicks, M.B.	Daily 9.30	..	..	..
SUMMER SESSION.															
MATERIA MEDICA.	Dr. Sieveking	Tu W Th F 8 a.m	4 4	..	6 6	Dr. H. Thompson	M W F 9	3 3	..	5 5	Dr. Clapton	Tu Th S 2	..	..	..
BOTANY	Dr. Dresser	M W F 12	3 3	..	4 4	Dr. R. Liveing	Tu Th S 11	3 3	..	4 4	Dr. J. W. Hicks	M W F 11	..	..	..
FORENSIC MEDICINE	Dr. Randall	M Tu Th 10	3 3	..	4 4	Dr. Greenhow	Tu Th S 9	3 3	..	5 5	Dr. Stone	Tu Th 12 S 11	..	..	..
MIDWIFERY	Dr. Tyler Smith	Daily ex. S 9	4 4	..	6 6	Dr. J. Hall Davis	M W F 10	5 5	..	7 7	Dr. R. Barnes	M Tu Th F 8	..	..	..
PRACTICAL CHEMISTRY	Dr. Matthiessen	Tu Th S 11.30—1	3 3	..	..	Mr. Taylor Mr. Heisch	M W F 11	3 3	..	..	Dr. Bernays	F 12 S 10—1	..	..	..
COMPARATIVE ANATOMY	Mr. S. G. Mivart	W F 10	2 2	..	3 3	Dr. T. S. Cobbold	W F 4	2 2	..	3 3	Mr. Ord, M.B.	Tu Th 11	..	..	..
OPHTHALMIC SURGERY	Mr. Ernest Hart	Tu 2.30	2 2	..	..	Mr. Hulke	Tu 3 wintr. & summer	..	..	..	..	..	..	..	..
PRACTICAL HISTOLOGY	Drs. Broadbent and Lawson, with Physiology	..	..	..	..	Dr. Woodham Webb	Tu Th 3	10 10	..	..	Mr. Rainey	Tu 12.30 winter	..	..	..
OPERATIVE SURGERY	Mr. J. Lane	Winter	..	..	..	Mr. Nunn	S Winter	..	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Sercombe	Winter W S 9	2 2	..	..	..	..	..	..	..	Mr. Elliott	Tu F 11	..	..	..
GENERAL PATHOLOGY	..	..	..	..	..	..	..	..	..	..	Mr. Simon	..	..	..	..
PATHOLOGICAL CHEMISTRY	..	..	..	..	..	..	..	..	..	..	Dr. Thudichum	..	..	..	..
PUBLIC HEALTH	Dr. Randall, with For. Med.	..	..	..	..	Dr. Greenhow	M 4	2 2	..	..	..	..	..	..	..
PRACTICAL PHARMACY	..	..	3 3 3 mths	6 6 6 mths	10 10 12 mths	..	..	5 5 6 mths	8 8 12 mths	..	..	..	..	..	..
Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons	..	..	..	..	89 5	..	..	..	..	90 0	..	..	..	..	..
To the Lectures alone	..	..	..	..	52 10	..	..	..	..	55 0	..	..	..	..	..
To the Hospital Practice alone	..	..	..	.	36 15	..	..	..	..	35 0	..	..	..	..	..
Unlimited	..	..	..	..	£105	..	..	..	..	..	..	..	..	..	90 0

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LECTURES.	UNIVERSITY COLLEGE AND HOSPITAL. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	WESTMINSTER. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. Jenner	Day. ex. S 9	6 10	..	8 0	Dr. Basham	M Th F 4	5 5	..	7 7
SURGERY	Mr. Erichsen	Tu Th F 5	4 10	..	6 0	Mr. Holthouse	Tu W 4 Th 5	5 5	..	7 7
DESCRIPTIVE ANATOMY	Mr. Ellis	Daily 12	7 7	..	10 10	Mr. Heath	Tu W Th F 9.15	5 5	..	7 7
DEMONSTRATIONS	Mr. Ellis Mr. P. Mason Mr. J. S. Cluff	Daily				Mr. Teevan	Daily 10—1	2 2	..	3 3
PHYSIOLOGY AND GENERAL ANATOMY	Dr. Sharpey	Daily ex. S 10	6 0	..	9 0	Mr. Power	M W F 3	5 5	..	7 7
CHEMISTRY	Dr. Williamson	Daily ex. S 11	6 0	..	9 0	Dr. Dupré	Tu Th 3 F 10.30	5 5	..	7 7
HOSPITAL PRACTICE—										
Physicians	Dr. Jenner Dr. Hare Dr. Reynolds	Daily 1	..	..	..	Dr. Basham Dr. Fincham Dr. Radcliffe	M Th 1.30 W S 1.30 Tu F 1.30	8 8 6 months	12 12 1 year	21 0
	Dr. Grally Hewitt, *obs.*	Three times a week				Dr. F. Bird, *obs.*	Tu F 3			
Assistant-Physicians	Dr. Harley Dr. W. Fox Dr. S. Ringer	..	..	..	..	Dr. Anstie Dr. Gibb Dr. Willis	M Th 1 Tu F 1 W S 1	8 8 6 months	12 12 1 year	21 0
Surgeons	Mr. Quain Mr. Erichsen Mr. Marshall Mr. H. Thompson	Daily 2	For 6 months to the Physicians' and Surgeons' practice, £15 15s. To either separately, £10 10s.	For 1 year to the Physicians' and Surgeons' practice, £21. To either separately, £15 15s.	..	Mr. Holt Mr. Brooke Mr. Holthouse	M Th 1.30 Tu F 1.30 W S 1.30			
Assistant-Surgeons	Mr. W. Jones, *oph.* Mr. Berkeley Hill Mr. Streatfeild, *oph.* Dr. Hillier, Phy. to Skin Infirmary	M W F 1 .. S 9			26 5	Mr. Hillman Mr. Power Mr. Heath	M Th 1 W S 1 Tu F 1	..	..	..
CLINICAL MEDICINE	Dr. Jenner Dr. Hare Dr. Reynolds Dr. Hillier	Once a fortnight Twice a week Once a fortnight			..	By the Physicians	Weekly	..	..	..
CLINICAL SURGERY	Mr. Quain Mr. Erichsen Mr. W. Jones, *oph.*	Twice a week Once a week Once a fortnight			..	By the Surgeons	Weekly	..	..	..
CLINICAL MIDWIFERY	Dr. G. Hewitt	..	..	..	..	..	..	..	..	..
MORBID ANATOMY	Dr. W. Fox	Tu W F 9 summer	3 0	..	4 0	Dr. Willis	..	..	..	..
SUMMER SESSION.										
MATERIA MEDICA	Dr. Ringer	Daily except M 12	4 0	..	6 0	Dr. Anstie	M Th F 3	3 3	..	4 4
BOTANY	Mr. Oliver	Daily except S 4	3 0	..	4 0	Dr. Syme	M W F 11.30	3 3	..	4 4
FORENSIC MEDICINE	Dr. Harley	Tu W Th F 10	3 0	..	4 4	Dr. Gibb Dr. Willis	Tu W F 3	3 3	..	4 4
MIDWIFERY	Dr. Grally Hewitt	Daily exc. S 8	4 0	..	6 0	Dr. Bird	Tu Th F 4	4 4	..	5 5
PRACTICAL CHEMISTRY	Dr. Williamson	Tu W Th F 11	4 0	..	..	Dr. Dupré	Tu Th 9.30	2 2	..	..
COMPARATIVE ANATOMY	Dr. Grant, *with Zoology*	Daily except S 3, from Oct. to June	3 0	..	9 0	Mr. Power	W S 9.30	2 2	..	..
OPERATIVE SURGERY	Mr. Marshall in April or May	Daily 7.30 a.m. 6 p.m.	5 5	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Ibbetson	Tu Th 6 in Jan	1 1	..	..	Mr. Walker	Th 12	..	..	..
NATURAL PHILOSOPHY	Prof. Foster	M W F 4	4 0	..	..	Mr. Brooke	Tu 3 sum.	1 1	..	..
OPHTHALMIC SURGERY	Mr. W. Jones	Tu Th	2 0	..	..	..	..	..	..	..
PALÆO-ZOOLOGY	Dr. Grant	Daily except S 3 sum.	1 0	..	..	..	..	..	..	..
HISTOLOGY AND PRACTICAL PHYSIOLOGY	Dr. Harley	M W 5 winter	3 0	..	4 4	..	..	..	..	..
PRACTICAL PHARMACY	..	..	3 3	..	5 5	..	..	..	..	..
Fees for the Lectures and Hospital Practice for the Licences of the Royal College of Physicians, Society of Apothecaries, and M.R.C.S.	..	..	3 months	..	6 months 92 13	..	..	..	..	78 15
For the Hospital Practice alone	..	..	..	..	..	..	..	..	..	29 8

ADDITIONAL INFORMATION RESPECTING THE METROPOLITAN SCHOOLS, ETC.

ST. BARTHOLOMEW'S HOSPITAL AND MEDICAL COLLEGE.

Fees for Lectures and Hospital Practice are payable by instalments,—£31 10s. at the beginning of the first Winter Session, £31 10s. at the beginning of the first Summer Session, £36 15s. at the beginning of the second Winter Session. The Midwifery-Assistant, the Clinical Clerks to the Physicians and to the Physician-Accoucheur, and the Clerks to the Assistant-Physicians and Assistant-Surgeons are chosen from the most diligent students.

A Course of Microscopic Demonstrations is given during the Summer Session, under the superintendence of Mr. Savory.

The following Scholarships and Prizes are awarded:—Senior Scholarship, of the value of £50, Medicine, Surgery, and Midwifery. Senior Scholarship, of the value of £50, Anatomy, Physiology, and Botany. Scholarships of the value of £25 each will be awarded to those students who are placed second in the Examinations for the Senior Scholarships. Junior Scholarships, of the value of £50, £30, and £20 are awarded after the General Examination at the end of the Summer and Winter Sessions. Wix Prize, founded 1842, is awarded for the best Essay on "The Connexion between Ancient and Modern Literature, and the Studies of Medical Science." Hitchin's Prize, founded 1851. Subject of Examination.—Bishop Butler's Analogy. Bentley Prize, founded 1842. For the best Report of Medical cases occurring in the Wards of the Hospital during the previous year. It is expected that the Reports will comprise the Histories, Progress, Treatment, and Results of not less than Twelve Cases, with observations thereupon. Foster Prize. Subject of Examination.—Practical Anatomy—Senior. Treasurer's Prize. Subject of Examination.—Practical Anatomy—Junior. The Kirkes Prize. Subject of Examination.—Clinical Medicine. Students preparing for the Universities may be examined by the Tutors. Fee, £5 5s. Students preparing for the College of Surgeons are examined by the Lecturers on Surgery, Anatomy, and Physiology, and by the Demonstrators; those preparing for the College of Physicians and for the Apothecaries' Hall are examined by Dr. Edwards, Dr. Andrew, or by the Tutors, Dr. Duckworth, Mr. Baker, and Mr.

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Shepard. Students of the first year are examined weekly in the several subjects of their studies, by the Tutors.

A Collegiate Establishment, in which students are lodged and boarded, exists in connexion with the Hospital. The Warden is Mr. A. Willett. Each student pays an entrance fee of £2 2s. The expense of board, lodging, etc., is from £1 10s. to £1 13s. a-week.

All communications must be addressed to Mr. Savory or Mr. Callender, at the Hospital.

CHARING-CROSS HOSPITAL.

Students pay a Matriculation fee of £2 2s. on entering to their studies. Those students who enter to separate Courses of Lectures or to Hospital Practice only, do not pay the Matriculation Fee. Payment of Fees may be made either in one sum (£72 9s.) on Matriculation, or in two sums, the first (£37 5s. 6d.) at the commencement of the Winter Session, the second (£35 3s. 6d.) immediately after the first or Christmas vacation, unless under special circumstances other arrangements are made at the time of entering. Matriculated students have the privilege of attending the course of Practical Microscopical Demonstrations on Healthy and Diseased Structures given by Dr. Salter in the summer; the Lectures upon the Diseases of the Eye delivered by Mr. Hancock, at the Royal Westminster Ophthalmic Hospital, as well as the practice of that institution.

Free Scholarships.—Candidates for Free Scholarships are required to be the sons of Professional men, of reduced circumstances and position, or of gentlemen in a corresponding station of society, and are to have had a classical education fitting them for the Medical Profession. They are to send in their application and testimonials before August 1. A printed form for that purpose will be supplied to them on the written application of the Candidates themselves, addressed to the Managers of the College, which application must be accompanied by the official certificate of the candidates having passed the Preliminary Classical Examination either of the London University, of the College of Physicians, the College of Surgeons, or the Society of Apothecaries.

The Medals and Testimonials of Honour are awarded in conformity with the following arrangement:—Competitors for the Governors' Clinical Medals are to have attended the Medical and Surgical Practice of the Hospital for the full period required to qualify for examination by the College of Surgeons and Society of Apothecaries. Competitors for the Silver Class Medals and Testimonials of Honour of the Senior Classes are to be in the last Session of their attendance in the classes for the Medal or Testimonials for which they are competitors. Competitors for the Bronze Medals and Testimonials of Honour of the Junior Classes are to have completed, when the current Session shall be ended, the first Session of attendance in the classes for the Medal or Testimonial for which they are competitors. In those Classes of which only one Session is required by the College of Surgeons and Society of Apothecaries, a Silver Medal is offered for competition instead of a Bronze Medal.

For further information apply to Mr. Hancock, Dean of the Medical College.

ST. GEORGE'S HOSPITAL.

Perpetual Pupils pay at the time of entry a compounding fee of £100. They are admitted to the practice of the Physicians and Surgeons, to all the Lectures (except Practical Chemistry), to compete for all Prizes and Exhibitions, to hold the appointments of Assistant House-Surgeon and House-Surgeon, and to become Clinical Clerks for two periods of three months each, and Dressers for two similar periods.

Gentlemen are admitted to the Hospital Practice and Lectures required for the Licence of the College of Physicians, for the Diploma of Member of the College of Surgeons, and for the Licence of the Society of Apothecaries, with the exception of Practical Chemistry, on payment of the following fees—viz., £40 for the first year of study, £40 for the second year of study, and £10 for each succeeding year. Admission to the Lectures and Hospital Practice required for the Diploma in Dental Surgery, £45.

Exhibitions and Prizes.—"The William Brown Exhibition," of £40 per annum, tenable for three years: This Exhibition is competed for by perpetual pupils who have commenced their third, but not completed their fourth, Winter Session. It will be "bestowed on the Candidate who shall show the best general fitness for the exercise of the Medical Profession, and whose moral conduct shall in all respects be satisfactory." Sir Charles Clarke's Prize for Good Conduct: The interest of £200 Consols to be awarded annually to the Student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A Silver Medal to be awarded annually for the best Clinical Report of Medical and Surgical Cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the perpetual pupil of the Hospital who shall have delivered to the Surgeons the best Report of not more than twenty Surgical cases which have occurred in the Hospital during the preceding twelve months. The Lewis Powell Clinical Prize in Medicine will be awarded to the perpetual pupil of the Hospital who shall produce the best Report of not more than twenty Medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that pupil who shall, in the judgment of the Medical School Committee, exhibit the greatest proficiency in Practical Anatomy. General Proficiency Prizes: To pupils in their first year, £10 10s.; to pupils in their second year, £10 10s.; to pupils in their third year, £10 10s.

House-Surgeons.—The appointment is made half-yearly from among the Surgeons' perpetual pupils.

Curator.—A Curator of the Pathological Museum is appointed annually from among the senior pupils, with a salary of £50 per annum.

Registrars.—A Medical and a Surgical Registrar are appointed annually from among the senior pupils, each with a salary of £50 per annum.

An Obstetric Assistant is appointed annually from among the senior pupils, and is eligible for re-appointment. He resides and boards in the Hospital, receives a yearly salary of £100, and must be a legally-qualified Practitioner.

For further information apply to Dr. Barclay or Mr. Hammerton.

GUY'S HOSPITAL.

Voluntary Examinations are held at four periods of the Student's Course, as follows:—1st.—At Entrance, and will take place this year on Monday, October 9. It will comprise Elementary Classics, Ancient and Modern History, and Mathematics. The Candidate who shall distinguish himself the most will receive £25; the second Candidate, £20; and the third, £15. 2nd.—At the end of the first Sessional year, on all the subjects of the first year's Course of Study, one sum of £30, another of £25, and a third of £10 10s. (presented by one of the Governors), will be given according to proficiency. 3rd.—At the end of the second Sessional year, on the subjects which form the Course of Study up to that time, £35 and £30. 4th.—At the end of the third Sessional year, on all the subjects of the Curriculum, £40 and £35.

Special Examination.—Two Gold Medals are given annually by the Treasurer to Students at the end of their first year: one for Clinical Medicine and the other for Clinical Surgery.

Clinical Clerks, Dressers, Ward Clerks, Resident Obstetric Clerks, and Dressers in the Eye Wards are selected according to merit. Each Dresser (except those in the Eye Wards) has the privilege of rooms and commons in the Hospital free of charge for one month of his course. The Obstetric Clerks have the like privileges for two months. Two House-Surgeons are appointed every four months from those Students who have obtained the College Diploma.

For further information, apply to Mr. Stocker, Apothecary to the Hospital.

KING'S COLLEGE.

The fees may be paid either in one sum on Matriculation or in two equal sums; the one at the commencement of the first Winter or Summer Session, the other after the first Christmas vacation, not later than January 21, unless special arrangements are made at the time of entrance. Students are, however, recommended to add £2 2s. for a second Course of Chemistry, as well as the fee for attendance on the Medical Tutor's class for one year, viz., £3 3s. All resident Students are required to attend the Tutor during their first year.

Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from Matriculated Students who are Pupils of the Hospital.

Scholarships.—Warneford Scholarships: The sum of £200 is set apart annually for Scholarships in the Medical Department, viz.: "For the encouragement of the previous educa-

tion of Medical Students," two Scholarships of £25 per annum for three years; "For the encouragement of resident Medical Students," one Scholarship of £25 per annum for two years. College Scholarships: The following are given every year to Matriculated Students of this department:—1. One of £40 for two years, open to Students of the third and fourth year; 2. One of £30 for one year, open to Students of the second year; 3. One of £20 for one year, open to Students of the first year. Daniel Scholarship: £20 tenable for two years is open to every Student of the College who has worked in the laboratory for at least six months. Divinity Scholarship, £30, open to Matriculated Medical Students.

Prizes.—Leathes' Prizes: Bible and Prayer-book to two Matriculated Medical Students. Warneford Prizes: £40 is expended in the purchase of Medals and Books, as Prizes to two Matriculated Medical Students. Class Prizes are awarded annually for proficiency; these consist of Books of the value of £3. Two Medical Clinical Prizes, one of £3 for the Winter Session, and the other of £2 for the Summer Session; and two Surgical Clinical Prizes of the same value are given for attendance at the Hospital. Todd Medical Clinical Prize: This prize was founded in memory of the late Dr. Todd. It consists of a Bronze Medal and Books to the value of £4 4s.

Residence of Students.—A limited number may reside within the College.

For further information apply to Professor Bentley, Dean of the Medical department.

THE LONDON HOSPITAL.

The entry fee to Lectures and Hospital Practice is payable in two instalments of £44 2s. each at the commencement of the two first Winter Sessions.

Prizes and Appointments.—1. Two Scholarships. The competition will be restricted to first year's students. The first, £20, will be awarded to the student who shall pass in December, 1865, the best examination in Human Osteology. The second, £25, will be awarded to the student who shall pass, at the end of the Winter Session, the best examination in Anatomy, Physiology, and Chemistry. 2. The Duckworth-Nelson Prize, £10 10s., will be awarded by competition, open to all students who have not completed their education. The subjects of examination will be Practical Medicine and Surgery. Two Gold Medals are annually awarded to Students who shall have most distinguished themselves in the performance of their duties at the Hospital. A Resident Medical Officer, who resides and boards in the Hospital, and receives £75, is appointed for twelve months by the Committee of the Hospital. The Resident Medical Officer is eligible for re-election for the further period of twelve months, and then receives £100. A Medical and Surgical Registrar is appointed by the Committee of the Hospital, and receives £25 a-year. Two House-Surgeons, a Resident Accoucheur, an Assistant Medical Officer, two Surgical Dressing Pupils, additional Dressers, an Assistant Dentist, and Post-mortem Clerks are selected from among the Students according to merit.

Further information may be obtained from Mr. Adams, Dr. Parker, or Mr. Hutchinson, or on application at the College.

ST. MARY'S HOSPITAL.

The entrance fees may be paid in instalments by arrangement with the Dean of the School.

Resident and Non-Resident Medical Officers, Clinical Clerks, and Dressers.—All these Appointments are open to the Pupils without additional fee, and are held in succession, so as to secure a complete system of Clinical training. Five of these Appointments exceed in value an equal number of Scholarships of £50 each. All General Students are required to perform the duties of Clinical Clerks and Dressers for a period of six months during the last two years of their curriculum. A Resident Registrarship within the Hospital has been created with a salary of £100 a year, tenable for two years, preference being given to past House Surgeons and Perpetual Pupils.

Prizes.—Examinations for Prizes are held at the termination of each Session, the Classes being grouped in accordance with the curriculum laid down for Students of the First, Second, and Third Year. The average value of each of these Prizes is £5 5s. A Scholarship in Anatomy, of the annual value of £25 (the holder of which will be styled Assistant-Demonstrator, and assist in the teaching of Practical Anatomy) will be awarded to the best qualified Student. A Prize of £20 for Students for the First Year is awarded at the end of the Winter Session. A Prize of the value of £4 4s. will be given to the Student who shall make the best Anatomical Preparation, such Preparation to become the property of the School. Two Prosectors are appointed annually, who each receive a Certificate and £5 for their services in the Dissecting-room.

Further information may be obtained from Mr. Ernest Hart, Dean of the School.

MIDDLESEX HOSPITAL.

The entrance fee to Lectures and Hospital Practice may be paid by instalments of £35 at the beginning of the First Session, £35 at the beginning of the Second Session, and £20 at the beginning of the Third Session. For every additional Session £10. Admission to the Library is included in this fee.

Clinical Clerks and Dressers.—General students have the privilege of performing the duties of Clinical Clerks and Dressers, according to arrangements which the Clinical Directors may from time to time consider expedient. The Clinical Clerks and Dressers are appointed by competitive examination for a period of six months, dating from May 1 and November 1.

Resident Medical Appointments.—Six Resident appointments, held for twelve months—viz., three Medical Assistantships, one Obstetric Assistantship, and two House Surgeoncies, are given to students who have complied with the established Regulations. The selection is made after competitive examination of the Candidates. The officers thus appointed reside and board in the Hospital free of expense. The House-Surgeons pay a fee of £21.

Prizes.—Class Prizes are discontinued. The money previously spent in Class Prizes will be employed in providing a College Tutor (Mr. Liveing), who will personally supervise the work done by the students. The Lecturers have also at their disposal the six resident appointments, each of which may be estimated in money value at £100. An Annual Prize of the value of £3 3s., given by Oscar Clayton, Esq., is awarded for proficiency in Comparative Anatomy. The Governor's Prize of £21 will be awarded for the best joint Clinical Reports in Medicine and Surgery.

For further information apply to Mr. Watts, the Resident Apothecary.

ST. THOMAS'S HOSPITAL.

The admission fee to Hospital Practice and all the Lectures is £40 for the first year, and a similar sum for the second, and £10 for each succeeding year.

Prizes and Appointments.—The William Tite Scholarship, awarded every third year: A Scholarship has been founded by W. Tite, Esq., M.P., F.R.S., the proceeds of £1000 Consols, tenable for three years, on proof of continued residence and good conduct. Preference, in case of equality between Students, to be given to the son of a Medical man, and more particularly of one who has been educated at St. Thomas's Hospital; or to the son of a Medical man of Bath. This Scholarship was awarded at the end of the Session 1863-64. To the three most distinguished Pupils for general proficiency in each year the following Prizes are awarded:—First Year's Students, a College Prize of £30; 2nd. A College Prize of £20; 3rd. Ditto of £10. Second Year's Students—1st. A College Prize of £30; 2nd. Ditto of £20; 3rd. Ditto of £10. Clinical Clerks and Dressers are selected according to merit from among Second Year's Students. The Dressers are provided with Rooms and Commons during their period of attendance in the Hospital free of expense. Third Year's Students—1st. A College Prize of £30; 2nd. Ditto of £20. 3rd. Ditto of £10. The Cheselden Medal, founded by George Vaughan, Esq., is awarded in respect of a Special Examination in Surgery and Surgical Anatomy. The Treasurer's Gold Medal is given annually for general proficiency and good conduct. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to the Third or Fourth Year's Students for the best Physiological Essay. A Newman Smith Prize, to the value of £40, will be awarded in December, 1866, for the best Essay on the Anatomy of the Brain and Spinal Cord, &c.

The House Surgeons and Resident Accoucheur are chosen from gentlemen who have obtained their Professional Diplomas. All are provided with Rooms and Commons. The two offices of Medical Registrar and Surgical Registrar are from time to time filled from among gentlemen who have completed their studies in the School. Each Registrar, on completing his Annual Report to the satisfaction of the Physicians and Surgeons, receives a gratuity of £40. If the two

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offices are held by one person, he then receives, on completing his Reports as above, a gratuity of £80.

For further information apply to Mr. R. G. Whitfield, Medical Secretary.

UNIVERSITY COLLEGE, LONDON.

The fee for Lectures and Hospital Practice required by the Colleges of Physicians and Surgeons and the Society of Apothecaries may be paid at once or distributed in payment over three years, as follows:—First Winter Term, £38 15s.; First Summer Term, £16 5s.; Second Winter Term, £24 10s.; Second Summer Term, £7; Third Summer Term, £6 3s.

Entrance Exhibitions.—Three Entrance Exhibitions of the respective value of £30, £20, and £10 per annum, tenable for two years, will be awarded upon examination to gentlemen who are about to commence their first winter's attendance in a Medical School. The examination, by written papers, will be in Classics, Elementary Mathematics, Natural Philosophy, and in either French or German at the option of the Candidate, and will take place at the College on Friday and Saturday, September 29 and 30. Notice of intention to compete, addressed to the Secretary, must be left before 2 o'clock on or before Wednesday, September 27, at the office of the College, where the Regulations may be obtained.

Scholarships and Exhibitions.—Atkinson Morley Surgical Scholarships: An Annual Scholarship, £45, awarded to the Student who, upon examination, shall be found to possess the greatest proficiency in the Theory and Practice of Surgery, tenable for three years. Longridge Prize: In every Session a Prize of £40 is awarded for general proficiency in Medicine and Surgery. Filliter Exhibition: A Prize of £30, awarded annually, founded "for the encouragement of proficiency in Pathological Anatomy."

Medals and Prizes.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, awarded at the end of each term to Pupils who shall have most distinguished themselves by reports and observations on the Medical cases in the Hospital. The Liston Gold Medal will be awarded at the end of the Session to the Pupils who shall have most distinguished themselves by reports and observations on the Surgical cases in the Hospital.

Class Medals and Prizes.—Besides the above, Gold and Silver Medals or other Prizes are awarded in each class.

Offices in the Hospital tenable by Students.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants are selected from the Pupils, without additional fees. The Physicians' Assistants, Obstetric Assistant, and House-Surgeons reside in the Hospital, paying for their board.

Further information may be obtained from the Dean, Professor Harley.

WESTMINSTER HOSPITAL.

The Entry Fee to Lectures and Hospital Practice required by the Colleges of Physicians and Surgeons and the Society of Apothecaries may be paid in three instalments—£36 15s. at the commencement of the first year, £31 10s. at the commencement of the second, and £10 10s. at the commencement of the third year.

Prize Appointments and Prizes.—The offices of House-Physician and House-Surgeon are open to competition amongst Gentlemen who have been educated at the Hospital, and who are qualified to practise under the Medical Registration Act. The House-Physician and House-Surgeon are provided with board and lodging in the Hospital free of expense. Assistant House-Surgeon: Is appointed from among the Senior Students by Examination. Clinical Clerks and Dressers: These appointments are conferred upon the most diligent students.

Prizes.—A Prize of Books or Instruments for each of the Winter and Summer Courses. A Clinical Medicine Prize of the value of 5 guineas. A Clinical Surgery Prize of similar value. A special Prize will be given for Clinical Midwifery by the Westminster Maternity Charity. Chadwick Prize for General Proficiency. A sum of 20 guineas will be awarded, in one or more Prizes, to the most meritorious Student or Students who are attending Lectures and Hospital Practice for the second or third year.

Further information may be obtained from the Dean, Mr. Power.

WEST LONDON HOSPITAL, HAMMERSMITH, W.

Number of beds, 25; average of out-patients, 30,000 annually; in-patients, 200.

The performance of the duties of House-Surgeon at this Hospital is recognised by the Royal College of Physicians as Professional Study, in the fourth year required of Candidates for the College Licence.

The Apothecaries' Company receive Certificates of attendance on the Medical Practice of this Hospital for six months of the whole period they require. Gentlemen may enter as articled pupils, and also acquire a knowledge of Practical Pharmacy. Fee for the whole period of apprenticeship (five years), 100 guineas.

ENGLISH PROVINCIAL SCHOOLS AND HOSPITALS.

BRISTOL MEDICAL SCHOOL, SESSION 1865-66.

The Winter Session will commence on Monday, October 2, 1865. Medicine, Dr. Brittan. Surgery, Mr. Coe and Mr. Leonard. General Anatomy and Physiology, Drs. Martyn and Fripp. Descriptive and Surgical Anatomy, Mr. Clark and Mr. Lansdown. Superintendence of Dissections, Messrs. James, Fisher, and Wintle. Chemistry, Mr. Herapath.

Fee for perpetual attendance on all the above Courses, excepting Practical Chemistry, £47 5s.

Competitive Examinations are held amongst Students of the first, second, and third years respectively; and Prizes are annually awarded, amounting in aggregate value to about £40.

Medical and Surgical Hospital Practice and Clinical Lectures are attended at the Royal Infirmary or at the General Hospital.

Further information may be obtained on application to the Honorary Secretary, Dr. G. F. Burder.

BRISTOL ROYAL INFIRMARY.

The Infirmary contains 242 beds.

Fees.—For one year, Surgeon's pupil, £12 12s.; Dresser (extra fee), £12 12s. For two years (at one payment), Surgeon's pupil, £21; Dresser (extra fee), £21. For three years (at one payment), Surgeon's pupil, £26 5s.; Dresser (extra fee), £26 5s. Physician's pupil, for six months, £8; one year, £15; eighteen months, £20; perpetual, £25.

BRISTOL GENERAL HOSPITAL.

The Hospital contains 130 beds.

Fees.—Medical or Surgical Practice, for six months, £6; one year, £10; perpetual, £20. Extra fee for Dresser or Clinical Clerk, £5 5s. Library fee, £1 1s. per annum.

HULL AND EAST RIDING SCHOOL OF MEDICINE AND ANATOMY, KINGSTON-SQUARE.—SESSION 1865-66.

The Winter Session will commence on Monday, October 2, 1865. Anatomy, Physiology, and Pathology, Mr. Craven. Anatomy and Anatomical Demonstrations, Dr. King and Mr. Craven. Principles and Practice of Medicine, Dr. Daly. Principles and Practice of Surgery, Dr. King. Chemistry, Mr. Walton. Summer Session, commencing May 1, 1866.—Midwifery, Mr. H. Gibson. Materia Medica, Mr. Holden. Forensic Medicine and Histology, Dr. Munroe, F.L.S. Botany, Mr. Niven. Practical Chemistry, Mr. Walton. Perpetual to all the Lectures, except Chemistry, £42. Perpetual fee for attendance on the Medical and Surgical Practice of the Hospital, which contains 152 beds, £21. Clinical Lectures (Medicine, Sir H. Cooper and Dr. Daly; Surgery, Dr. Lunn, Mr. Craven, and Dr. King), £1 1s. Application for tickets may be made to Mr. R. M. Craven, 14, Albion-street, Hull.

LEEDS SCHOOL OF MEDICINE.

The Winter Session will commence on Monday, October 3, 1865, when the new building in Park-street will be opened. The Introductory Lecture will be delivered at 3.30, by Jas. Paget, Esq., F.R.S., Surgeon to St. Bartholomew's Hospital. Physiology, General Anatomy, and Pathology, by Mr. Ikin and Mr. Wheelhouse. Anatomy, by Mr. Teale, jun., Mr. Atkinson, and Mr. Seaton. Demonstrator of Anatomy, Mr. Seaton. Assistant-Demonstrators, Mr. Land, Mr. Jessop, Mr. J. W. Teale, and Mr. J. Nunnely. Surgery, by Mr. Smith and Mr. Hey. Chemistry, by Mr. Scattergood and Mr. Fairley. Principles and Practice of Physic by Dr. Chadwick, Dr. Heaton, and Dr. Allbutt. Clinical Medicine, Dr. Chadwick, Dr. Heaton, and Dr. Allbutt. Clinical Surgery, Mr. S. Hey, Mr. Nunnely, Mr. Wheelhouse, and Mr. T. P. Teale, jun.

Summer Session, 1865, commencing May 1.—Materia Medica and Therapeutics, by Dr. Allbutt. Midwifery, by Mr. Smith and Mr. Price. Forensic Medicine and Toxicology, by Dr. Smith. Botany, by Mr. Hall. Practical Chemistry, by Mr. Fairley. Operative Surgery, by the Surgeons of the Hospital. Fee to all the Courses required by the Examining Bodies, except Practical Chemistry, £42. Clinical Lectures will be given at the General Infirmary.

Clinical Clerkships and Dresserships.—Six Clinical Clerkships and eight Dresserships are awarded by the Physicians and Surgeons to the General Infirmary. Application for tickets to be made to Dr. Heaton Claremont.

The terms of attendance on the Medical and Surgical Practice of the Infirmary, and on the Practice of the House of Recovery, the Dispensary, and the Eye and Ear Infirmary, may be known on application to the officers of those institutions.

LIVERPOOL NORTHERN HOSPITAL.

Physicians, Dr. Collingwood and Dr. Waters. Surgeons, Mr. Chalmers, Mr. Hakes, and Mr. Manifold. Junior Surgeon, Mr. Lowndes.

Fees for Hospital Practice.—Perpetual, 30 guineas; one year, 12 guineas; six months, 9 guineas. For further particulars apply to the House-Surgeon, Mr. Armstrong.

LIVERPOOL ROYAL INFIRMARY AND SCHOOL OF MEDICINE.

The Session of 1865-6 will commence on Monday, October 2.

Hospital Practice, Royal Infirmary.—Physicians, Dr. Vose, Dr. Turnbull, Dr. Inman. Surgeons, Mr. Stubbs, Mr. Long, Mr. Bickersteth. House-Surgeon, Mr. Nash; Pathologist, Dr. Rawdon. Dental Surgeons, Mr. Snape and Mr. Puzey.

Terms for Hospital Attendance and Clinical Lectures:—

	Medical Practice.	Surgical Practice.
For Six Months .	£5 5 0	£5 5 0
One Year .	9 9 0	9 9 0
The Second Year	6 6 0	6 6 0
The Third Year	5 5 0	5 5 0
Perpetual .	18 7 6	18 7 6

Lectures, Winter Session. — Surgery, Messrs. Long and Bickersteth. Principles and Practice of Medicine, Dr. Cameron. Anatomy and Physiology, Dr. Waters and Mr. Harrison. Demonstrator of Anatomy, Mr. Harrison.

Lectures, Summer Session.— Midwifery, Mr. Grimdale. Diseases of Children, Dr. Gee. Materia Medica and Therapeutics, Dr. Nevins. Medical Jurisprudence, Drs. Whittle and Edwards. Botany, Dr. Collingwood. Ophthalmic Medicine and Surgery, Dr. Taylor. Practical Chemistry, Dr. Edwards. Pathological Anatomy, Dr. Rawdon. Dental Surgery, Mr. Snape. Dental Anatomy and Physiology, Comparative and Human, vacant. Metallurgy, Dr. Edwards.

Exhibitions.—Royal Infirmary Medical Scholarship—value £42—consisting of Gold Medal, value £10 10s., and Six Months' Free Board and Residence, with Clerkship and Dresserships in the Royal Infirmary.—Four Exhibitions—value £31 10s. each—consisting of Six Months' Free Board and Residence in the Royal Infirmary.

The Fee for all the Lectures required by the College of Surgeons and Physicians and the Apothecaries' Hall is £45, payable in advance. Registrar, Mr. Harrisson, 18, Marland-street.

THE MANCHESTER ROYAL SCHOOL OF MEDICINE AND SURGERY, FAULKNER-STREET.

The Winter Session will commence on Monday, October 2.

Winter Session, 1864-5.—Physiology, by Mr. Turner and Smith. Descriptive Anatomy, by Mr. Godson, M.B. Practical Anatomy, by Mr. A. Godson, M.B. Chemistry, by Mr. Stone. Principles and Practice of Medicine, by Dr. Brown and Dr. Roberts. Principles, Practice, and Operations of Surgery, by Mr. Southam. Anatomy, Physiology, and Pathology of the Eye, by Mr. Hunt.

Summer Session.—Midwifery and Diseases of Women and Children, by Mr. Greaves. General Pathology and Morbid Anatomy, by Dr. Morgan. Materia Medica, Medical Botany, and Therapeutics, by Mr. Somers. Forensic Medicine, by Mr. Harrison. Botany, by Mr. Grindon. Practical Chemistry, by Mr. Stone.

Perpetual Fee to the whole of the Lectures required to qualify for Examination at the London University, the Royal Colleges of Physicians and Surgeons, and the Apothecaries' Company, £42.

Hospital Practice at the Royal Infirmary, where Clinical Lectures are regularly delivered by the Physicians and Surgeons of the Institution.

Scholarships.—In addition to prizes for general proficiency, Three Scholarships for perpetual students will be offered for competition—one of £20 for third years' students; one of £15 for second years' students; one of £10 for first years' students.

Further particulars may be obtained from Mr. Southam, 21, Lever-street.

COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

Winter Session, commencing October 2, 1865.—Anatomy and Physiology, Dr. Murray. Anatomy, Dr. Nesham, Mr. Watson, and Mr. Armstrong, Medicine, Dr. Charlton, and Dr. Embleton. Surgery, Dr. Heath. Chemistry, Dr. Richardson, Mr. Browell, and Mr. Marreco.

Summer Session.—Midwifery, Drs. Dawson and Gibson. Botany, Mr. Thornhill and Dr. Arnison. Medical Jurisprudence, Dr. Donkin. Materia Medica, Dr. Humble. Practical Chemistry, Dr. Richardson and Mr. Marreco. Operative Surgery, Dr. Heath. Military Surgeon, Sir John Fife. Pathological Anatomy, Dr. Gibb and Dr. Philipson.

Fees for Lectures.— Perpetual Fee for all the Lectures qualifying for the Licence in Medicine, and the Mastership in Surgery, of the University of Durham, the Licence and Membership of the Royal College of Physicians, the Diploma of the College of Surgeons, and the Licence of the Apothecaries' Society, and payable on entering to the first Winter Session, £46 4s.

Hospital Practice.—This can be attended at the Newcastle Infirmary.

Fees for Hospital Practice.—Twelve Months, £7 7s.; Six Months, £5 5s.; Three Months, £4 4s.; Perpetual Fee, £17 17s.; or, if paid by instalments, first year, £7 7s.; second year, £6s. 6s.; third year, £5 5s. These fees also are payable in advance.

Medical Scholarships in the University of Durham.—Four Scholarships of £25 a-year each, tenable each for four years. Two non-resident Clinical Clerkships and four Dresserships are conferred for merit.

College Medals.—At the end of each Session a Silver Medal will be awarded in each of the required classes.

Further particulars may be obtained from Dr. Embleton, Registrar, or Dr. Philipson, Secretary.

QUEEN'S COLLEGE, BIRMINGHAM.

Dean of the Faculty, W. S. Cox, Esq., F.R.S.

The Michaelmas Term will commence on Monday, October 2.

The Composition Fee for the three years' Course of Lectures required by the Colleges of Physicians and Surgeons, Society of Apothecaries, and Army and Navy Boards, is £42. Attendance on the Medical and Surgical Practice of the Queen's Hospital, £21. Total, £63. Fees to be paid half on entry, half at commencement of the second year.

In the Arts Department, Students are prepared under the Resident Classical, Mathematical, and Medical Tutors for the Preliminary Examinations required by the Examining Boards. Inclusive Fees, £15 15s. per annum.

Resident Students of the Arts and Medical Departments are received at a charge of £50 per annum for board and furnished rooms, and live in the College during term time, under the supervision of the Warden and Tutors.

There are four Scholarships to be awarded to deserving Students resident in the College.

Application to be made for detailed prospectus to Professor Suckling, Hon. Secretary to the Professors, or to Professor Postgate, Hon. Treasurer of the Professors, to whom, under the resolution of the Council of the College, all fees for attendance on Lectures and on the practice of the Queen's Hospital are to be paid.

SYDENHAM COLLEGE MEDICAL SCHOOL, SUMMER-LANE, BIRMINGHAM (Opposite the General Hospital).

The Session 1865-66 will commence on Tuesday, October 3. Anatomy and Physiology, Dr. Jordan, M.D., and Mr. Bartleet, M.B. Practical Anatomy, Mr. F. Jordan; and Demonstration, Mr. Jones. Principles and Practice of Medicine, Dr. Russell. Principles and Practice of Surgery, Messrs. Baker and Bolton. Surgical Pathology, Mr. Pemberton. Dental Physiology and Surgery, Mr. Howkins. Chemistry, Dr. Hill. Summer Session.—Midwifery, Dr. Elkington and Mr. Bassett. Materia Medica and Therapeutics, Dr. Foster.

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Practical Chemistry, Dr. Alfred Hill. Botany, Dr. Savage. Forensic Medicine, Dr. Hill and Mr. Swain. Further particulars may be obtained on application to the Principal, Dr. Bell Fletcher, Waterloo-street.

SHEFFIELD MEDICAL SCHOOL.

Lectures.—Winter Session, commencing October 2, 1865.—Descriptive Anatomy, Dr. Allanson and Mr. Le Tall. Physiology, Dr. Griffiths and Mr. Cooper. Practical Anatomy and Demonstrations, Messrs. H. Walker, Norton, and Barker. Chemistry, Dr. Allan. Medicine, Dr. Frank Smith. Surgery, Messrs. Jackson, Barber, and W. F. Favell. Clinical Medicine, Dr. Burtolome and Dr. Elam. Clinical Surgery, Mr. H. Jackson, Mr. J. Barber, and Mr. W. F. Favell. Dental Mechanics, Mr. G. Moseley. Summer Session, commencing May 1, 1865.—Midwifery, Drs. Aveling and Keeling. Materia Medica, Dr. Beaumont. Medical Jurisprudence, Mr. J. Hall. Dental Surgery, Mr. Merryweather. Botany, Mr. Birks. Practical Chemistry, Dr. Allan. The Fee for all the Lectures required by the College of Surgeons, the College of Physicians, and the Society of Apothecaries is £32. This, however, is exclusive of the Fee of £2 2s. for Practical Chemistry. The Terms of Attendance on the Practice of the Sheffield General Infirmary:—Medical (perpetual), £15 15s.; Surgical (perpetual), £21. Attendance at the Sheffield Public Hospital and Dispensary may be known on application to the Officers of that Institution. For further particulars apply to Dr. Griffiths, 14, Tudor-street, Sheffield.

MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.—FACULTY OF MEDICINE—Session 1865-66.

Anatomy, Demonstrations, &c., Prof. Goodsir, £8 8s. Chemistry, Prof. Playfair, £4 4s. Materia Medica, Prof. Christison, £4 4s. Institutes of Medicine, Prof. Bennett, £4 4s. Pathology and Pathological Anatomy, Prof. Henderson, £4 4s. Medicine, Prof. Laycock, £4 4s. Surgery, Mr. Spence, £4 4s. Midwifery, Prof. Simpson, £4 4s. Medical Jurisprudence, Prof. Maclagan, £4 4s. Natural History, Prof. Allman, £4 4s. Clinical Medicine, Drs. Bennett and Laycock, £3 3s. Clinical Surgery, Prof. Syme, £3 3s.

Summer Session.—Botany, Prof. Balfour, £4 4s. Medical Jurisprudence, Prof. Maclagan, £4 4s. Comparative Anatomy, Prof. Goodsir, £2 2s. Practical Chemistry, Prof. Playfair, £3 3s. Natural History, Prof. Allman, £4 4s. A Course of Lectures on Histology is delivered by Prof. Bennett, and one on Medical Psychology by Prof. Laycock.

Hospital Practice is attended at the Edinburgh Royal Infirmary.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

WINTER SESSION, 1865-66.

The following Courses of Lectures on Medical and Surgical Science, and also those delivered in the University, qualify for Examination for the Diplomas of the Royal Colleges of Physicians and Surgeons. Classes open on Wednesday, November 1:—Surgery, Dr. P. H. Watson. Surgery (1, Surgeons'-square), Dr. Joseph Bell. Surgery (4, High School-yards), Mr. Annandale. Chemistry (School of Arts, Adam-square), Dr. Stevenson Macadam. Practical Chemistry, Dr. Stevenson Macadam. Analytical Chemistry, Dr. Stevenson Macadam (at Surgeons' Hall). Chemistry (4, High School-yards), Dr. A. C. Brown. Practical Chemistry, Dr. A. C. Brown. Analytical Chemistry, Dr. A. C. Brown. Physiology, Dr. Saunders. Medical Jurisprudence (course commences on Monday, November 6), Dr. Littlejohn. Clinical Medicine (Royal Infirmary), Drs. Sanders, Rutherford Haldane, and Scoresby-Jackson. Dr. J. Matthews Duncan (for Diseases of Women). Clinical Surgery Royal Infirmary), Dr. Gillespie. Anatomy: Anatomical Demonstrations, Dr. P. D. Handyside. Practical Anatomy (will be commenced October 2), Dr. P. D. Handyside. Practice of Physic, Dr. Rutherford Haldane. Practice of Physic (4, High School-yards), Dr. George W. Balfour. General Pathology, Dr. Grainger Stewart.

Practical Instruction.—Royal Infirmary, 12 noon: Perpetual Ticket, at one payment, £10; annual, £5 5s.; half-yearly, £3 3s.; quarterly, £1 11s. 6d. Separate payments for two years entitle the Student to a perpetual ticket.

Fees—For the first of each of the above Courses, £3 5s.; for the second, £2 4s.; perpetual, £5 5s. To those who have already attended a First Course in Edinburgh, the perpetual fee for that Class is £2 4s. The fees for the following Courses are:—Practical Chemistry and Practical Anatomy, £3 3s. Anatomical Demonstrations, £2 2s.; when taken along with Practical Anatomy, £1 1s.; perpetual, £4 4s. Analytical Chemistry, £2 a months, £5 for three months, or £10 for the Session of six months.

During the Summer Session, 1866, the following Three Months' Courses will be delivered:—Midwifery, Dr. Keiller. Midwifery (4, High School-yards), Dr. J. Matthews Duncan. Medical Jurisprudence, Dr. Littlejohn. Materia Medica and Therapeutics, Dr. Scoresby-Jackson. Clinical Surgery, Dr. Gillespie. Clinical Medicine, Drs. Sanders, Rutherford Haldane, and Scoresby-Jackson; Dr. J. Matthews Duncan (for Diseases of Women). Practical Chemistry and Analytical Chemistry, Dr. Stevenson Macadam at Surgeons' Hall, and Dr. A. C. Brown, 4, High School-yards. Practical Anatomy, Operative Surgery Demonstrations (Regional, Surgical, and Microscopic), and Elementary Anatomy, Dr. P. D. Handyside. Pathological Anatomy, Histology, and Practical Pathological Histology, Dr. Grainger Stewart, Royal Infirmary. Diseases of Children (Royal Hospital for Sick Children), Dr. Keiller. Histology, Dr. Sanders. Military Surgery and Hygiene, Dr. P. H. Watson. Surgical Appliances and Operative Surgery, Dr. Joseph Bell. Surgical Pathology and Operative Surgery, Mr. Annandale. Vaccination (six weeks' course), Dr. Husband. Diseases of the Eye, Dr. Argyll Robertson. Insanity, Dr. Skae.

The minimum cost of education in the above School for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons, including the fees for the Joint Examinations, is £90 4s., which is payable by yearly instalments during the period of study; while the minimum cost for the single qualification of either Physician or Surgeon, including Fee for Examination, is £80.

For further information apply to Dr. Stevenson Macadam, Secretary to the Medical and Surgical Schools.

ROYAL INFIRMARY, EDINBURGH.

In this Hospital a portion of the beds is set apart for Clinical Instruction by the Professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary Physicians and Surgeons.

Medical Department.—Professors of Clinical Medicine: Dr. Bennett, Dr. Laycock, and Dr. Maclagan. Extra Physicians and Lecturers on Diseases Peculiar to Women: Dr. Simpson and Dr. J. Matthews Duncan. Ordinary Physicians and Lecturers on Clinical Medicine: Dr. Sanders, Dr. Rutherford Haldane, and Dr. R. E. Scoresby-Jackson. Pathologist: Dr. T. Grainger Stewart.

Surgical Department.—Professor of Clinical Surgery: Mr. Syme. Consulting Surgeon: Dr. Dunsmure. Ordinary Acting Surgeons: Mr. Spence, Dr. J. D. Gillespie (Lecturer on Clinical Surgery), and Dr. P. H. Watson. Ophthalmic Surgeon: Mr. Walker. Assistant-Surgeon: Mr. Thomas Annandale. Dental Surgeon: Dr. John Smith. Hospital Tickets: Perpetual, in one payment, £10; Annual, £5 5s.; Half-yearly, £3 3s.; Quarterly, £1 11s. 6d. Separate payments for two years entitle the Student to a perpetual ticket.

Appointments.—No fees are payable for any Medical or Surgical Appointment in this Hospital. The subordinate appointments are made by the Physicians and Surgeons, or, on their recommendation, by the Managers; and they are open to all Students and Junior Practitioners holding the Hospital Ticket during the period over which the appointment extends.

UNIVERSITY OF ABERDEEN.

Faculty of Medicine—Session 1865-66.

Winter Session, Commencing on the first Tuesday of November.—Anatomy, Professor Struthers, M.D., £3 3s. Anatomical Demonstrations and Practical Anatomy, Prof. Struthers and the Demonstrator, £2 2s. Chemistry, Prof. Brazier, £3 3s. Institutes of Medicine, Prof. Ogilvie, £3 3s. Surgery, Prof. Pirrie, £3 3s. Practice of Medicine, Prof. Macrobin, M.D., £3 3s. Midwifery, and Diseases of Women and Children, Prof. Dyce, £3 3s. Zoology, with Comparative Anatomy, Prof. Nichol, £3 3s. Medical Logic and Medical Jurisprudence, Prof. Ogston, £3 3s.

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Summer Session, commencing on the first Monday in May.—Botany, Prof. Dickie, £3 3s. Materia Medica, (100 lectures), Prof. Harvey, £3 3s. Anatomical Demonstrations and Practical Anatomy, Prof. Struthers and the Demonstrator, £2 2s. Practical Chemistry, Prof. Brazier, £3 3s.

Matriculation Fee for the Winter and Summer Sessions, £1. For the Summer Session alone, 10s.

Royal Infirmary—Daily.—Perpetual Fee to Hospital Practice, £6; or First Year, £3 10s.; Second Year, £3. Clinical Medicine and Clinical Surgery—each, £3 3s.

UNIVERSITY OF GLASGOW.

Faculty of Medicine.—The Classes open for the Winter Selsion on Tuesday, November 7, 1865.

Chemistry, Practical Chemistry, and Chemical Laboratory, Dr. Anderson, £3 3s. Natural History, Dr. Rogers, £3 3s. Practice of Physic, Dr. Gairdner, £3 3s. Anatomy, Anatomical Demonstrations, and Practical Anatomy, Dr. Allen Thompson and Demonstrator, £8 8s. Materia Medica, Dr. J. A. Easton, £3 3s. Forensic Medicine, Dr. Rainy, £3 3s. Surgery, Mr. Lister, £3 3s. Midwifery, Dr. Pagan, £3 3s. Institutes of Medicine, Dr. A. Buchanan, £3 3s. Clinical Medicine and Clinical Surgery, Physicians and Surgeons of Royal Infirmary.

ANDERSON'S UNIVERSITY, GEORGE-STREET, GLASGOW.

WINTER SESSION 1865-66.

Chemistry, Practical Chemistry, and Laboratory, Dr. Penny. Surgery, Dr. G. H. B. Macleod. Institutes of Medicine, Physiology, Dr. E. Watson. Anatomy, Anatomical Demonstrations, Practical Anatomy, or Dissection, Dr. G. Buchanan. Practice of Medicine, Dr. Cowan. Materia Medica, Dr. Morton. Hospital Practice in Royal Infirmary. Clinical Lectures in Royal Infirmary.

SUMMER SESSION.

Botany, Mr. Kennedy. Midwifery, Dr. H. Wilson, Medical Jurisprudence, Dr. Leishman. Surgical Anatomy, Practical Anatomy, Osteology for Beginners, Dr. George Buchanan. Practical Medical Chemistry, Dr. Penny. Operative Surgery, Dr. G. H. B. Macleod.

Class Fees.—For each of the above Courses of Lectures, first Session, £2 2s.; second Session, £1 1s.; afterwards free.

Anatomy Class Fees.—For both Courses (Lectures and Demonstrations), first Session, £4 4s.; second Session, £4 4s.; afterwards free.

Practical Anatomy.—The Dissecting-room is free for two Sessions to those who attend both Courses of Anatomy. After the second year the fee for Practical Anatomy is £1 1s. per Session.

The Fees for all the Lectures and Hospital Practice required of Candidates for the Diplomas of Physician and Surgeon, amount to £40.

GLASGOW ROYAL INFIRMARY.

Physicians, Dr. Orr, Dr. Gairdner, and Dr. Leishman. Surgeons, Dr. Lyon, Dr. Morton, Dr. G. Buchanan, and Mr. Lister. Fever Physician, Dr. Perry.

Besides the Clinical instruction given at the bedside, Lectures on the Cases are given four times weekly, at Nine a.m., during the Winter and Summer Sessions. Clinical Medical Lectures on Mondays and Thursdays. Clinical Surgical Lectures on Tuesdays and Fridays.

Fees, admitting to the Medical and Surgical Practice and the Clinical Lectures—Perpetual, £10 10s.; or, for one year, £5 5s.; for second, £5 5s.; for third, £1 1s.; and afterwards free.

SCHOOLS AND HOSPITALS IN IRELAND.

THE QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, BELFAST, FACULTY OF MEDICINE.

The Lectures will commence on Wednesday, November 1. Anatomy and Physiology, Dr. P. Redfern. Chemistry, Dr. Thomas Andrews. Practice of Medicine—*vacant*. Practice of Surgery, Dr. A. Gordon. Materia Medica, Dr. J. S. Reid. Midwifery, Dr. W. Burden. Medical Jurisprudence, Dr. J. F. Hodges. Natural Philosophy, Dr. J. Stevelly. Zoology and Botany, Dr. Wyville Thomson. The Demonstrations in Anatomy are delivered by Dr. Burden. The Course of Botany will commence in March.

Fees.—Anatomy and Physiology—First Course, £3; each subsequent Course, £2. Anatomical Demonstrations and Practical Anatomy—Each Course, £3. Practical Chemistry—£3. Other Medical Lectures—First Course £2; each subsequent Course, £1.

Belfast General Hospital.—Fees for Clinical Instruction—First year, £4 4s.; second year, £3 3s.; third year, £2 2s.; for two years in advance, £6 6s. Hospital Fee, £1 1s. per annum. Three Resident Pupils are appointed by examination.

Belfast Lying-in Hospital.—Fee for the Session, £3 3s.

ROYAL COLLEGE OF SURGEONS IN IRELAND—SCHOOL OF SURGERY.—SESSION 1865-66.

The public Lectures and the usual Winter Course will commence on Monday, November 2. Anatomy and Physiology, Dr. Jacob. Descriptive Anatomy, Dr. Bevan and Mr. Morgan. Surgery, Mr. Hargrave and Dr. J. S. Hughes. Practice of Medicine, Dr. Benson. Chemistry, Dr. Barker. Materia Medica, Dr. Macnamara. Midwifery, Dr. Sawyer. Medical Jurisprudence, Dr. Geoghegan. Practical Chemistry, Dr. Barker. Comparative Anatomy, Dr. Jacob. Botany, Dr. Mitchell. Hygiene, Dr. Mapother. Dissections under the direction of the Professors of Anatomy and the Demonstrators, Dr. Croly and Messrs. Stoney and MacAllister.

The Summer Session commences in May and terminates in August, including Materia Medica, Medical Jurisprudence, Botany, Practical Chemistry, and Hygiene.

The Fee for each of the above Courses is £3 3s., except Comparative Anatomy, which is free. Practical Instruction in Operative Surgery is given by the Professors of Surgery, separate from the Surgical Lectures, Fee, £5 5s.

For further information application to be made to the Registrar, Mr. John Brennen, at the College.

QUEEN'S COLLEGE, CORK.—FACULTY OF MEDICINE.—SESSION 1865-66.

Anatomy, Physiology, and Practical Anatomy, Dr. J. H. Corbett. Practice of Medicine, Dr. C. O'Connor. Practice of Surger, Dr. W. Tanner. Materia Medica, Dr. P. O'Leary. Midwifery, Dr. J. R. Harvey. Natural Philosophy, Mr. John England. Chemistry and Practical Chemistry, Dr. J. Blyth. Zoology and Botany, Mr. J. R. Greene. Modern Languages, Mr. R. De Vericour. Clinical Medicine and Clinical Surgery, at the North and South Infirmaries, by the Physicians and Surgeons of these Institutions. Clinical Midwifery, at the Lying-in Hospital. The Medical Session will be opened on Monday, October 30, 1865, and the Lectures will commence on October 30.

For further information apply to Mr. Robert John Kenny, Registrar.

SCHOOL OF MEDICINE AND SURGERY, TRINITY COLLEGE, DUBLIN.

The School was established by Act of Parliament 40th George III., and is under the joint government of the Board of Trinity College and the King and Queen's College of Physicians.

Winter Session.—Institutes of Medicine and Pathology, Prof. Law. Materia Medica and Pharmacy, Prof. A. Smith. Surgery, Prof. R. Smith. Anatomy and Physiology, Prof. McDowel. Practical Anatomy, Drs. Barton and Bennett. Chemistry, Prof. Apjohn. Practice of Medicine, Prof. Banks. Midwifery and the Diseases of Women and Children, Prof. Sinclair.

Summer Session.—Botany, Prof. Harvey. Medical Jurisprudence, Professor Travers. Practical Chemistry, Dr. Apjohn. Hospital Practice and Clinical Lectures at Sir Patrick Dunn's Hospital.

The Fee for each Course of Lectures is £3 3s.; for each Course of Clinical Lectures, £3 3s.; for attendance on the practice of Sir P. Dunn's Hospital to Students in Arts T.C.D. of two years' standing, £3 3s.; to other Students, £10 10s.

CATHOLIC UNIVERSITY, DUBLIN.

School of Anatomy, Medicine, and Surgery, Cecilia-street, Dame-street.

Winter Session.—Anatomy and Physiology, Drs. Hayden and Cryan. Anatomical Demonstrations, the Professors of

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Anatomy and Physiology. Chemistry, Dr. W. K. Sullivan. Theory and Practice of Surgery, Mr. A. Ellis. Theory and Practice of Medicine, Dr. R. D. Loyns. Theory and Practice of Midwifery, Dr. J. A. Byrne.

Summer Session.—Practical Anatomy, Dr. W. K. Sullivan. Materia Medica, Dr. F. B. Quinlan. Medical Jurisprudence, Dr. S. W. MacSwiney. Pathology, Dr. R. D. Lyons. Botany, Natural Philosophy, Mr. H. Hennessy. Logic, Dr. D. B. Dunne.

The Fee for each of the above Courses is £3 3s.

For further information apply to the Hon. Sec., Dr. Hayden, 30, Harcourt-street.

CARMICHAEL SCHOOL (FORMERLY RICHMOND HOSPITAL SCHOOL) OF ANATOMY, MEDICINE, AND SURGERY, NORTH BRUNSWICK-STREET, DUBLIN.

Anatomy and Physiology, Mr. Curran and Dr. Stokes, jun., Surgery and Operative Surgery, Dr. R. McDonnell. Theory and Practice of Medicine, Dr. Cruise. Midwifery, Dr. Jennings. Materia Medica and Pharmacy, Dr. Frazer. Chemistry, Dr. Davy. Descriptive and Practical Anatomy, Dr. Corley and Dr. O'Grady. Medical Jurisprudence, Dr. O'Reilly. Botany, Dr. Campbell. The Fee for each of the above Courses is £3 3s.

For further information apply to Dr. McDonnell, 14, Lower Pembroke-street; Mr. H. Curran, 70, Eccles-street; or Dr. F. Cruise, 37, Westland-row.

THE ADELAIDE HOSPITAL, PETER-STREET, DUBLIN.

Physicians, Dr. J. F. Duncan and Dr. H. H. Head. Surgeons, Dr. A. J. Walsh, Mr. J. Morgan, Dr. J. K. Barton, and Mr. B. Wills Richardson.

The Winter Session of this Hospital commences the first Monday in October. It contains 100 beds, of which twenty-four are devoted to the Special Diseases of Infants and Children. There is a detached Fever Hospital for the treatment of Contagious Diseases.

Clinical Instruction.—Two Medical and Two Surgical Lectures, including Lectures on the Diseases of the Eyes, will be delivered in each week. Practical Demonstrations in the use of the Stethoscope, Laryngoscope, and Microscope, as applied to the Diagnosis of Disease, will be given during the Session. Ophthalmoscopic Demonstrations every Saturday.

There is a numerously-frequented Dispensary attached to the Hospital, which is attended daily by the Physicians and Surgeons.

Fees, for Nine Months' Hospital Attendance, £8 8s.; for Six Months' Hospital Attendance, £6 6s.; for Summer Three Months' Hospital Attendance, £3 3s.; Perpetual Pupils (paid at entrance), £21.

Prizes.—Two Medical and Two Surgical Prizes will be given at the close of the Session. Certificates of Attendance upon this Hospital are fully recognised by all the Licensing Bodies of the United Kingdom.

Further particulars can be obtained from Mr. Richardson, Secretary to the Medical Board, 2, North Frederick-street; or any of the other Physicians or Surgeons.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY, PETER-STREET, DUBLIN.

Founded 1810.

Anatomy, Physiology, and Pathology, etc., Mr. E. Ledwich and Mr. T. P. Mason. Theory and Practice of Surgery, Mr. Wharton. Surgical and Descriptive Anatomy, Demonstrations and Dissections, Messrs. Bright, Glanville, and O'Leary. Theory and Practice of Medicine, Dr. W. Moore. Midwifery and Diseases of Women and Children, Dr. J. Ringland. Materia Medica and Therapeutics, Dr. H. Minchin. Forensic Medicine and Hygiene, Dr. R. Travers. Theory of Chemistry, Practical Chemistry, and Natural Philosophy, Dr. Cameron. Botany, Dr. C. Asken.

A Course of Operations to be performed by the Student, under the superintendence of the Lecturers (subjects, etc., included), *£5 5s.*

Fee for each Course of Lectures, £3 3s.

Sec.—Mr. E. Ledwich, 7, Harcourt-street, Dublin.

DR. STEEVEN'S HOSPITAL, DUBLIN,

Contains 250 beds, with distinct Wards for Fever, Syphilis, Diseases of the Eye, and Diseases of Females; there is also in connexion with the Hospital a Maternity Department, and an extensive Dispensary for Out-patients. Systematic Courses of Lectures are delivered during the Winter and Summer Sessions on all the subjects required by the Colleges, Halls, and the Public Service. These Lectures are given in a Medical Schools within the walls of the Hospital. Students enjoy the advantages of a Reading Room, Museum, and Lending Library. There is accommodation in the Hospital for two Medical and six Surgical Resident Pupils as Dressers. Fee £21, including Hospital Certificate. The Sessional Courses of Lectures will commence on the first Monday in November. Fees, each Course—Hospital, £7 7s.; Lectures, £3 3s. Perpetual to both Hospital and School, 75 guineas, payable in two instalments.

Further particulars on application to Dr. Tyner, Resident Surgeon, at the Hospital; or to E. Hamilton, M.D., Secretary, 120, Stephen's-green.

CITY OF DUBLIN HOSPITAL.

The course of Practical Medical and Surgical Instruction in this Hospital will commence in October. The Clinical Lectures will be delivered on three days in each week during the Session, by Dr. Jacob, Dr. Benson, Mr. Hargrave, Dr. Geoghegan, Mr. Tufnell, and Mr. Croly; and on Diseases peculiar to Women and Children, by Dr. Beatty. Dr. Jacob's Clinical Lectures on Diseases of the Eye, illustrated by the Cases in the Hospital, are open to the Pupils in attendance.

Consulting Physicians: Professor Apjohn and Dr. C. P. Croker.

The certificates of attendance are received as qualification by all the Colleges, Halls, and Boards.

ST. MARK'S OPHTHALMIC HOSPITAL AND DISPENSARY FOR DISEASES OF THE EYE AND EAR, DUBLIN.

Clinique by Sir William Wilde and Dr. Wilson on Tuesdays and Fridays. Operations on Wednesdays. Instructions in the use of the Ophthalmoscope by Dr. Wilson.

QUEEN'S COLLEGE, GALWAY.—FACULTY OF MEDICINE.

Anatomy and Physiology, and Practical Anatomy, Dr. Cleland. Practice of Medicine, Dr. N. Colahan. Practice of Surgery, Dr. J. V. Brown. Demonstrator, Mr. J. Hill. Materia Medica and Medical Jurisprudence, Mr. S. M'Coy. Midwifery and Diseases of Women and Children, Dr. R. Doherty. Chemistry, Dr. T. H. Rowney. Natural Philosophy, A. H. Curtis, A.M. Botany and Zoology, Dr. A. G. Melville. Logic and Mental Philosophy, Dr. T. W. Moffett. The County Galway Infirmary, Town, and Union Hospitals are in the immediate vicinity of the Queen's College. They are visited every morning by Professors of the College, who deliver Clinical Lectures.

For further information apply to the Registrar, W. Lupton, M.D.

National Hospital for the Paralysed and Epileptic, 24, Queen-Street, Bloomsbury.—The Hospital contains thirty beds, and the number is about to be increased to sixty. More than 1000 out-patients are now under treatment. The Physicians attend every Monday, Tuesday, Wednesday, and Friday. Medical Practitioners and students will be admitted on showing their cards.

British Lying-in Hospital, Endell-street, Long Acre.—Founded 1748.—Medical Officers: B. Brookes, Esq., Consulting Surgeon; Dr. Graily Hewitt, Dr. G. C P. Murray, and Dr. Eastlake. About 200 women are delivered annually in this Hospital, and between 500 and 600 at their own houses. Resident male pupils are admitted for periods of two, four, or six months on paying a fee of seven, ten, or twelve guineas, exclusive of board and lodging. Non-resident Pupils are now afforded opportunities for attending the Out-door Practice of the Hospital, and will be supplied with cases on payment of a moderate fee. A systematic course of instruction is also given to Midwives and Monthly Nurses by, and under the direction of, the Medical Officers. Matron: Mrs. Firth.

Special Educational Station for Vaccination.—Under the direction of Her Majesty's Privy Council.—National Vaccine Establishment, Tottenham-court Chapel Station.—Mr. Simpson is appointed to give instruction and grant certificates of qualification in vaccination according to the regulations of the Privy Council, College of Surgeons, Apothecaries' Hall, and Poor-law Board. Fee, £1 1s.; attendance, six weeks. No Practitioner is eligible for a Poor-law appointment without holding a certificate of proficiency.

National Vaccine Establishment.—Principal Educational Station, Surrey Chapel, Blackfriars-road.—Educational Station for Teaching and Granting Certificates of Qualification in Vaccination, according to the requirements of the Privy Council, the Royal College of Surgeons, the Society of Apothecaries, and the Poor-law Board. By Mr. Marson, Surgeon to the Small-pox and Vaccination Hospital, London. The Practice and Principles of Vaccination on Tuesdays and Thursdays, from 1.30 to 2.30 o'clock. Fee, £1 1s. Attendance, Six Weeks.

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ORIGINAL LECTURES.

AN INQUIRY INTO THE NATURE OF THE PHENOMENA WHICH CONSTITUTE "INFLAMMATION."

TWO LECTURES DELIVERED AT

The Royal College of Physicians.

By LIONEL S. BEALE, M.B., F.R.S.,

Fellow of the College; Professor of Physiology and of General and Morbid Anatomy in King's College, London; Physician to King's College Hospital.

ON CONTAGION.

(Concluded from page 274.)

Of the Different Kinds of Contagion.—If the above notions turn out correct, it will not be difficult to understand why there should be so large a number of contagious diseases, nor shall we feel surprised at the appearance of new contagious diseases from time to time, or at a change in type in some of those which have been known from the earliest periods. The conditions under which civilised life is carried on in densely-populated cities are undergoing continual, though it may be but very gradual, and to one generation scarcely perceptible, change.

It seems to me improbable that we shall be able to distinguish the different kinds of these specific disease-producing living particles from one another. I have endeavoured to show that every kind of living matter exhibits certain common characters, and that the living matter of a high and complex organism is not to be distinguished from that of a low and comparatively simple one, by any peculiarities we can recognise, on submitting the matter to the various methods of examination at present known. The living matter of the tissue-destroying pus corpuscle resembles that from which the normal tissues are produced. It is only in the rate at which such masses multiply—the pabulum they are capable of taking up—the products resulting from their life and death—that the several kinds of living matter can be said to differ from one another, and these phenomena are all dependent upon the agency which I have spoken of as vital power. In fact, it appears probable that the living matter, which is the *materies morbi* of contagious diseases, differs from the living or germinal matter of ordinary pus and that of normal tissues, or the white blood corpuscles, etc.—not in form, in force, or in property—but in vital power. I think that if we consider the difficult problem from this point of view we shall learn much from new work; but if we continue to regard these poisons as gases, or vegetable or animal organisms, or as ferments, or as inorganic matter, we shall never succeed in adding to our knowledge of vital phenomena. Most assuredly we should never cease to inquire until we have discovered the real nature of these terrible diseases which it is our duty to try to prevent, to mitigate, or to cure; for until we are acquainted with the exact nature of a disease are we not at a great disadvantage in attempting to treat it? It is not to be expected that a labouring peasant should be able to recognise the connexion between scientific discovery and the practical relief of his aches and pains; but it is disgraceful that educated men can be found to oppose any kind of minute research, upon the ridiculous ground that investigation is not likely to be immediately productive of practical results, as if the operation of looking on and doing nothing, or, at best, suggesting haphazard and, perhaps, really useless remedies, were more in accordance with the dictates of common-sense, than endeavouring to find out what was really taking place in the diseased organism. Of those even who would be ready to investigate the subject by careful post-mortem examination and accurately-recorded observations during life, not a few are, I fear, opposed to still more minute and thorough scientific work; and thus the only means at present at our disposal which afford a reasonable hope of discovering the real nature of many of these diseases are only imperfectly used. If persons could be convinced that very minute bodies were truly the active agents, doubtless they would take steps to study these minute bodies. It is most difficult to convince the public of the real utility of minute research, and it is not surprising that very few should devote themselves to a branch of study which, while it requires intense and earnest devotion, and is necessarily unremunerative, is undervalued and almost ignored even by some whose position obtains for their opinion a certain amount of respect.

Of the Passage of the Contagious Matter into the Blood.—I apprehend that it will be generally conceded that these contagious poisons produce their peculiar influence upon the organism through the blood—in fact, that they pass into this fluid, grow, and multiply there, give rise to changes in its composition, and indirectly affect the action of different organs and tissues of the body. It has been but too frequently proved that if, in certain states of the blood, particles of living matter allied to pus be introduced, they give rise to phenomena which often very rapidly destroy life.

In other instances, the living germinal matter makes its way into the lymphatic vessels, grows and multiplies there, giving rise to abscess in the glands; the blood, in some cases, being also infected, in others escaping altogether.

It is at least doubtful if the growth and multiplication of every kind of these living particles will take place in perfectly healthy blood, even if they be introduced. Numerous facts which will occur to every Practitioner render it far more probable that—at least in the case of the great majority of contagious fevers—a certain state of blood must exist before the contagious poison can grow and multiply in its peculiar way, although we have not yet discovered in what particular this supposed altered state of blood differs from the healthy state. But, at any rate, it is a condition not associated with a large number of red blood corpuscles or with a highly active state of the oxidising processes; nor is it brought about by living in the open air and a supply of wholesome food and water. To enter fully into this question would, however, lead me too far from the matter I am now considering.

Admitting, then, that contagious poisons generally, consist of living matter, and that this living matter enters the blood, let us inquire how the living particles may enter the vascular system where there is no inoculation—no solution of continuity of the vascular walls. We may explain the fact that of a number of persons equally exposed to the influence of a contagious poison, some will contract the disease while others will escape, by supposing that in the latter case the living particles are prevented from passing through the vascular walls, or that, coming into contact with the blood, they do not grow and multiply, but become destroyed.

How, then, do the living particles pass through the vascular walls and enter the blood, and what are the circumstances that would favour or interfere with their passage? Thin-walled capillary vessels, as is well known, come very near to the surface in many parts of the body. Those of parts of the mucous membrane of the nose, mouth, and conjunctivæ, even in a state of perfect health, are covered with a very thin layer of protective epithelium, while those of the air-cells of the lung are practically bare. In many morbid states the epithelial covering of the mucous membranes enumerated above is very soft, and sometimes it is reduced to a thin layer of a soft pulpy mucus, in which any foreign particles would very readily become embedded. It is reasonable to suppose that the contagious germs find in this soft mucus a nidus favourable for their reception, and at the same time soluble materials adapted for their nutrition. They would grow and multiply, and probably minute offsets from them would soon find their way to the external surface of the capillary walls.

I have shown that there is strong reason for concluding that when the capillaries are much stretched, as when fully distended with blood, particles of living germinal matter, probably derived from the white blood corpuscles, may make their way through the walls with some of the serum, and grow and multiply in their new position. Thus, an "exudation" will in many instances contain particles of living growing matter, and these particles absorb nutrient matter, and soon become the spherical granular cells which are often seen external to the vessels in inflammation. They do not become aggregated together, as Dr. Bennett supposed, but each absorbs nutriment, and, just as in the case of all other masses of living matter, grows, and divides and subdivides. This view concerning the origin of many of the corpuscles in exudation is supported by the fact that in pneumonia and in some other conditions in which the capillary distension is very great, red blood-corpuscles, which are much larger than the particles of living matter just referred to, pass through the capillary walls without complete destruction of the vessel taking place. Every one who has made very minute injections is familiar with the fact that minute longitudinal rents or fissures may be made quite wide enough for a red blood-corpuscle to pass through edgeways. It is therefore certain that particles of minute size

may pass through capillary walls without the occurrence of actual rupture.

Besides which, there are at very short intervals in the capillary walls masses of germinal matter or nuclei, which increase considerably in size when supplied with increased nutriment. These may divide and subdivide, and give rise to collections of little granular corpuscles, as seen in cases of inflammation of the pia mater, and also in cases of tubercular disease of the same membrane. In the situation of these nuclei the walls of the vessel are probably weak and liable to alterations, as they increase or diminish in size. Hence there is no difficulty in accounting for the passage of minute particles of the living contagious germinal matter in cases in which the capillary walls have been unduly stretched and then rendered somewhat flaccid. The little particle of contagious matter having gained entrance into the blood, probably absorbs nutrient material rapidly. It is possible that fibrin may become coagulated around these little bodies just as if they were pus corpuscles, and the mass being too large to pass, becomes impacted in some part of the capillary system. The large size of the white blood corpuscles in very many blood diseases is also a fact not generally known, although of great importance, which I will discuss elsewhere. The nutrition and multiplication of the germinal matter would proceed and give rise to secondary phenomena familiar to all of us, and of the utmost interest; in those organs in which the circulation is slowest—as the spleen and liver—the conditions would be very favourable to the multiplication of such particles of living matter. I must not, however, pursue this part of the inquiry any further on this occasion.

Now, the state of things referred to above—a soft moist state of the mucous surfaces, a dilated condition of the capillaries, combined with a weak, flaccid state of their walls, which would follow long-continued congestion, and which is intimately connected with a weak heart's action and feeble condition of the nervous system, are those which would facilitate the passage of such living germs as I am supposing, and are not these the very conditions which exist in the organism about to be the victim of a contagious fever? No doubt in these cases the composition of the blood is altered and its fluid constituents manifest a tendency to permeate the vascular walls more readily than in a perfectly healthy state. This state of blood would doubtless affect the action of the nervous centres presiding over the contraction of the arterial walls, and regulating the flow of blood through them, thereby influencing the nutrition of the part, and in this way a relaxed state of the arterial walls and a congested state of capillary vessels might be induced, or already existing, might be increased. It is this low and but too often ill-defined weak state of health that we should endeavour to detect by most careful observation, and at once treat. Nay, it seems to me almost certain that every serious acute disease dangerous to life to which we are subject is preceded by a condition of system which in many particulars is a departure from health. If this can be altered, the liability to the supervention of the acute attack no longer exists. It is in the direction of anticipating the occurrence of actual serious well-marked disease that those most earnest in advancing Medicine may reasonably hope to do useful work. And it seems certain that the more minutely we investigate, the more likely shall we be to learn how to discover and to appreciate that slight departure from the healthy state which precedes, and often by some considerable time, the development of many of the most serious and most fatal maladies.

The measures advised by sound practical men in consequence of what they themselves have carefully observed, accord not more with the teachings of sound common sense than they do with those of the most minute and most extended scientific research. Nothing short of house to house visitation, and thorough examination, not only of the rooms and dwellings, but of the food and general mode of life and habits both of rich and poor, by a sanitary eye, will ever enable us to teach people how they should act so as to reduce to a minimum the chances of attack when severe epidemics are raging, and how they may reasonably hope to live to the ordinary period of human life in the enjoyment of sound health.

Contagious Diseases in Domestic Animals.—The excellent example set by Mr. Ceely (of Aylesbury), Dr. Budd (of Clifton), and others(b) ought to be more generally followed, and Practitioners, as well as scientific physiologists and veterinary Surgeons, should carefully study the different classes of contagious diseases met with in domestic animals and enter into much more minute detail than has been possible hitherto. Many, if not all, of these diseases are evidently, in their general nature, the same as those from which we suffer, though they are not specifically the same or mutually convertible. They seem to obey the same laws, originate under very similar conditions, are propagated in the same manner, and are probably to be prevented, relieved, or cured upon the same principles. It seems almost certain that thorough observation, carried out with due care, would reveal to us the precise manner in which the marvellously minute agents already described produce their frightful results, and that from well arranged experiments we should soon learn how these maladies may be successfully treated.

We may, I think, feel quite certain that the thorough knowledge of the conditions favourable or unfavourable to the local origin and spread of contagious diseases in our domestic animals, will teach us very much concerning the same class of diseases in man. The contagious cattle disease now spreading originated without doubt in cattle themselves, and resulted from the conditions under which they have been living for some time previously. As is the case with diseases of the same class in man, we find that although the exposure, as far as we can ascertain, may have been equal in degree—to some the disease proves fatal, while others are seriously affected by it, but recover; some, again, suffer from only a very mild attack, and a few perhaps escape altogether. Those which have been subjected to depressing circumstances, such as bad food, or an insufficient supply of food, or too much food, which is at least as hurtful as too little, foul air, or too little air, or bodily fatigue, are almost certain to be victims, while of the vigorous and well kept, many may escape.

Moreover, it is probable that by carrying out careful experiments upon those contagious diseases which affect the lower animals, important facts would be discovered which would add to our existing knowledge of the whole subject of contagion. In the lower animals most important experiments might be made with reference to the effects of inoculating different poisons. Who knows but that by inoculating cattle with some fever poison of man a mild disease might be produced which would render the animal no longer susceptible to its own special and much more virulent fever poison? It appears to me that active work in this direction must be productive of most important practical results, not only as regards animals, but to man himself. I am, however, well aware that these views, although based upon facts arrived at from careful and somewhat widely extended observation, will appear to one considering them for the first time so speculative that I cannot hope they will attract much notice from practical men, and I fear that amid the necessary detail their general bearing will almost be missed.

I will now try to sum up, in as few words as possible, the most important of the conclusions at which I have arrived with reference to contagious diseases.

The *materies morbi* of contagious diseases does not consist of lifeless organic or inorganic matter, nor of any form of gas or vapour generated in the decomposition of animal or vegetable substances, nor of any matter set free during the decomposition of fæcal or other excrementitious matter of animal origin; nor is it any species of animal or vegetable organism or parasite; but the active contagious material consists of exceedingly minute particles of living germinal matter which may be regarded as the direct descendants of the germinal or living matter of an organism which has been for some time living under unusual conditions. Contagious poisons affecting men and animals have originated in their organisms. The living or germinal matter of some contagious diseases originating in the bodies of animals may grow and multiply in man, and *vice versa*. These particles of living germinal matter may retain their vitality for some time after they have escaped from the seat of their formation. They may pass through the air or be preserved in clothes, or various fluids, or moist solids. The smallest particle (less than the $\frac{1}{100,000}$th of an inch in diameter) being introduced into the body already in a fit state for its nutrition, may grow and multiply, giving rise, in due time, to the symptoms characteristic of the particular disease, and producing myriads of particles like itself. But it is probable that such particles, being introduced into a perfectly sound organism in a state of perfect health, would not grow and multiply, but would die; or, in other words, such an

(b) See particularly the highly interesting memoirs of Dr. Budd upon typhoid fever in the pig and in oxen *British Medical Journal*, July 29, August 19, 1865.

organism would resist the influence of the contagious matter. Some of the germinal matter forming the *materies morbi* of certain contagious diseases may retain its vitality for a considerable period of time in a comparatively dry state, like vaccine lymph. Knowing what we do of the protecting influence exerted by vaccination, it seems probable that the ravages of many other contagious diseases besides small-pox may be mitigated or prevented by the inoculation of certain forms of contagious matter which would produce allied but much less severe forms of disease. It seems desirable that numerous experiments should be instituted on cattle with the object of ascertaining if any such protective influence would be really exerted.

(The subject of Inflammation to be continued.)

ORIGINAL COMMUNICATIONS.

ON THE ALLEGED DEGENERACY OF VACCINE LYMPH.

By THOMAS MASSEY HARDING, M.R.C.S.

Degeneracy of Vaccine Lymph by Frequent Transmission.

On this subject every shade and variety of opinion has been expressed by persons whose opinions ought to carry great weight, and I think it would be impossible to determine the question on either side by the array of authority. It is well known that the report of the National Vaccine Board (1854) contains a decided expression of opinion that "vaccine lymph does not lose any of its prophylactic power by a continued transit through successive subjects." It is always interesting to inquire into the opinion of Dr. Jenner himself, and we find him decidedly of opinion that the vaccine virus suffered no deterioration by repeated transmission. Dr. Waterhouse, Professor of Physic, University of Cambridge, America, having practised vaccination for some time, became apprehensive that the matter had degenerated, and sent to Dr. Jenner for matter as fresh from the cow as possible. Of this application the following remark is made, "This was not practicable or necessary, since it is well known to Dr. Jenner and to all other principal inoculators in England that the matter suffers no degeneracy by repeated transmissions."

Ring, writing in 1801, says, "A considerable part of the matter now in use has been preserved by repeated inoculations in the human body ever since the spring of the year 1799, yet, notwithstanding it has undergone so many successive trials, its purity has suffered no alloy and its efficacy no diminution." Ring has also the following, "It is proved in a satisfactory manner by the experiences of Dr. Colon, of Paris, and all the other Practitioners in France that the vaccine virus does not degenerate by repeated transmissions in the human subject. It may be supposed that Mr. Ceeley, of Aylesbury—whose opinion on all questions connected with vaccination deserves greater weight than that of any living writer on the subject—was impressed with the conviction of the deterioration of vaccine lymph; but such is not the case. In a letter which he was kind enough to write to me, dated January 30, 1865, he says, "My own experiments were performed with a view to determine a pathological fact, not to procure a new lymph;" and in another part of the same letter, "I cannot say I am satisfied of the deterioration of the current lymph."

A great number of authorities may be cited who hold the opinion that vaccine virus has become deteriorated. They are all mentioned in the order of time in Mr. Simon's report, and I will therefore quote briefly from Mr. Simon, including also Mr. Simon's own conclusions from the evidence which he has examined.

1818.—Mr. Brisset, in "Mem. de la Societe de la Faculté de Médécine de Paris, 1818," and "Reflexions sur la Vaccine et la Variole," says:—"The phenomena, and especially the cessation, of the symptoms of the cow-pox seem to be notably abridged; the course of the disease is more rapid. The tumefaction incidental to vaccination (the development of which is so essential to constitute the activity of the virus and its protective efficacy) is infinitely less marked, if it can be said to exist."

1824.—Dr. Meyer, of Kreutzburg, examining, in 1824-25, 4000 persons of all ages, found the older scars of vaccination more marked than the present one; and having obtained a supply of lymph of more recent date, he found it act with more power, and the resulting scars were of the old type.

1836.—M. Bousquet, "Sur le Cow-pox decouvert à Passy, 1836," contrasts the action of the new lymph with the old, and says:—"We see that the new lymph is at once more quick and more slow in its course: more quick, because it takes effect more rapidly; more slow, because its effect lasts longer."

1837.—Dr. Gregory became convinced that the vaccine lymph in use at the Small-pox Hospital had lost some of its efficacy. He employed some lymph which was taken by Mr. Marson, Resident Surgeon, from the arm of a woman who had contracted the casual cow-pox. Dr. Gregory found the new lymph more active than the old, and therefore continued to use it to the complete exclusion of the old stock.

1838.—Mr. Estlin (*Medical Gazette*, xxii., p. 997) says:—"The alterations in the vaccine infection which have appeared to me most marked are—the smallness of the vesicle and its attendant areola; its rapid course; the absence of constitutional disturbance; the small quantity of lymph yielded by the vesicle, and especially the diminished activity of its infecting power.

Similar testimony has been given by Professor Hering, of Stuttgart, M. Fiard in a communication to the Academie des Sciences in 1844, and Dr. Steinbrenner, Traite de la Vaccine, Paris, 1846, says, "We may almost say that the pustules produced by the old lymph are to the pustules produced by lymph recently obtained from the cow, as the pustules of the varioloid disease are to those of true variola. In fact, as in the varioloid disease, the pustules produced by lymph of ancient date (that is, long in use) are less developed, desiccate more quickly, the constitutional affection which accompanies them is more transient, and they leave slighter cicatrices." So much for authority on this subject—something may be learned by a careful examination of the phenomena of the vaccine disease as described by Dr. Jenner and also by Mr. Ceeley, and those ordinarily observed by vaccinators, who employ the current lymph of the National Vaccine Institution.

There are two questions to be borne in mind,—1st, Are the phenomena of the vaccine disease different in the present from those observed by Dr. Jenner; and, 2nd, Is the protective efficacy of vaccination diminished? Let us take first one of Dr. Jenner's experiments related in his own words:—

Case 17.—"I selected a healthy boy, about 8 years old, for the purposes of inoculation for the cowpox; the matter was taken from a sore on the hand of a dairymaid who was infected by her master's cows, and it was inserted, on the 14th May, 1796, into the arm of the boy by means of two superficial incisions barely penetrating the cutis, each about half an inch long. On the seventh day he complained of *uneasiness in the axilla*, and on the ninth he became *a little chilly*, lost his appetite, and had a slight headache," &c.

Not to multiply extracts of cases, I will simply add that in all Dr. Jenner's accounts of vaccination he speaks of pain and uneasiness in the axilla, loss of appetite, and other feverish symptoms.

We will now refer to the experiments of Mr. Ceeley.

Mr. Ceeley having succeeded in producing in the cow the genuine cow-pox by inoculating with variolous matter, took matter from the vesicles then produced, and vaccinated several children. In all these cases, says Mr. Ceeley, the primary constitutional symptoms were very slight, the secondary proportioned to the extent and character of the areola; hence J. W. suffered severely, had vomiting and delirium.

In Mr. Ceeley's next cases, he vaccinated two persons with matter taken from the variolated sturk. A sturk, I may say, is a young female animal about twelve months old. "The symptoms (he says) in both subjects appeared on the approach of the areola, and were rather severe during its activity."

Mr. Ceeley, in conclusion, says:—"The constitutional symptoms, though mild, were commonly well marked. In infants restlessness, fretfulness, and inappetency about the fifth or sixth day were very common; very few escaped feverfsh symptoms on the ninth and tenth days; many had vomiting and diarrhœa. In adults, of course, more complaint was made—headache, chilliness, anorexia, and sometimes thirst on the fifth or sixth day, increased on the seventh day, with axillary tenderness, but on the ninth and tenth days much general febrile complaint, disinclination, and even inability, to leave the bed."

I have quoted these words at length, as they contain the best account of the manifestations produced by inoculation, either direct from the cow, or after very few transmissions. Will any unprejudiced observer of the effect of the lymph at

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present in use affirm that vaccination as now practised produces constitutional symptoms of equal severity to those above described? I have been a public vaccinator for ten years, and have vaccinated 400 or 500 every year. I know nothing of such symptoms. True, I have seen such effects, but so rarely that I cannot call to mind half-a-dozen instances. The ordinary rule is that vaccinated persons, whether children or adults, present no affection of the axillary glands—a condition noticed by Dr. Jenner and Mr. Ceeley in every instance; there is no feverishness; and as to inability to leave the bed, it does not occur once in five hundred times. I think it, therefore, a fair conclusion that the constitutional symptoms produced by inoculation with matter derived directly from the cow or from persons who have themselves casually derived the disease from the cow are much severer than those produced by the current lymph of the present day.

The second and more important question remains to be discussed—viz.: Is the protective efficacy of vaccination diminished?

When Jenner announced his discovery it was the prevailing custom to inoculate with variolous matter, and in order to demonstrate beyond the possibility of a doubt the protective efficacy of the new operation, the vaccinated were exposed in every conceivable manner to the small-pox—put to sleep with patients suffering from the disease, and also inoculated with variolous matter. Nevertheless, it was found impossible to communicate the disease. The enemies were many and loud; they sought diligently, but in vain, for cases to bring discredit upon the operation and its founder. Hate and self interest are sharp spurs, and we may be quite certain that no pains were spared to find cases of small-pox after successful vaccination. If it had been possible in the first few years after 1798 to find one fatal case of small-pox after vaccination, would the operation ever have made way with the public? Yet now it would be easy to find not one, or ten, or a hundred, but thousands of deaths after vaccination. What explanation more rational or more probable can be offered, than that the vaccine virus has undergone some change during its repeated transmissions that has in some way diminished its power, especially when we consider that the local manifestions and constitutional symptoms are also modified, and, in fact, diminished? There is another reason why we should have expected *à priori* that this would occur. Inoculation of small-pox itself is known to be followed by a gradual diminution of intensity, so that in time the matter is no longer capable of producing the disease. Why, then, should not this change occur in the matter of cow-pox, which has been proved to have been identical in its origin, but diminished in its power, by the constitution of the cow?

If it be true that vaccine lymph is capable of deterioration through long transmission, then it is obvious that a very large proportion of the population are insecure, for the National Vaccine Institution continues to supply the Medical Profession with lymph that has not been renewed, in accordance with their opinion, before mentioned, that the prophylactic properties are neither lost nor diminished. I certainly think the weight of evidence in favour of the opinion of the deterioration of the lymph, and should wish to see a general renewal of lymph throughout the empire by means of a series of careful and well conducted experiments in imitation of those of Mr. Ceeley and Mr. Badcock. This cannot be done by public vaccinators at their expense—it requires a great deal of time, patience, and perseverance, and is accompanied with considerable expense. I have myself attempted the experiment, being ably assisted by Mr. Blakeway, Veterinary Surgeon of this town, but hitherto without success; and to convince my Medical brethren that it is no easy matter to obtain a fresh supply of lymph by these means, I will quote a few words from a letter of Mr. Ceeley to me January 30, 1865. He says—"The variolation of the cow is attended with much trouble and great uncertainty as to success. One person may succeed in a few trials, while another may operate on nearly one hundred before he succeeds. It does not appear that every animal of the species is equally susceptible. The most successful operator I know, Mr. J. Badcock, late of Brighton, chemist, now of Camberwell, London, told me that he had succeeded about thirty times after operating on 300 cows in the course of a few years."

It is quite obvious from this a complete renewal of the current lymph cannot be effected by the unaided efforts of the public vaccinators; it should be done at the expense of Government, and the lymph thus obtained should be employed at the National Vaccine Institution, and after a few transmissions sent out to the Medical Profession upon application. I do not recommend the general and indiscriminate employment of primary lymph; its effects upon some constitutions are too violent, it requires to be passed through some constitutions properly selected by competent judges before it acquires sufficient mildness to be appropriated for general use. I think that many repeated renewals of lymph could be effected in this way, so as in a short time to completely supersede the lymph now employed, and such a recourse to the parent stock for renewal of lymph may be had periodically, so as to maintain the action of the lymph to the standard of Dr. Jenner. Such a course would materially improve the condition of the people of this kingdom, so far as their immunity from small-pox is concerned; but, after all the care, cases of post-vaccinal small-pox will occur. Let it be remembered, then, that vaccination does not confer an absolute, but a relative, immunity from small-pox, and the more complete the vaccination—that is, as regards the purity and strength of the virus and the number of punctures—the more complete the immunity.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. GEORGE'S HOSPITAL.

FORMATION OF PECULIAR HOLLOW CAPSULE-LIKE SUBSTANCES AT THE UPPER PART OF THE FAUCES AND POSTERIOR NARES, EVIDENTLY THE RESULT OF INSPISSATED MUCUS, AND GIVING RISE TO SYMPTOMS CAUSING ANXIETY—COMPLETE RECOVERY FROM THEIR FORMATION, AND CESSATION OF SYMPTOMS.

(Under the care of Dr. OGLE.)

Louisa J., aged 34, married, and regular as to catamenia, etc., complained of being languid and weak, and subject to "colds," but never to continued cough or expectoration, though she had for some years lost much flesh, came under my care at the Hospital. Four years previously she first coughed up, along with a "hacking" cough, a roundish body, as she described it, of about the diameter of a six-pence, and hollow in the middle. She stated that ever since she had, at intervals, been subject to a recurrence of the same, always voiding a similar kind of round substance, and always with cough and often much *sneezing*, but never attended by vomiting. On one or two occasions, when there had been great difficulty in getting up the substance, blood had appeared, and, at times, what she called "corruption." Her sensations referred the substance to the right side of the throat, and very often, when troubled by it, it would, as she described it, "all but come, and then go back again." The sense of hearing on the left side was very deficient, owing to a bad cold, and the left ear was wont to contain much "wax and scurf." She was subject to sharp pain at the back of the head, making her "quite faint," and to flatus and pain at the stomach after eating, and to dryness of the throat. I could, on inspection, see nothing wrong about the fauces or back of the throat, and could find nothing wrong about the lungs and other organs of the body. After treating the stomach symptoms with small doses of kino and alum, along with the canella bark, I concluded that all the other troubles were attributable to some affection of the posterior nares. In this I was confirmed by examining one or two of the substances, which, ere long, the patient brought up and showed me. They were hollow capsules, evidently formed of inspissated mucus which had accumulated at the back of the upper part of the fauces and nares, and become discharged therefrom. She quite recovered from all symptoms, and was no more troubled with the re-formation of the substances.

AGUE IN FEN DISTRICTS—RECURRENCE OF THE SAME DURING RESIDENCE IN LONDON, BUT CONFINED TO THE CATAMENIAL PERIODS.

(Under the care of Dr. OGLE.)

Ellen M., aged 14, had lived in the fen-country, and had ague in the previous year for six weeks (every other day) at a time when she had not begun to have the catamenia. She came to me as an out-patient, having recently had two attacks of ague, each occurring at the catamenial periods, and lasting for the space of one week (alternate days). During the inter-

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vals of the catamenial appearance she was quite free from any ague-like symptoms. The appetite was defective and the general strength rather feeble, but otherwise no complaint was made. I began at once (April 17) to give her five grains of quinine, with ten drops of dilute sulphuric acid and infusion of roses, and this was continued thrice a day for two weeks. At that time she had gained appetite and borne the medicine well. No ague-like symptoms came on until May 19 (the catamenial period having just ceased), when a very slight degree of shivering, followed, however, by much fever, ensued, and again on the evening of the 20th, and again in the night of the 21st. When I saw her on the 22nd the tongue was furred. With the addition of an occasional dose of senna the quinine was continued in the same quantity until June 26, when she was discharged as being quite well, no recurrence of the ague having taken place.

ST. BARTHOLOMEW'S HOSPITAL.

MONSTROSITY IN A CHILD FOLLOWING A FRIGHT TO THE MOTHER IN THE THIRD MONTH OF PREGNANCY.

(Under the care of Mr. PAGET.)

WHATEVER be the explanation of the fact, it seems fully proved to be by no means an infrequent occurrence that women who have, during pregnancy, been subject to some strong mental impression, give birth to children with a deformity or defect which shows a marked likeness to the object which produced that impression. A large number of cases might be collected in support of this. It appears important, however, to notice that in the great majority of instances of this kind which are sufficiently authenticated to deserve attention, the maternal impression was not slight and soon forgotten, but powerful enough to induce a settled conviction of what the result to the child would be. Dr. Carpenter, in the last edition of his work on "Human Physiology," says,—"No soundly-judging Physician of the present day is likely to fall into the popular error of supposing that 'marks' upon the infant are to be referred to some *transient*, though strong impression on the imagination of the mother; but there appear to be a sufficient number of facts on record, to prove that *habitual* mental conditions on the part of the mother may have influence enough, at an early period of gestation, to produce evident bodily deformity or peculiar tendencies of the mind. The error of the vulgar notion on this subject lies in supposing that *a sudden fright speedily forgotten* may exert such a continual influence on the nutrition of the embryo as to occasion any personal peculiarity." Some very interesting remarks on monstrosity in children, with some remarkable examples of the condition, may be found in Dr. Montgomery's "Signs and Symptoms of Pregnancy." The subjoined case is offered as a contribution to the literature of this obscure and difficult subject.

A girl, 12 years old, was in Lucas Ward in the month of April last for the treatment of an attack of lepra. She at once became a nine days' wonder in the Hospital, under the name of the "monkey child," for it was found that the left arm and the greater part of the trunk presented a precise resemblance to the like parts of a monkey. The arm was long, thin, and withered looking, the scapula prominent, and the skin deeply stained with dark brown pigment, and covered with an abundant crop of lank tawny hair, some of which was nearly two inches in length—in fact, the likeness of these parts to the corresponding parts of a monkey was so complete that any one, judging by them alone, would almost certainly think she was a chimpanzee. Her mother stated that when she was three months pregnant with the child she was very much terrified by an organ monkey which suddenly jumped upon her back as she was passing along the street.

The following remarkable instance was related by Mr. Paget as he went round the wards, as having taken place under his own observation:—A person when pregnant with her first child chanced to shake hands with a man who, by an accident some years previously, had lost the middle fingers of the right hand, the index and little fingers, from long practice in grasping objects, having afterwards fallen almost into the shape of a lobster's claw. Being a nervous and very sensitive woman, she was startled and distressed when she became aware of the condition of the hand, and for several days she could not dismiss the recollection of it from her mind. When her child was born, it was found that the middle fingers of both hands, and the middle toes of both feet, were absent. After an interval of five years, during which she had had four perfectly formed children, and, being now pregnant with a fifth, she again encountered the man, and was again obliged shake hands. She was so much disturbed by this occurrence, and so impressed with the idea that the child would be deformed, that in the evening she wrote down the event and her conviction regarding the child. When the child was born it was deformed exactly as the first had been.

ST. THOMAS'S HOSPITAL.

A REPORT OF A RECENT CASE OF HYDROPHOBIA.

SEVERAL cases of hydrophobia have recently happened in the metropolis. We are indebted to Mr. Henry Summerhayes for the following, which has been lately under treatment at St. Thomas's Hospital. The commencement of the attack with priapism is remarkable; nothing of importance, and no fact likely to throw light upon this strange malady, was made out apparently from the post-mortem examination. Of the post-mortem appearances, fluidity, or imperfect coagulation of the blood, probably owing to some morbid change, together with a congested condition of the brain, spinal cord, and meninges, seem to be the most constant:—

H. R., aged 42, was admitted at 10·45 on May 23 last, and the following history was obtained of him:—About six weeks previously he had burnt his face and both arms slightly with hot iron. Afterwards a little pet dog with which he was in the habit of playing had often licked his face and hands, has he he had been used to do before. Later this dog had begun to snap at people generally, and had on that account been drowned. A second dog, a stranger, is remembered by a son of the patient to have seized the leg of his father's trousers, some six weeks before, about the time of the burns; the son does not suppose that his father was bitten, as he said nothing of it at the time. Nothing remarkable, or that excited the attention of the man and his relatives, occurred until Friday, May 19, when being at work he was troubled much with priapism; in the night he was kept awake by priapism, and aching pain in the penis and testicles. It was the same on Saturday. On Sunday he is said to have become somewhat intoxicated early in the day; accordingly he went to bed early. During the night he complained very much of priapism and pain. He had no discharge at all from the urethra.

Monday, 22nd.—He rose at 6 a.m., drank some hot tea and went to bed again; he ate nothing. At 1 p.m., he consulted a Medical Practitioner, who ordered him some salts. At 6 p.m. he returned to bed, and suffered much during the night from priapism.

Tuesday, 23rd.—At 5 a.m. he drank about an ounce and a-half of water, which he soon vomited; his wife made him some tea, but he could not drink it. At 11 a.m. he got up; was very bad tempered, and so unreasonably so that his wife thought him scarcely in his right mind. He was sweating very much all the day. At 8 p.m. he was ordered to St. Thomas's Hospital by his Medical attendants, and was admitted at 10·45 p.m.

On admission he was perfectly sensible, and answered questions readily. What struck one most forcibly on looking at him was the great difficulty he seemed to have in getting his breath; he would fling his head back and open his mouth wide and gasp hard. At the same time he would point with his fingers to his throat, as if to signify that the cause of his distress lay there. The muscles of the fore part of his neck were seen to be rigid and contracted. The difficulty of breathing was not uninterrupted; there were short intervals of comparative ease and quiet, when his respiration was attended with long-drawn sighing rather than with gasping. Quite suddenly a new paroxysm would end the brief remission of distress. He was bathed in a cold clammy sweat; his tongue was covered with a brownish fur; his pulse was weak, 112; his pupils were dilated. He was given some water to drink, but as soon as the cup approached his mouth a paroxysm seized him and he dashed the cup away. The mention of water induced a paroxysm. 11 p.m.—An enema, consisting of beef tea ʒv., brandy ʒj., tinct. opii ʒi., was administered to him.

24th, 1 a.m.—The paroxysms had not abated; the enema had been retained; the pulse was stronger, 130. He was rational, and complained greatly of thirst. Nurse had watched him dip his fingers in water and struggle in vain to get them to his lips. 1.30 a.m.—A teaspoonful of brandy-and-water

was given him, and caused a most violent paroxysm. It was observed that any noise in the ward or the effort to speak brought on paroxysms. 2 a.m.—Enema, tinct. opii ʒii., beef tea Oss. 3 a.m.—There was no change, except that the poor man was considerably weaker. 5 a.m.—The enema was repeated, with the addition of brandy ʒi. 5.30.—He seemed to be trying to vomit almost constantly. The paroxysms were more frequent and more severe. 7.20.—The enema was again repeated. 10.30 a.m.—He died, exhausted.

Autopsy on the 25th inst. at 2.30 p.m.—No wound could be found on the body. The papillæ at the back of the tongue were prominent, and the submaxillary glands appeared somewhat congested; the mucous membrane of the pharynx was congested; the œsophagus appeared healthy, as did the larynx, trachea, and bronchi; the lungs were congested and slightly œdematous. The large veins were full of dark imperfectly coagulated blood. The diaphragm was very flaccid; its muscular tissue appeared healthy under the microscope, but appeared to break up very readily into ultimate fibres and fibrillæ.

THE LONDON HOSPITAL.

CLINICAL REMARKS ON A CASE OF INHERITED SYPHILIS, WITH MERCURIAL TREMORS, Etc.

(By Mr. HUTCHINSON.)

SYNOPSIS OF CASE.—*Mercurial Tremors, etc., in a Young Man believed to be also the Subject of Inherited Syphilis—Interstitial Keratitis commencing whilst he was under the Influence of Mercurial Poisoning.*

THE case the subject of which is now before us would be a most valuable and important one if we could only remove all doubt as to the diagnosis. As it is, I believe it to be an instance of keratitis and nodes consequent upon inherited syphilis commencing at the time that their subject was under the influence of mercurial poisoning, and in spite of that remedy. It may even be granted that, by reducing the lad's strength, the mercurial poisoning has favoured the outbreak of the inflammation of the corneæ. On the other hand, those who believe that mercurial poisoning can simulate the symptoms of syphilis, can produce nodes, etc., may incline to discard the facts which support the suspicion of inherited taint, and to consider the case from first to last as one of mercurial disease.

The patient is, as you see, a puny, pallid, earthy-complexioned lad; at the angles of his mouth are radiating lines of scar, from ulcerations in infancy. There is no reason to think that he has ever had acquired syphilis, but in front of his right tibia there is considerable periosteal thickening. Only one eye is inflamed, but in this the conditions of interstitial keratitis are well shown. His teeth are not malformed.

His case affords us a good example of mercurial poisoning, and as these rarely come under our notice, I will ask you to give special attention to them, as well as to the facts regarding syphilis. Our patient is aged 20, and, until two years and a-half ago, he was a packing-case maker, and had then tolerable health. He then went to a looking-glass manufactory. In this he uses mercury freely, but without heat. He tells me that all the men in the workshop suffer more or less; they only work one day in the week. Whilst at work it makes the throat dry and parched. The expectoration is increased, and the gums become sore. By restricting themselves to one day a-week, the men are able to keep at their employment, but all suffer more or less. On the first occasion he only remained a-year in the employment, and suffered only from the dryness of throat and sore gums; he had no tremors. He then went back to packing-case making for six months. During the last year he has been steadily at work in the quicksilver, and latterly he has often worked over-time in the silvering, *i.e.*, two extra hours in the evening.

Only during the last four months he has suffered from the tremors. It began by trembling of the hands when at work, and he was "nervous." The tremor was always increased if he was excited; if his master were looking at him whilst he was at work, his hands would shake very much. The tremor is generally worse in the morning. He has lost flesh, and become pale and earthy-complexioned. His breath has become fœtid and mercurial. Until about a year ago he had never had any particular ailment. He then had nodes on the front of the right leg, which ulcerated. He attended as an out-patient at the Metropolitan Free Hospital under my care, and was cured by iodide of potassium. A considerable amount of periosteal thickening still remains.

His right cornea began to inflame two months ago, and is now in a most characteristic stage of interstitial keratitis.

His parents are living, and are reported healthy. He is the second; the older one is a married woman of twenty-three. I have seen this sister, and, although she is pallid and puny, she does not present any characteristic signs of syphilitic taint. His teeth are not malformed, and the reasons for believing him to be syphilitic are—1st, the keratitis; 2nd, the nodes; 3rd, radiating scars at the angles of the mouth; 4th, his earthy complexion.

CASES OF OPERATIONS ON THE FEMALE GENITO-URINARY ORGANS.

(Under the care of Mr. MAUNDER.)

PREVIOUS to operating upon Case 1, Mr. Maunder demonstrated to the class (as is his custom in cases of vesico-vaginal fistula) the *modus operandi*, on a piece of folded red flannel with cotton wool between the folds and a hole cut through all. The layers of flannel represented respectively the mucous membrane of the bladder and of the vagina, the cotton wool the septum between them, and the hole the fistula. This being held by an assistant, the mode of vivifying the margin of the aperture and of introducing the sutures was readily shown and made intelligible to a novice.

Case I.—Vesico-Vaginal Fistula—Cured.

A. B., aged 23. A week after her first confinement, labour being prolonged and delivery effected by forceps, inability to retain the urine occurred. In the centre of the roof of the vagina is a circular aperture readily admitting the tip of the forefinger into the bladder, and behind this opening a thick semicircular band of cicatricial tissue is found narrowing the vagina very much at this point.

March 6, 1865.—The edges of the fistula were freely vivified by the aid of Mr. Bryant's modification of Hilliard's prong. The requisite portion of the cicatrix bounding one side of the fistula having been cut away, the vagina at once assumed its normal dimensions. Wire sutures, shotted, were employed, and the patient was quite well on the eighth day subsequent to the operation. During the day-time (14 hours) the bladder was evacuated by the catheter every three hours; during the night (10 hours) a catheter was retained in the bladder.

Mr. Maunder does not keep a catheter in the bladder day and night, because in previous and similar cases the constant presence of the instrument had caused the patients an unnecessary degree of pain.

Case II.—Ruptured Perinæum—Cured.

E. B., aged 24. First child, 24 hours' labour, natural delivery. Perinæum completely ruptured through the sphincter into the rectum; incontinence of fœces.

June 7, 1865.—The parts were vivified in the usual manner, and kept in apposition by quilled sutures. In this instance, in order to avoid the possible formation of a recto-vaginal fistula, Mr. Maunder passed one suture fairly beyond the rawed surface of the rupture in the recto-vaginal septum, the whole of it, in fact, being concealed from view. During the progress of the case the patient was twice attacked by erysipelas, and the success of the operation was in great measure due to the unremitting attention bestowed upon her by Mr. Mackenzie and Mr. F. M. Mackenzie (House-Surgeon and Dresser). The bladder was periodically evacuated by the catheter, and the bowels kept confined by opium, during a fortnight subsequent to the operation, and the parts at length healed soundly by secondary adhesion.

Case III.—Stricture of Rectum—Recto-Vaginal Fistula—Cured.

L. R., aged 26. Thin, cachectic-looking, married, never pregnant. History: Rheumatic fever four years ago, attack of piles two years ago, and since then defecation has been performed with increasing difficulty, alternating with very frequent and persistent diarrhœa. Three weeks ago she experienced great pain in the pelvis, followed, after a week's suffering, by a passage of fæces through the vagina, and a subsidence of pain. Patient's mother is said to have had cancer of the breast. The tumour was removed sixteen years ago, the subject of it being still alive and in good health; the disease has not recurred.

The patient is now, June 9, afflicted with a very tight stricture just within the anus, and associated with it, and running obliquely through the recto-vaginal septum, is a fistulous passage communicating above the stricture with the rectum, and also with the vagina just within the vulva. The

trunk and extremities are besprinkled with a chronic squamous eruption.

Mr. Maunder remarked that the presence of a stricture of the rectum in a person whose mother had been the subject of a malignant tumour, would naturally lead to a suspicion of cancer in the former also, but on carefully analysing the pathological history of both mother and daughter, he was of opinion that the stricture originated in a syphilitic diathesis.

A tumour had been removed from the mother sixteen years ago. It had not recurred, and she was in good health; it was, therefore, in all probability of a benign rather than of a malignant character. The patient, a young woman, had a syphilitic rash about her, and the so-called hæmorrhoids were probably condylomata. This form of secondary syphilis is constantly mistaken for piles by the public, and not unfrequently by members of the Profession.

The treatment of the case was conducted on the principle of stricture of the male urethra associated with perineal fistula—dilatation of the stricture with bougies; evacuation of the rectum above the stricture by daily injections was also adopted. The stricture was in this way readily dilated to No. 6 bougie, and fæces ceased to flow into the vagina, but further attempts with the bougie caused great pain. On examination with the forefinger, which could now be passed through the stricture, this latter was found to be a mere ring of dense tissue, and suitable for treatment by "splitting." This was effected by Weiss' three-pronged urethra dilator without subsequent pain to the patient, but with great benefit from a mechanical point of view, she experiencing no difficulty whatever in defecation. Small doses of iodide of mercury were administered by the mouth. On leaving the Hospital she was instructed to submit to the use of a No. 8 bougie for some time to come.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 23.

OUR MEDICAL SCHOOLS.

One of the greatest advantages of a public school education is the *esprit de corps* which it developes. When a boy leaves Eton or Harrow, he feels that he must support the credit of his school; and this feeling may not only save him from many snares and pitfalls in his younger days, but it may also stimulate him into a life of useful activity which he might not otherwise have embraced.

The same thing holds true of our Universities. A man has always a kindly feeling to another man who has studied in the same college as himself, even if half a century have elapsed between their collegiate careers. What a hold the old school retains upon us! How we love in our maturer years to re-visit the place, and see others acting the drama which we know so well.

"How dear the schoolboy spot
We ne'er forget, though there we are forgot."

And what a deep feeling of respectful love we bear to our *alma mater!* It is no longer a babyish fondness; it is gratitude for the fostering care with which our intellectual childhood was watched. It is a feeling of which we need not be ashamed.

Within these walls an impress was given to our character which time will never efface; and therefore we love our old University, and we try to support its credit, and we look with jealousy on every innovating hand which would profanely seek to improve it off the face of the earth.

In our last Number, addressed to beginners in our Profession, we laid before them a map of the different Medical Schools which they might join. Let them not decide rashly. There is an *esprit de corps* in Medical Schools as there is in all others. In some schools, this family feeling is sedulously cultivated. The student is told, "Become one of us; begin at the lowest round of the ladder, and you will ultimately reach its top. Go in at the door, and compete among your fellows. We shall take care that no one shall come over the wall and rob you of your just reward."

This conservatism is, perhaps, most practised at our oldest schools, such as Guy's and Bartholomew's. St. George's, too, is noted for it. In the younger schools, on the contrary, the advancing liberalism of the age is remarkable. The great prizes are thrown open to the Medical public. It little avails the candidate for a Professorship to plead that he has been an alumnus, and that it is but fair that he should be allowed to teach there, where he himself was taught.

The theory is, that the best man shall win, no matter what may have been his antecedents. University College was founded on this principle, and, although practically many of its teachers have also been its pupils, still there is a very considerable infusion of extramural talent. King's College, again, was founded as a religious antidote to University College. The founders of the latter professed to teach science and art; they did not stoop to inquire whether the Professor who taught Anatomy, or Chemistry, or Surgery, were of the same religious denomination as the student who learned from him. It seemed to them that they, as scientific men, had nothing whatever to do with religious controversy. Moreover, their Institution was founded at a time when the Liberals desired to shake the hold which the Church held over education in general.

But many very good men feared that the principles on which University College was founded favoured the overthrow of the order of English society, which in their minds was greatly dependent on the union of Church with State. Whether their fears were well or ill-grounded is one thing; but any one who considers the political atmosphere of 1830 may well excuse the Conservative party for looking out for squalls, and providing a haven of refuge against shipwreck of their political and religious principles.

At any rate, to this antagonism we owe the excellent school King's College, which was founded on the principle that religion and morality formed an essential part of all training, and which combined distinctive religious with Professional teaching. To the same end, it was provided that all its Professors should be members of the Church of England. This was, perhaps, unnecessary. The mere teaching a branch of science is one thing; that might be done by a man of any religion; the work of forming mental character and moral habits is another and far deeper matter, in which the agents employed must of necessity hold specific religious views.

King's, however, like University, chooses its teachers from all quarters, although sometimes it is not easy to detect the principle upon which the selections are made. When we find men like Murchison, Brinton, Bowman, Hulke, Headland, Salter, Mason, and Tanner among the leavings, we turn to the actual staff, expecting prodigies of genius. We find men of talent selected from all schools, even from the hotbed of materialism in Gower-street.

The student should bear all this in mind before he chooses his school. He should remember that in one school his

upward path will be smoothed for him, and that with average ability he may reasonably hope in time to attain the highest place. In other schools he will receive nothing but a first-rate Medical education, and if he seek one of the great prizes of the school he will have to fight for it and maintain his position against all comers.

We only give the facts; we abstain from comment. Let it not be thought that we advocate the close borough system. We regard it as a thing of the past, just as we regard restrictions on trade and pocket Parliamentary boroughs as obsolete relics of a bygone age. We should be shocked to see the education of the rising generation intrusted to an incompetent man merely because he happened to have been educated in such or such a school. We have always combated any attempt to stifle talent. Since the introduction of railways many young men have sought to gain additional information and prepare themselves for the battle of life by studying in many schools, abroad and at home, taking, as it were, the cream from each. Under the close *régime* these men would find no field open to them upon their return. The modern student, who deserves the name, will find it impossible to obtain a perfect Professional education at any one school, or in any one country. No Medical school is equally strong at all points. At one there may be a good Syphilographer, and a painstaking Medical clinical staff, but a teacher of obsolete midwifery. Students from such a school must needs have a winter at Dublin or Vienna. At another there may be an enthusiastic Surgeon and capital operator, but no field for the students to acquire practical familiarity with the duties of dressers. No man now can know his Profession well who has clung to one school, and he who has studied in many ought to be better off, and not worse, in any competition. At any rate, we say emphatically, let the best man win, just as we say let the best horse win, be it French or English.

THE SANATORIUM QUESTION AND THE CATTLE PLAGUE.

The Metropolitan Cattle Plague Committee are at issue with the Government on the best means to oppose the spread of the epizootic which threatens us with a dearth of beef and milk. The City Committee denounce the "indiscriminate slaughter" of infected beasts, which the Government have advised, and propose the erection of three great Hospitals in the north-eastern, north-western, and southern suburbs of London, for the reception and treatment of bovine patients smitten with the distemper. They are, of course, opposed by the arguments that such sanatoria would furnish fresh and effective means of spreading the disease; that each Hospital would be a focus where the poison by which the plague reproduces itself would be constantly concentrated, and whence it would be constantly disseminated; that the disease in itself is incurable; and that the amount of salvage in the shape of cattle that live through its cycle would be insignificant when compared with the amount of loss from the indefinite multiplication and re-enforcement of the contagious principle. The great argument on the other side urged by Dr. Letheby in the recent interview between a deputation from the City Committee and the Lords of Her Majesty's Council was derived from the effects of the treatment of typhus and typhoid fever in the human subject. Dr. Letheby said, "What would have been the result if in cases of typhus or typhoid fever in the human subject the practice had been adopted of not treating it at all? Treating that disease in Hospitals, there was now only one death in ten; and applying that reasoning to this particular case he came to the conclusion that it was a barbarous, unscientific, and cruel thing to send the infected animals to be slaughtered without an attempt to cure them." Now, it may fairly be objected to this mode of reasoning that there is really no analogy between the two cases—that of a man stricken with typhus and that of a plague-smitten ox. The life of a man—at least in this country—cannot be appraised in pounds, shillings, and pence; the life of the ox is worth just what the animal will fetch at the market price. The life of man is so immeasurably valuable a thing that it is difficult to say what risk should not be run to save it; the value of the life of an ox is so exactly known that it is not at all difficult to say what risk should not be run to preserve it. If by allowing one ox to live there is a reasonable probability that two others will die, it is clear that it would be folly to prolong the existence of the first for an hour. In the next place, there seems good reason to believe that this cattle pest is far more contagious than either human typhus or typhoid. It is certainly not identical with either. It at least differs as much from these fevers as does ovine variola from cow-pox or the small-pox of man. We are so entirely ignorant of what contagion is, how it is carried, and in what excretion or secretion of the body it is localised, that it would be out of place to dogmatise on the matter; but there is no absurdity in the belief that as the extent of the respiratory and cutaneous surfaces in the ox is so much greater than in man, and the quantity of the alvine and other excretions in the former so greatly exceeds those of the latter, the bovine animal must be a much more formidable engine than the human for the spread of a contagious disease. Again, disinfection can be practised in the case of an animal who is clothed and bedded as man is with far greater certainty than in the best arranged cowhouse or cattle sanatorium. But, even admitting there is an analogy in the case, we assert that the experience of fever Hospitals does not afford much argument for the establishment of cattle sanatoria. In the first place, typhus and typhoid fever are neither of them curable diseases in the strict sense of the term. Who now believes in cutting short a fever? The Medical Profession, by abandoning the violent remedies formerly in vogue, because the truth we are insisting on was not admitted, and by carefully watching and seconding the efforts of Nature in the means she adopts for eliminating the morbid poison, have reduced the mortality from these diseases considerably, although we think not quite to so low a standard as that at which Dr. Letheby places it. If we remember rightly, the deaths from typhus fever are nearer one in five than one in ten. But all that medicine can do is to give the human patient the best chance of living through the disease. To argue, therefore, from "the curability" of these fevers, as has been done by many of the writers in the public prints, is to argue on an entirely mistaken and imaginary basis. A case of cattle plague is no more likely to be "cured" than typhus fever is to be cut short. After considerable and dearly-earned experience, the Veterinary Surgeon may hit on the best method of conducting his patient through the disease; but how long will it be before that experience is gained? and what a hecatomb of victims of contagion and treatment will be first sacrificed. Every day that a diseased animal lives, there is the certainty of its giving off particles of pus, or of germinal matter, or of miasm, or vegetable spores, or animal ova, which may infect fifty others; and, in our ignorance of what contagion is, and in our knowledge of the innate carelessness of the uneducated classes, we would not even trust the adoption in every cow Hospital of Dr. Thudichum's elaborate code for disinfection to avert the evil. Then, again, what is the fact with regard to fever Hospitals as centres of infection? Is it not well known that typhus may and has been carried in numerous instances by convalescents from the London Fever Hospital? Do not all the nurses and Doctors become victims in turn to the contagion? and this, be it remembered, is the case where every precaution is taken to prevent the spread of the disease by *fomites*,—a mode of dispersion which it will be next to impossible entirely to control in the case of bullocks.

We hope we have said enough to prove that no true analogy exists between the case of the treatment of the continued fevers in man and the management of the bovine plague; and that

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were an analogy to be proved, the Medical experience on the subject of the cure of fevers and fever Hospitals does not furnish so conclusive an argument in favour of the proposed sanatoria as the partisans of the scheme would wish.

At this somewhat late period of the Epizootic, the Government have announced that a Commission is being organised to inquire into the origin, causes, and mode of spread of the disease. There can be no doubt that this is a step in the right direction, although it would have been better had it been taken earlier. We have little hope, however, that the labours of the Commission will throw fresh light upon the facts of the introduction of the disease into this country. The Privy Council have accorded to the City authorities permission to erect one Sanatorium for diseased stock. We would recommend that this should be at least some miles from the Cattle Market and the London cowsheds, and that a strict cordon should be maintained.

Since our last article on this cattle plague, several State papers of importance in reference to it have been published. One is the Report of the French Minister of Agriculture, founded on the information collected by the Alfort Professors, MM. Bouley and Raynal, during their visit of inspection to England and Germany. The French Minister insists on the contagious character of the pest, on the facts that it is endemic on the steppes of Hungary and Russia, that it never developes itself spontaneously elsewhere, and that for the last fifty years it has been confined to its natural home by the vigorous quarantine measures instituted by the Governments of Austria and Prussia on the land routes. The present facilities and new modes of communication, however, are said to have increased considerably the chances of the disease overleaping or evading the barriers which Germany has hitherto raised against it. Thus, the English outbreak is traced to Russian stock sent direct by steamboat to the English market. The result of this Report has been a decree of the Emperor forbidding the importation of cattle, raw hides, etc., from England and Holland. Dr. Thudichum's memorandum on the best methods of disinfecting, published by the Privy Council, is a good example of how much talent and sagacity may be well expended in giving directions on a very common-place and simple matter. Dr. Thudichum, in recommending chloride of lime as the best and most reliable chemical agent for disinfection, gives an opinion which we are glad to have from so good a chemist. Amongst the innumerable letters on the subject which have appeared in the public prints, perhaps two of the most valuable are Messrs. Saxton's and Payne's account of the outbreak at Mrs. Minor's farm, and Dr. Aldis's history of the disease at Eltham, which appeared in the *Times* of September 11. The difference in the postmortem appearances in the two outbreaks is worth noticing. In a case examined by Dr. Aldis there were neither prominent nor diseased glands, nor ulcerations in any part of the intestines, whilst in one of the cases examined by Mr. Payne the lining membrane of the stomach and small intestines was studded with a small vascular eruption, similar to the pustules produced on the human skin by croton oil. Neither of these accounts, it will be seen, resembles that of the characteristic intestinal affection of human typhoid; neither is the resemblance confirmed by Dr. Smart's elaborate report on the pathological appearances of the disease, which we reproduce in another column. He expressly states there is no ulceration of the intestinal glands, and that in this respect the condition of the intestine differs from that in ulcerative typhoid. The disease, however, whatever be its affinities, seems to be spreading, in spite of all that has been done to arrest it. This cannot be wondered at when we recollect that a commerce in manure and animal refuse is constantly going on, which it is next to impossible to supervise by any means at the disposal of the Government. It is some satisfaction, however, to learn that Ireland is as yet untainted. The distemper which was reported from Donegal turns out to have been the foot and mouth disease, and not the dreaded rinderpest.

THE WEEK.

DANGER OF SUBCUTANEOUS INJECTIONS.

Professor Nassbaum, of Munich, has just published an interesting account of an accident which happened to himself. Suffering from neuralgia, he had injected morphia under his own skin more than 2000 times—sometimes to the extent of five grains of morphia in twenty-four hours. Two months ago, he injected two grains of acetate of morphia dissolved in fifteen minims of water, and accidentally sent it direct into a subcutaneous vein instead of into the cellular tissue. He gives a graphic account of his dangerous position for two hours, after which the effect passed off. He has seen similar effects in a smaller degree in two of his patients, and the practical lessons are, that as it may be impossible to avoid veins at all times, and one may be punctured unawares, subcutaneous injection should always be done *very slowly*. The effects are so instantaneous that the syringe can be stopped at the first sign of danger, and some of the injected fluid mixed with blood may even be sucked out again by the syringe. It is very remarkable how the effects of the same dose of the same substance differ when directly injected into a vein and mixed with the venous blood, and when they filter into the blood from the cellular tissue through the unbroken coats of the vessels.

MEDICAL TESTIMONY AS TO CAPITAL PUNISHMENT.

In another column we publish a letter by Dr. H. G. Lyford, for many years Surgeon to the County Hospital at Winchester and to the County Prison near that place. We believe Dr. Lyford's statement as to the moral effects of a public execution upon the surrounding population to be perfectly true. What he says of the painful and prolonged nature of the death that hanging occasions is certainly not in accordance with common opinions. If it were as Dr. Lyford states, it would be an argument in favour of decapitation, but not against capital punishment; in fact, it does seem probable that the guillotine would strike more terror into an English multitude than the rope. After all, this question remains: Is it possible to punish severely without shortening life? What is the difference in principle between shortening life by the slow operation of perpetual imprisonment, low diet, hard labour, with solitude and darkness in the bowels of the earth, as Dr. Lyford suggests, and cutting it off by the axe or the rope?

IRVINE v. WILSON AND ANOTHER.

The arbitration case which occupies so large a portion of our space this week, is, we are sorry to say, not an uncommon, although it is a very curious one. It appears to have been reserved for the Profession of Medicine to produce gentlemen of such disinterested probity and widely-reaching benevolence that they are ready to come forward on any occasion to depreciate the value of Professional services, and lower the gains of their Professional brethren. We repeat that we believe no other profession can show instances of such disinterested benevolence. Passing a catheter is so easy and slight a matter, according to Messrs. Whittle and Wigglesworth, that if you are regularly attending a patient it is wrong to charge for it at all, and half-a-crown under such circumstances must be ample remuneration! Really, we should be curious to follow these two gentlemen about in their daily rounds of practice. With their estimation of the value of Professional services, in what very uncomfortable positions they must constantly find themselves. How they must blush when they pocket a guinea for a consultation! We earnestly commend Messrs. Whittle and Wigglesworth to the estimation and regard of their Professional brethren, who will not be slow to appreciate the high

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motives of self-sacrifice which have led them to adopt an arduous and expensive Profession, from which their consciences will not allow them to derive a higher scale of remuneration than that which would requite an ordinary mechanic.

SANITARY DOINGS IN BRIGHTON.

At length, after many delays, the Town Council of Brighton are taking some steps towards the appointment of a Medical Officer of Health. They appear to move reluctantly in the matter, and only in consequence of determined pressure from without. The question now under consideration is, the amount of payment to an Officer of Health, respecting which the municipal authorities have very inadequate ideas. We may shortly report particulars, which may prove instructive. In the meantime, the Medical men of Brighton, who are very numerous, and who can exert plenty of influence when an Hospital election is to be carried, should inquire what is doing, and strengthen each other's hands. The municipal elections are approaching, and the Doctors should not stand aloof, but vote—and induce their friends to do the same—that their influence may be felt in the choice of those who are to manage the affairs of a town with which Medical interests are so intimately mixed up. The Profession in Brighton have shown themselves exceedingly prompt to correct any aberration on the part of each other; it will now be seen what true *esprit de corps* they possess, and whether they are equally ready to stand together to secure their common interests, and to help one another in a true brotherly spirit.

THE FRENCH STATUE TO JENNER.

Continental nations were not, as a rule, slow in acknowledging their obligations to the discoverer of vaccination. During Jenner's life he was elected Honorary Fellow and Corresponding Member of a large number of foreign scientific bodies, including the French Institute, and medals in his honour were struck in France, Italy, and Prussia. These, it may be said, were not very substantial rewards, but they were at least in proportion to those which he obtained at home. When Jenner was complimented by the Emperor of Russia on having received the thanks, the applause, and the gratitude of the world, he replied that he had received "the thanks and applause, but not the gratitude;" and if gratitude was to be estimated by guineas he was certainly right. Honours and wealth, however, are so generally bestowed by mankind in the inverse ratio to benefits received, that as things go we do not think our great countryman's life and memory can be cited as furnishing a striking instance of public ingratitude. The first Napoleon once said that he could refuse nothing to the name of Jenner, and France, acting under the same feeling, has now chosen the discoverer of vaccination as *the* Englishman whose monument shall stand on her shore an international pledge and memorial of amity. The Société des Sciences Industrielles de Paris, who were the originators of the scheme, chose Boulogne as the place where the statue should be erected, not merely because it is the great thoroughfare between London and Paris, but because vaccination is said to have been there first practised on French soil by Woodville and Nowell in 1800. The inauguration of the statue was performed by M. le Maire on the 11th inst. As usual on such occasions, various orations were delivered and ceremonies performed, the details of which we spare our readers. The statue is from the atelier of M. E. Paul, who, in admiration of Jenner, has declined all remuneration for his labours. It "stands on a marble pedestal about twelve feet high, and measures nearly ten feet in height. It is of iron, bronzed by galvanic aid, and cast by M. Brochon, of Paris. The *pose* of the figure is easy, and clothed in the costume of about 1810. The head is slightly inclined, as though absorbed in thought. In the right hand he holds a lancet; the left hand reposes on a pile of treatises placed on a pedestal, from which depends the sketch of a cow. The right foot is firmly placed over the word 'Angleterre,' while the left is advanced over the word 'France.' On the border of the ground work is inscribed the name 'Jenner,' and on the pedestal is imprinted 'A Edward Jenner, la France recognaisante, 11th Septembre, 1865.'"

SPANISH MEDICAL CONGRESS FOR THE YEAR 1866.

At the close of the Medical Congress of the year 1864, a managing committee was selected for the duty of organising the meeting of 1866, under the Presidency of Dr. Melchor Sanchez de Toca. All subscribers are enrolled as members of this committee, and it addresses itself to the support and adhesion of the Medical world at home and abroad. The two first days of the Congress will be devoted to the reading of essays on Medicine, Surgery, Pharmacy, or the auxiliary sciences. Each written paper is not to occupy more than twenty minutes' time; such superabundant detail as shall be deemed indispensable to elucidation of the subject will be placed on the table, and have to undergo consideration in the publication of the *Transactions;* but conciseness is strongly insisted on, and also that a summary of facts and opinions should form part of the written essay. If this recommendation be not generally attended to, some papers, it is feared, will have to be sacrificed. The subjects appointed for the Congress of 1866 are—

I. The reforms required in public charities, Hospitals, dispensaries, prisons, garrisons, and public establishments in their Medical administration.

II. The histological, chemical, and clinical analysis of purulent infection.

III. The nature of typhoid fever, and the treatment to be adopted.

IV. What are the reforms required in the existing penal code, considered under the light of Medical science?

The regulations for the forthcoming Congress remain the same as appointed for the Congress of 1864. We think it well to draw attention to the following:—If any foreign member wishes to take part in the discussions, he is permitted to speak in French; the reply may be in French or Spanish. The subscription is 60 reals, and each member will have a volume of the *Transactions*. The committee will do their best to facilitate the means of communication with absent and distant Professors of Medical science, etc. The two first days of the meeting having been more especially devoted to written verbal communications, the other four days are allotted to the discussion of the subjects designated by the committee. Communications and inquiries to be addressed to the Secretary, Dr. Pablo Leon y Luque, at Madrid.

Leeds Students' Testimonial to Mr. Jessop.—Many of the present and former Students at the Leeds School of Medicine, feeling themselves to be greatly indebted to Mr. Jessop for much valuable clinical instruction given both in the wards of the Hospital and privately in his own rooms, resolved to seize upon the occasion of his resigning the office of House-Surgeon at the Leeds General Infirmary—which appointment he has held during a period of more than five years—for testifying in a practical manner their appreciation of his labours on their behalf. The testimonial—one of Messrs. Smith, Beck, and Beck's largest and most valuable microscopes—was presented to Mr. Jessop on Saturday, the 9th inst., by a deputation of Students appointed for that purpose.

Mr. Sprague.—At the Central Criminal Court the grand jury ignored the bill against Charles Gordon Sprague charging him with a rape upon the person of Hannah Hart. The prisoner, it will be recollected, was the person who was lately tried at Exeter, and acquitted, on a charge of attempting to poison his mother-in-law, Mrs. Chalker, at Ashburton. On the application of Mr. Sleigh, his counsel, the prisoner was discharged from custody on the announcement of the finding of the grand jury.

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MEDICAL REPORT OF THE THIRTY-FIFTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

HELD AT BIRMINGHAM FROM SEPTEMBER 6—13.

[*From our Special Correspondent.*]

The meeting of the British Association for the Advancement of Science has once again become an event of the past. From the central position of the town of Birmingham, it was expected this meeting would be one of the most decidedly living representatives of the series. It is, however, felt very generally that the proceedings, on the whole and by comparison, have been slow, and that in the sections no brilliant debate has enlivened and enlightened the ordinary routine. Why this should be so—and there is a kernel of truth in the sentiment—admits, perhaps, of being explained by virtue, not of one, but of several reasons. In the first place, the weather during the sittings was, in fact, too hot to allow of any friction whatever, mental or physical; then the external inducements to work were absent. "So much to see; so much to see!" that was the cry. Who will sit day after day, through section after section, when all Birmingham exposes her chaste art, and when Warwick Castle, Kenilworth, and the home of immortal William are within easy reach, to say nothing of a brewery at Burton and mines inexhaustible the Black Country throughout? Once more, and lastly, there was a slight local mistake, which led to some flagging in the attendances. It is a mistake constantly made, and most important;—we mean that of separating the Sections by too great distance of space. We do not exaggerate when we say that on the present occasion it was actually fatiguing, physically, to attend even half the Sections in one day, while it was impossible to make sure of hearing any two papers read during the same noon. In future, we trust the central executive will press on the local committees the vital necessity of securing a position for the Sections that will bring them within easy reach the one of the other. We believe that in Birmingham all the Sections might have been brought close to each other but for some foolish misunderstandings. In the case of towns where there really are not sufficient rooms near enough to each other, why should not temporary rooms be erected and fitted up? A temporary building might be constructed in wood, and handsomely decorated, that should place every Section under one roof, and be in the end less expensive than the present clumsy and inconvenient system, which not only makes one Section practically inaccessible to the other, but often provides that the Section most numerously attended shall have the smallest space, and *vice versa*.

This year a change has been instituted in respect to the Section which mostly concerns the Medical world, and which will, we fear, be hazardous. For some years past, as our readers are aware, there has been a Section called "Section D.—Zoology and Botany," and a "Sub-Section D.—Physiology." Practically, the Sub-Section has been conducted with all the appearance and dignity of a Section, and of late years the said Sub-Section, owing to the popular character of its proceedings, has been rising in position until it has become D. number one. Thereupon has arisen jealousy and divers splittings of opinions whether such and such a paper were zoological or physiological. In Physic we sometimes have a dispute whether a case is Surgical or Medical, but then the fee, as Mr. Guthrie taught, comes in well to decide the question. Here there is no such regulating influence at work, and disputes once commenced continue. For some years past, then, the zoologists have lent no willing voice to sustain the Sub-Section, and we have heard of its dissolution until the expectation was worse than the reality. This year a crisis has come from another cause. The anthropologists, who are becoming strong, have fought with becoming courage and certain skill for a Section all to themselves. The General Committee, resisting this attack, has been stirred up to do something, and has therefore determined that next year the Section of Zoology—Section D.—shall merge, and that a comprehensive Section of Biology shall take its place. The Section of Biology is to be divided into three departments, to include Zoology, Physiology, and Ethnology or Anthropology, and each department is to be governed by a Vice-President. It is not as yet very clear what the President of the Section is to preside over. For ourselves, we think this change is hazardous; it is an admitted compromise of several interests, and it reaches none actually, to their satisfaction, for the precise fact is, that there are now instituted three new Sections, *alias* departments, with a central organisation not well adapted for the independent governance of either department. If there be one committee for all the Sections, there will be endless disputation in dividing the work and electing officers. How much better, how much simpler, to have let the Sections normally increase, and to have given to each Section an independent organisation. We shall see what time and experience will prove, and if our bad omens are false, why then we shall be the first to be glad.

The Physiological Section, mustered this year under the Presidency of Dr. Acland, of Oxford, Regius Professor of the University of Oxford, true scholar and gentleman. No selection of President could have been happier. He was supported by,—*Vice Presidents:* John Davy, M.D., F.R.S.; Professor Rolleston, F.R.S.; Professor Lionel Beale, F.R.S.; Professor Van Der Hoeven; Edward Smith, M.D., F.R.S., LL.D.; Professor John Hughes Bennett, M.D., F.R.S.E. *Secretaries:* William Turner, M.B., F.R.S.E.; Alexander Fleming, M.D.; Thomas P. Heslop, M.D.; Oliver Pemberton. *Committee:* J. Balding Barkway; F. T. Bond, M.D.; Charles Brooke, F.R.S.; Frank Chance, M.D.; T. S. Cobbold, M.D., F.R.S., F.L.S.; T. A. Carter, M.D.; Dr. Gilbert Child; Robert Dunn; M. Foster, M.D.; R. Garner, F.L.S.; George D. Gibb, M.D., F.G.S., LL.D.; Arthur Gamgee, M.D.; J. Deaken Heaton, M.D.; William Hinds, M.D.; R. P. Howard, M.D.; W. R. Hughes, F.L.S.; G. M. Humphry, M.D., F.R.S.; Furneaux T. Jordan; W. H. Kelburne King, M.D.; W. H. Lightbody, M.D.; Professor Macdonald; J. R. Milner; Professor Parkes, F.R.S.; Henry Power, M.B.; Dr. Ransom; B. W. Richardson, M.A., M.D.; and Edward Waters, M.D. We also observed present Dr. Crisp, Mr. J. S. Gamgee, Dr. Arlidge, Mr. E. Watkin Williams, Dr. T. Wood, Professor Wanklyn, and others well known in Medicine and general science.

Of the work of the Section this year we shall be able to form a more correct estimate when it is fairly before us. Let us, then, at once to the work, commencing with—

THE PRESIDENT'S ADDRESS.

By Henry W. Acland, M.D., LL.D., F.R.S.

Ladies and Gentlemen,—In addressing you from the chair this day, I desire first of all to express my sense of the unmerited honour thus conferred upon me. When informed that it was intended to propose me as your Chairman, my first impulse was without hesitation to decline so great a distinction, in order that the post might be held by one of the many eminent persons who usually contribute to the success of the Section, or to the renown of the Department. Further consideration seemed to show me that the greater homage would be to place unreservedly at your service such humble powers as I have, and to offer you that which I possess, viz., the force of profound interest in the progress of one of the most important departments of human knowledge, and of sympathy all but lifelong with its promoters.

I rely, therefore, on the support which you will generously give to my endeavours to secure all full and fair discussion that is consistent with a due regard to the limited time at our disposal.

It has become a custom that the Presidents of Sections should make some opening address, though it is held to be inexpedient that it should be elaborate or long. While debat

ing on the subjects on which I might usefully touch, I chanced to encounter the remark of a philosophic writer, that the time was come when it was a prime necessity for Biology that it should be separated from Medicine. The grounds alleged were, the imperfect education of Physicians, there want of leisure, and the magnitude of Biological science. There seemed to me such a mixture of truth and error in the remark itself, and in the general tenor of the data on which it was founded, that it appeared to me well worthy of your attention.

As to the imperfect education of Physicians, the remark is too general to be correct, and is not a topic proper to be considered here, further than to say, 1st, that it is to great Medical minds, from Hippocrates and Galen down to Haller and Hunter, that we owe the promotion, and, indeed, the very creation, of a large part of existing biological knowledge, so that these men cannot have been ill furnished for their work; and 2ndly, that it is certain that no persons who are not well prepared will in future make any additions of importance to this or any other department of science. The observation, therefore, on the whole, amounts to this, that in these days biological science has become too expensive to be committed to the care of any but those who can give to it undivided attention. This also is only true under limitation. It is true so far as this, that division of labour is as necessary for the perfection of this portion of science as of others; and further, that some parts of biology are become so complicated and so extensive as to demand for original work the whole powers of any man of ordinary calibre. But it would be quite as just if we were to lay it down broadly, "There has been no period when it was as necessary for the progress of biology as now it is, that its relations with Medicine should be closely maintained." Neither position would be wholly true, or, therefore, wholly safe. It may not be amiss to occupy a short time at the outset of our detailed labours with a brief consideration of the real scope of the pursuit in which we are engaged, and of the means which we possess for attaining our objects. I crave your indulgence if my analytical description fall short of your distinct conceptions or your more sanguine aspirations.

The objects of biological study are, unquestionably, as in most other sciences,—First, simply to ascertain what are the facts in a certain department of nature, with no regard to the practical consequences which can be deducible therefrom; and Secondly, but less directly, to discover the laws and devise the rules which are of various degrees of importance and value for the practical exigencies of mankind,—just as mathematical and physical astronomers investigate the facts which are necessary for the construction of the Ephemeris, and make it to be a work of equal value for the pure astronomer and for the practical navigator.

But some of the facts which physiology investigates, and the laws which it seeks to discover, happen to be of cogent consequence to all men equally,—to the thoughtful and the cultivated, because they have the tendency to illuminate the most hidden recesses of our mental constitutions, the most obscure traces of our origin, and our various correlations to other beings, animate and inanimate; to the mere "hewers of wood and drawers of water" among men, because it seeks to ascertain in the most precise manner the conditions of physical existence, to point out the work that can, and that cannot be done upon such and such an amount of sustenance. In short, it seeks to define the exigencies of the human body in respect of all the external circumstances in which it is ordinarily placed, in respect also of all other physical agents that can act upon, or be acted upon by it; together with the internal chemical and physical alterations to which these several circumstances can, directly or indirectly, give rise. It has to learn also the limits of toleration within which the body is confined by these external agents, and the way in which these limits are regulated—as the laws of toleration of climate, of heat, of food, of various noxious agents, and many other particulars, of which the catalogue would be greater than that of the ships of Homer.

Every person, therefore, whether he knows it or not—the statesman, who has to consider the sustentation of the people—the religious man (that is, every one who believes in a moral government of the world, or hopes for a future state, and who has opinions on the history or origin of the human race)—the animal man, who prides himself on his strength, or whose strength is to him for a fortune—the mother, rich or poor, who yearns by night and by day for the healthy growth of her tender offspring—the Physician or philanthropist, who desires to avert or to relieve diseases among communities or individuals of men—each and all of these are alike really interested in the steady progress of the most abstruse philosophical speculations of the physiologist, as certainly as of the commoner rules of a healthy life, which are to be safely deduced from them.

In reference, therefore, to the opinion which was just now adverted to, I think that Biology is to be extricated from the hands of Physicians only in a limited sense. No persons have so many grounds for advancing it as they. The Physician, abstractedly considered, combines all the characters to which I have alluded. He is, in respect of the health of the people, a statesman; as a man, like others, a religious man; not less than others, father and husband; as much as any, a workingman; by education, more or less, a man of science. In short, abstractedly considered, I say it is his special duty at least to advocate and, if he can, to promote the advance of physiological knowledge unfettered and free,—

1st. As a pure science.

2nd. As the basis of the Medical art.

3rd. As of practical utility in helping to regulate the lives and habits of society at large.

Now the hindrances to a perfectly free study of Physiological Science arise from two causes:—

1st. The intrinsic difficulty of the subject; and, 2nd., The prejudices of mankind.

To the consideration of these two points it may not be useless for us to devote some attention.

1st. As to the intrinsic difficulty of the subject.

Although the wisdom of this Association entitles this meeting a sub-section, I am among the minority who cannot understand the force of the arguments which go to class Biology (which term may be now used synonymously with Physiology) as a subordinate subject. Being, when properly considered, the most complicated of all the subject matter debated at this Association, it cannot be really subordinate to any, least of all to Zoology and Botany, which it distinctly includes. It may be an open question whether Physiology be a branch of Physics and Chemistry; it is not an open question whether it includes the knowledge of the characteristics upon which the classification of all entities that are said to have life is based.

It were an impertinence, however, now to spend time in arguing about the classification of sciences. It is sufficient for us to note the vast range of Biology, a range which every year makes more wide.

The knowledge of the actions of living beings depends, and necessarily depends, not only upon what may be learnt intrinsically, so to say, in the living beings themselves, but upon the collateral advancing waves of physical and chemical inquiry. How largely, for instance, in the last few years, have the idea of Conservation of Force in Physics, and the remarkable advance of the synthetical operations of the laboratory, affected our fundamental conceptions of the actions in living bodies, and increased the chances of our advancing a step towards the knowledge of what is essential in the phenomena which we designate life.

The intrinsic difficulty of this search in the present day consists not so much in the morphological examination of beings on the one hand as complex as Man, with all his varieties, and the problems thereto attaching (though this morphological examination of man in all his varieties is still incomplete), nor in the examination, on the other hand, of beings so inexplicably simple as our own *Amœba*, or as the ancient (and how ancient!) *Eozôon Canadense*, but in the causes and conditions of the actual or potential changes in the minutest portions of any one creature. The labours of Goodsir and Virchow and Beale, and of many others labouring in the same direction and in various ways, have shown, what was indeed long suspected, that the solution of the problem of the actual relation between Function and Organ may be sought, and has to be sought, among parts mechanically almost as fine as the Chemical Atom; for we have life, secretion, motion, generation in parts, to our present means of examination, structureless. Yet, although this may be the case, it would be a great error to suppose that there is not much work yet to be done in the more obvious department of Descriptive Anatomy which chiefly occupied older investigators. Every year seems to show this, from the researches of cultivated Palæontologists and Naturalists in every department: for both in this country and on the two continents additions are being unceasingly made to the stock of knowledge either of objects wholly new, or of objects or parts heretofore incompletely described.

For the purposes of the great scientific question of this age, the Causes of the present order of Life on the Globe, it would seem that the minutest accepted data of biological conclusion

may have to be revised under new methods. It is a saying among painters, "that a draughtsman *sees* no more than he *knows*." It is true in the same way in Natural Science, that the real signification of a known fact may be concealed for ages. Of this, Pathology offers many examples. The older naturalists, notwithstanding the great learning of such men as Linnæus and Haller, had comparatively either very simple or hypothetical and incorrect notions of the complexities of living Beings and their constituent parts. Chemistry, the Microscope, and the search for the Origin of Species have, in this country, widened the horizon of Biological study in a way not less surprising than does the dawn of day to a traveller, who, having by night ascended some lofty peak, sees gradually unfolding an extent and detail of prospect which he can generally survey, though he cannot hope to verify each detail and visit every nook in the brief time allotted to him for travel. The desire *rerum cognoscere causus* urges him even more keenly than to know the things themselves. Thus in Biology, the. aws of the genesis of every known organic being have now become as much the object of investigation as was once the nature of the being itself. The existence of defiuite species or varieties was formerly assumed in an arbitrary manner to be a kind of necessity. The search after the laws which produced those species, and the signification of them, has become as ardent as was once the definition of the specific characters. But it is a far more difficult pursuit, and requires either a very special education or remarkable natural powers. The difficulty pervades every department of Biology in gross and in detail. Darwin seeks the solution for the whole kingdom of nature. The Histologist, the Pathologist, the Organic Chemist approaches it in the detail of every mechanical texture, and of every organic chemical compound. We are apt to look on the museum of John Hunter as the most philosophic and extensive exposition of Biological science in this or any other country. And justly so. Inquiring originally into what is the proper treatment of disease, he asks in order, What is its nature? what its cause? how are the functions disordered? how are they performed in health? by what mechanism? how is this mechanism varied? whence did it originate? But compare with his knowledge the knowledge of biologists of the present period viewed collectively: take our knowledge of the ovum, for instance, and its development, or the minute anatomy of the tissues, or (may I venture to use the epithet for so vast a collection of ascertained truth?) the *nascent* chemistry of living structures, or the relations of osseous structures in the vertebrata. It were hard to say which is the more remarkable, Hunter's comprehensiveness, or the detail of modern science. Yet how many details are still needed for a safe Biological Philosophy.

Yet are we only on the threshhold of detailed knowledge. We still speak of many hard points with an almost childlike simplicity. What do we understand, for instance, of the cause of that which Herbert Spencer calls "Organic Polarity"—that is to say, the power, force, or tendency by which lost parts are repaired—by which a whole limb—or part of a limb—or even all but a whole body is replaced by the outgrowth from what remains of the original unmutilated whole—a process so common in Asteriadæ and Crustacea and other animals as to seem a matter of course in their history, while it is apparently a property which cannot exist in the higher animals? What do we know of the causes of hereditary transmission *in general* (a property wholly different from, and more unintelligible, than the hypothesis of natural selection), or of the transmission of disease *in particular*, as, for example, Carcinoma? What is it in its essence? How does it originate in an individual of untainted family? How is it transmitted? Is it an original property of the ovum *per se*, or of the nutrient plasma by which that ovum is nourished up to the time of its birth? Could food, or mode of life, or any specific agent eradicate the tendencies to transmission, just as in certain cases we empirically modify the transmission of tubercle? or is the transmission of the Carcinoma as inevitable in certain cases as the development of the germ? Grave questions for future solution.

These allusions to disease, I need not say, are purposely introduced. There seems to be a tendency in some modern physiologists to pay insufficient attention to the retrograde metamorphosis of living creatures. The study of death is as much an object of biological science as the study of birth. The whole being originates, reaches maturity, declines, and dies. So does every part. He strives with vain endeavour to grasp the history of any organic thing, who does not regard it in relation to its origin, its growth, its dissolution, its relations to objects external to it, the changes which it undergoes in itself and of itself, and the modifications, accidental or necessary, which external agents can and may induce in it.

General considerations of this kind have a certain, though subordinate office in scientific deliberations, and seem just now not out of place. It will be remembered that I have been speaking of the intrinsic difficulties of biological study. If I have correctly, though briefly, sketched the domain of Biology, the existence of these difficulties will be conceded. They are now insisted upon, not certainly so much for the sake of those skilled experts, our teachers, who are carrying on the conquest of nature, as of those many cultivated learners who, from want of leisure, cannot actively pursue, but who, from real interest, desire to aid and promote the study of biology. For them it is desirable to take from time to time a general survey of the aims and extent of biology, in order that they may bring the weight of their influence in support—1st, of free, unfettered pursuit of biology for its own sake; and 2ndly, of public education, such as may conduce in the next generation to a just appreciation of its scientific, its educational, and its practical value.

I am thus led to consider, 2ndly, the prejudices of mankind, "*opiniones præjudicatæ*," in respect of biology.

These resolve themselves into active prejudices and passive prejudices. Active lead men to object to it as harmful; passive lead them to regard it with indifference.

These prejudices are rapidly undergoing modification, but they have existed harmfully more or less, from various causes, among almost all but professed physiologists. I need only advert among the active prejudices to the so-called theological dread of free inquiry into the origin of races, and the origin of species generally. Among the passive prejudices, I would point to the want of appreciation of purely scientific inquiry that has no practical end in view; to objections of various kinds brought against experiments made for physiological, toxicological, or therapeutical purposes; to objections to the introduction of biological studies into courses of general education; to the tardy recognition of biological knowledge as the basis of practical Medicine, and of hygiene, public and private.

History gives the clue to the source of these prejudices—namely, the empirical assumptions of supposed truths made at former, and often ancient epochs, which have one by one to be eradicated from their respective departments before the advancing knowledge of ascertained natural law.

What we see around us in the natural world is admitted on all sides to be the result of the operations of causes working by fixed laws. Why those laws exist, or how they came to be, it is not within the domain of physical science to discuss. What (in so far as they affect living beings) they are, and what the mode and limit of their action, including, of course, the mode and limits of their possible modification, is the special province of biological science. Science, therefore, is not only at liberty, but is bound, at all times to test the correctness of opinions which bear on or have relations to the subject matter of science, and do not appear to have been founded on adequate scientific evidence. A great part of the scientific work in the present century has been that of recasting or rejecting received dogmas. This work is not yet complete, and possibly never will be. It is evident that new means of research show the incorrectness of the belief of many of the greatest minds. Plato was satisfied that the use of the liver was to be the seat of prophetic agency for the soul. Yet are we sure that, notwithstanding the researches of Bernard, Pavy, and others, we know even at this moment all the functions and uses of that organ? How long since is it that taurine was found to contain 25 per cent. of sulphur, and was not, as had been supposed, devoid of that substance? How complicated are the chemical questions of the hepatic functions, when viewed as a whole throughout the animal series, may be seen by a glance at M. Milne-Edwards's summary of these questions in his elaborate work now in course of publication.

The utmost toleration is required in dealing with the prejudices which we are considering: among other reasons, because truly there may be scientific prejudices as well as popular prejudices. A scientific man may become impatient of every opinion which rests only on probability; whereas some of the important issues of human affairs are not susceptible of absolute proof. A physician, or a lawyer, or a moralist, who always refused to act on the greater probability would be a sorry adviser to his client. But the work of the chemist or

the physiologist would be at once set aside if probability, and not ascertained fact, entered into his formula.

Different subject matters are taught or studied with different degrees of certainty, or by different methods; the methods and degrees of certainty must be known and acknowledged. There can be no just ground of objection to conclusions based on hypothesis so long as the promoters are ready to accept, on proper and reasonable evidence, new elements of calculation.

I spoke also of the passive prejudices of mankind in respect of biology. A curious chapter might be written on the slowness with which physiological principles have been generally received (I cannot say they are even now accepted by us) as the basis on which to secure public and private health. England is but even now awakening to these questions. The Registrar-General, the Army and Navy Departments, the Health Department of the Privy Council, the various Drainage Commissioners and Committees, and many other bodies are all engaged in collecting, disseminating, and in using physiological knowledge under various aspects It must be admitted that evidence as to what is and what is not favourable to the correct performance of the functions in men and other animals is even now often conflicting. It was said just now that the pure physiologist is too apt to disregard the processes "*præparantes ad mortem*;" so also he is too apt to look on health questions as problems of practice or art, and not of science. Yet the highest scientific qualities are requisite for determining with precision any problems affecting, for instance, nutrition, and the consequent capacity for labour of a population, viewed as a whole or as individuals: witness the investigations of your last year's President (now, happily, employed by the Government), and many of the important papers in Mr. Simon's valuable yearly Reports, and such memoirs as that of Professor Haughton, of Dublin, on "Work." In such cases, I will not say theory, but knowledge precedes, and regulates, and compels practice.

Similar considerations apply to the relation of physiology to practical Medicine. This art or science is undergoing revision under the influence of physiology—a revision somewhat indeed retarded by popular prejudice, but certain.

In looking back on the history of Medicine, we are at a loss to say which is the more curious, the sagacity of the older Physicians and Surgeons, considering the scantiness of their physiological knowledge, or their folly, considering the extent of it. The explanation lies in the intermixture of empirical (that is, of accepted, traditional, unquestioned) belief with really ascertained fact; and we are not now-a-days without danger of undervaluing the eminent artistic power and great practical shrewdness of former Physicians, in the presence of our more precise, but sometimes also less practically valuable scientific knowledge. Dr. Stokes, the eminent Dublin Professor, has lately spoken on this topic in a timely and earnest way.

The business of physiology and of an Association like this, as I just now said, is therefore not only to add new knowledge, but to destroy incorrect or imperfectly correct statement and belief. The incorporation of advancing Physiology with Medicine every year adds certainty to the latter, while it furnishes data as well as tests to the former. Experiment properly applied in Medicine under trained physicists and chemists will not only eliminate gradually all remaining error, but will make more definite the properties of therapeutical agents. In illustration it is sufficient to refer to some of the investigations of Claude Bernard, from whose great skill, combined with philosophic power, much may be expected. Yet it may be doubted if the importance of this alliance between Science and Medicine to the community at large is yet fully understood by the Legislature. Under the recent Medical Act, the whole expense of constructing a National Pharmacopœia was thrown by Parliament on the existing Practitioners of Medicine, and the cost of its future maintenance was charged on the students of Medicine: the national funds are to contribute nothing towards the great benefit, a benefit accruing to every one at some period of life, of a genuine and philosophical revision of known, or the discovery of new, curative agents. Experiment alone can decide conclusively on the mode of operation of various agents on the human body and on animals. These experiments are always difficult, often costly. The Government, as I said, do not acknowledge the duty of providing funds. Perhaps the Medical Council might. It is indeed charged with the administration of the only public funds that are applicable to keeping on a level with modern science the national catalogue of remedial agents and the mode of preparing them. If it could be induced to expend £1,000 a year, as under proper management it easily might, in experiments and reports bearing on the physiological action of preventive or remedial agents, sometimes perhaps suggested and aided by the British Association, what might not be the fruit to science and to the public and private health?

I have been assuming, what no one here will question, that the basis of Medicine is knowledge of biological laws. It is so, but only in the wide sense assigned at the outset to biological pursuits; viz., the study of the laws of decay as well as of growth—growth and decay of species as well as of individuals. But I must guard myself by saying that this does not include the whole basis of Medicine. Physiological experiment is necessary to obtain the laws of action on healthy bodies, but alone it does not explain the laws of action on perverted organic structures or functions, as is seen in the common instance of the different effect of opium on a man in health and on a man in disease. Clinical observation is of course beyond physiological research, and must, from its far more limited field, follow rather than precede. It aims at applying, in due course, all safe and established results of previous physiological inquiry; and adds the deductions from investigations exclusively its own.

Much remains to be done in comparing the effects of agents, and the causes of those effects on man and on the inferior animals respectively. The knowledge which exists on these subjects has become, I need not say, both extensive and precise. But new problems are constantly arising from the discovery of new toxic agents. Even new diseases occur, as is well instanced by cholera, implying either new conditions of circumstances external to man, or new combinations of the internal conditions of man.

Accordingly fresh experiments are perpetually required to meet the new problems; and it has become the interest and almost the duty of States to specially train and to countenance skilled experts familiar with the most recent methods and researches in these directions, with a view not only to fresh scientific knowledge, but to the great practical results that may be obtained. It is sufficient to refer as illustrations to Bernard's experiments, such as those on the Woorara—to the question of physiological antidotes—and to the more precise notions of the physiological causation and mode of action of fever poison.

These, you will observe, though apparently what are called Medical questions, are not less physiological questions proper, of vast importance to mankind.

A few more words in another aspect, and I will not venture further to trouble the Section, or delay our detailed work, which is ample enough. I have implied, what is sufficiently obvious, that physiology proper (I exclude such questions as the evolution hypothesis, which cannot be proved in this way) has become uncompromisingly precise, and that nothing will stand which does not bear the crucial tests of observation and, where possible, of experiment. But the experiments cannot in the present advanced state of physics and of chemistry be devised by ordinary men, nor even executed by them. Consequently every year old statements concerning the effects of agents so called physiological and therapeutical, are becoming of less value, and new ones of more. Most of us, who have passed the prime of life, must be content to learn from the more favoured in years. They who are young must be willing to be patient and laborious, if they would add anything of permanent value to physiological knowledge. The day in which hundreds of organic compounds are synthetically produced, and the microscope offers for mechanical analysis a clearly defining magnifying power of 5000 linear, is not one when rough work of hand, or conjecture unsupported by proof as to the chemical changes which go on within organic structures, will stand. What life is will long, perhaps always, evade our human ken; what is done during life, what can be done consistently with life, and what produces death among living things, every year makes more sure and more plain; every year makes the search more exciting, the reward more great, the reasons for admiration of the order of things on the whole more conclusive, and the admiration and awe more profound.

At the outset it was said that only very qualified assent could be given to the remark of a philosophical writer, that it is a prime necessity for biology that it should be separated from Medicine. It has been my endeavour to show the amount of truth which belongs respectively to the remark and to the dissent.

Physiology, to sum up, is become a science, precise, of enormous extent, bringing to its support mathematics, ad-

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vanced physics, difficult chemistry, accurate and comprehensive anatomy. Part of the basis of the science or art which averts or lessens suffering and disease, and postpones or makes easy death, depends in great measure upon its progress. But the applied and observational part can only be learned by the bed-side of the sick. Therefore pure biological science and pure clinical art must each have their votaries, but it must be the aim of each to learn from the other what is necessary for himself. May the State be wise enough (and it is becoming so in every civilised country) to appreciate these principles and their application! There never was an age—it is not ungrateful to the giants of old to say this—there never was an age when there were so many students, in the best sense, of Biology and of Medicine, actuated by a simple love of truth; and never a time when, as a class, they were so free from prejudice, so candid, and so patient.

The address of Dr. Acland was received most warmly. At its close the work of the Section commenced in earnest. The members met five times. In accordance with our usual custom, we herewith supply an abstract of every paper, taking the names of their authors in alphabetical order.

ABSTRACTS OF PAPERS.

ON LIFE.

By Dr. Lionel Beale, F.R.S.

Dr. Beale commenced by remarking that what he said would be both theoretical and hypothetical. The difference between vital and physical agencies were ably discussed, and Spencer's theory, that assimilation and reason were life, was skilfully combated. Assimilation was not common to the life of all orders where there was certain vital agency. The author alluded to the various kinds of life, and showed that life could not be distributed or passed through space. The matter in every living cell might be divided into three parts—that which was in a state of life; that which was dead, but had been alive, and that which was lifeless, but would be alive and after passing through that state would die. The living cell had been compared to a laboratory; but what laboratory was self-serving and self-creating, and what machine could make up waste like the living cell? Dr. Beale noticed the various kinds of life, and proceeded to notice vital movement, in which he remarked that there was no expenditure of force, and alluded to the fact that living matter moves upwards in spite of the attraction of gravitation. The difference between vital power and physical force, and the fact that the one was not attributable to the other, formed the concluding argument of the author.

ON THE FORMATION OF PUS IN REFERENCE TO THE FALLACIOUS DOCTRINE OF CELL PATHOLOGY.

By Dr. John Hughes Bennett, F.R.S.E.

Dr. Bennett, in his usual ready and emphatic style, delivered extemporaneously a description of his views of cell life and cell pathology. Without connecting himself with the pure physical school, he opposed Dr. Beale.

A brisk discussion followed.

BEEF AND PORK AS SOURCES OF ENTOZOA.

By Dr. Cobbold, F.R.S.

Dr. Cobbold prefaced the reading of his essay by some remarks respecting some specimens of parasites which he had brought specially from London. Coming to this paper, he referred to the general impression that the common pig was the principal source of entozoa. He asserted that birds and all animals of warm blood were liable to breed parasitic disease, and stated that, in spite of all preconceived notions, the human system was the home of at least two sorts of entozoa. He combated the popular idea that tapeworm was principally derived from measly pork, and asserted that the disease was as often contracted from eating beef and veal. He showed, too, that animals containing parasites did not always display unhealthy symptoms, therefore it was difficult to detect the disease, and asserted that persons who ate moderately of infected meat were liable to be affected with tapeworm. Young animals were less liable to have the disease, and persons eating their food always well cooked were most likely to escape any bad effects. In fact, eating meat always well cooked, and never under-done, was the only sure preventative. Dr. Cobbold, by the aid of diagrams, showed the different kinds of tænia, and stated that the hookless tænia was to be found generally in beef, and the hooked tænia in pork.

ON THE EFFECTS OF SCANTY AND DEFICIENT FOOD.

By John Davy, M.D., F.R.S.

Dr. Davy commenced by stating that although it is generally believed that health suffers and the constitution is impaired by scanty supply of food, he had good reason to believe that this impression is unnecessarily exaggerated. He had failed to discover to his own satisfaction that an insufficient supply of food created disease, and quoted the experience of many great travellers in Africa, and also of some connected with the Arctic expedition, to show that in great privations and a temporary loss of sustenance, the constitution was not permanently injured in consequence. In fact, Dr. Davy went so far as to say that occasional abstinence from food was likely to prove more beneficial than otherwise. He referred to those tribes of people whose supply of sustenance is precarious, and averred that no particular form of disease was contracted by their not being able to obtain what might be considered a proper quantity of food with regularity. He admitted that such tribes and people are often below the average standard in height and weight, but still maintained that they did not materially suffer in health in consequence of their occasional fasts. The same thing was observable in people of all ages. The persons who had been remarkable for longevity were invariably to be found among the poorer class of people, and were consequently not among those who fared the most sumptuously, or who, even in regard to the quantity, took a large amount of food. Dr. Davy drew attention to the fact that the Irish people suffer more from scarcity of provisions than we in England, and had been subject to famines almost unknown to us, yet the average longevity in Ireland was greater than in this country. His remarks also applied to animals, and he instanced that cattle which were not overfed were the healthiest, and that the Welsh sheep that obtained their sustenance from the scanty herbage that grows upon the mountains, were not worse than sheep better fed. Dr. Davy referred to that class of people, such as the poor needlewomen, among whom the mortality is great, but asserted that this was not owing to the poor supply of food, but rather to bad ventilation, sedentary habits, and other causes. His remarks were, however, principally urged against the present prison dietary system. He stated that our criminals were unnecessarily well fed, owing to the prevalent impression that too little food was dangerous to health, and he endeavoured to prove that a lower scale of diet would not be followed by any dangerous results to the constitution of the criminal. In fact, his remarks went to show that philanthropy in this direction had been carried too far, and by quoting the scale of diet given at various prisons he endeavoured to show that criminals were rather overfed than underfed.

IS THE OPINION THAT A DIET OF ANIMAL FOOD CONDUCES TO LEANNESS WELL FOUNDED ON FACTS?

By Dr. John Davy, F.R.S.

Dr. Davy said those who have advocated the opinion that a diet of animal food conduced to leanness had supported it by arguing that a vegetable diet was commonly richer than flesh in the elements from which adipose matter is formed, such as starch, etc., and further, that carnivorous animals were commonly leaner than herbivorous. He disregarded the first argument, inasmuch as certain kinds of animal food abounded in fatty matter. He instanced the case of animals subsisting on other animals, all of which were very fat, and he considered that tended to show that a diet of exclusively animal food was in no wise incompatible with fatness. Referring to our own species, it was easy to find corroborative instances. Butchers and their families, who used large quantities of meat, were not remarkable for leanness; and fishermen and their families were generally stout. The English, as a rule, had always been considered large consumers of meat, especially in the olden time, when vegetables were less abundant; and in those periods they were notorious for their stoutness. Did a vegetable diet tend to the production of fat? The Irish, living mostly on potatoes, should be distinguished for lustiness, though they certainly were not; and he had not heard fatness ascribed to vegetarians. Amongst our soldiers and sailors a fat man was a rarity; but that was no wonder, for though their diet contained a large proportion of animal matter, their meat ration was never in excess, and they were rather underfed than overfed; while at the same time they had a great deal of exercise. His opinion, in which he was supported by eminent physiologists, was that a mixed diet, partly animal,

partly vegetable, was best adapted to the wants of man, as well as most suitable to his taste; and that the safest way to avoid obesity was to live moderately, observing the happy medium between a too sparing and a too copious dietary; and, for the correction of obesity, attending rather to quantity than quality of food.

ON THE FUNCTIONS OF THE CEREBELLUM.

By Dr. Dickinson.

This paper was founded partly upon experiments made on a great variety of animals, chiefly of the lower order, and partly upon observations on human pathology. There were tables before the meeting, which gave the details both of the experiments and the cases. In the experimental part of the inquiry two classes of observations were made. The first consisted in a comparison between two similar animals, in one of which the cerebrum and cerebellum had been removed, in the other the cerebrum alone—so that the only difference between them was in the possession of the cerebellum. The powers which one animal had more than the other were believed to represent the functions of the organ. The general results were as follow:—1. The addition of the cerebellum to the medulla oblongata gives an increase of voluntary motive power in the four limbs—to the posterior in a greater degree than to the anterior. The power thus obtained is distributed in such a way as to produce even and balanced movements, and often appears to be exercised in a continuous and automatic manner.

2. The removal of the cerebellum has an effect upon the muscles of the limbs, which increases in proportion as the organ increases in size. It consists in a diminution of voluntary power and of muscular adjustment. When an inequality of effect can be noticed the loss is greater in the posterior limbs. There is a loss of habitual activity. From the effect of lateral injuries it must be assumed that each lateral half of the organ has an influence on both sides of the body, but to a greater extent upon that opposite to itself. 3. The removal of the cerebellum has no effect upon superficial sensation, on any special sense, on the action of the involuntarily muscles, nor on reflex movements. 4. In the human being it appears there is no constant effect from loss or alteration of the cerebellum, but failure of voluntary muscular power. Disease, or deficiency of the whole organ, invariably lessens voluntary power in the limbs, especially in the lower. The loss of one lobe produces its effect more on the opposite side than on its own. Disease confined to the cerebellum has no effect upon superficial sensation, on the intellectual powers, nor on the action of muscles supplied by the cranial nerves. Hence it appears that the function of the cerebellum is to supply the voluntary muscles of the trunk and limbs with self-regulating motive power. This is distributed in an inverse manner to the influence of the cerebrum. The latter has the sole control over the parts supplied by the cranial nerves, and the chief control over the anterior limbs. The cerebellum exerts its greatest effect upon the posterior limbs, less upon the anterior. Thus the muscles of the trunk and limbs are under a double rule, while those of the head and neck are regulated solely by the cerebrum. It appears that cerebellar movements are apt to be continuous and habitual, contrasting with the emotional character of those which originate in the cerebrum.

A discussion followed in which Dr. Humphry and Dr. Richardson expressed the conviction that the nervous centres act as a whole, and that their functions do not admit of isolation.

ON THE PREVALENCE OF TAPEWORM IN BIRMINGHAM.

By Dr. Fleming.

Dr. Fleming commenced by stating that it would be difficult to point to any department of Medicine or natural science in which knowledge has made more progress than in relation to animal parasites, and, after remarking on the labours of many eminent men in this field, he passed on to speak of the prevalence of tapeworm in Birmingham. He alluded to the fact that it is seen in its severer form among the patients of the several Hospitals of Birmingham, and quoted figures to show how much more prevalent tapeworm was in Birmingham than in many other large towns and cities. He stated that the number of in-door and out-door patients in the General Hospital during the year ending June 30, 1864, was 22,649, and out of these there were fifty-one tapeworm cases. Dr. Fleming also gave statistics of other institutions to prove his statements. Having thus spoken of the number of cases occurring in Birmingham, he considered the subject as well worthy of attention in respect of origin, cause, and prevention. The tapeworm in man was the highest degree of development of the black flesh worm or measle of the pig. The measle of the pig originates in the egg of the tapeworm which infests the bowels of the dog. These coming from the dog are scattered by the wind, taken with the food of the pig, and so the pig becomes affected with measle. Dr. Fleming next noticed the appearance of the pigs suffering from measle, and the parts most frequently affected, and also noticed the appearance of the flesh of the diseased pig. He attributed the prevalence of tapeworm in Birmingham to the large consumption of pork. The average number of pigs sold here per week was 1500. Of these 1000 come from Ireland, where pigs suffer more from measle than anywhere else in the kingdom. Much of the pork sold in Birmingham was measly, and what could not be sold in the joint was sold in the sausage form, where the disease was not readily detected. Dr. Fleming next noticed the fact that cooking and curing pork destroyed the bad effects, and noticed that in Cork there was a large quantity of measly pork consumed, and yet there was a great immunity from tapeworm, and this was owing to the circumstance that the pork was always cured. Having examined into the causes of the prevalence of tape-worm in Birmingham, Dr. Fleming went on to indicate the means to be taken for prevention. He urged that the pig should be supplied with thoroughly clean food and drink, and, as far as possible, removed from the neighbourhood of dogs. The official inspection of both living and dead pigs should be made as searching as possible, and he went on to instance the following manner in which pigs are examined in the south of Ireland:—It appears that in Cork the pig is examined for "measle" by official persons both in the living and dead markets. The parasite shows itself at a very early stage of the disease in the tongue, and this organ is inspected in the living market. The pig is placed on its side, and the mouth opened. The tongue is then drawn forward, and pressed firmly between the fingers in its whole length. The measle, if present, is felt by the finger and withdrawn through a scratch in the mucous membrane. If none are felt the pig is passed as healthy. The test is the best known, but as the worm may be absent from the tongue and present somewhere else in the body, a more certain mode of detecting the disease is desirable. In the wholesale dead market the inspection is made by making a free cut lengthways into the inner loin muscle at the side of the spine, and by cutting across the neck. Should the purchaser desire it, other cuts are made elsewhere, and if one measle is found the price is reduced, and if more seen, a larger reduction is made. The worse forms are not sold at all in this market. Dr. Fleming then went on to observe that however free pork might be from disease it should be always well cooked and well cured, as those processes destroy the parasite. In conclusion, it was stated that though measly pork was the chief source of tapeworm, it was not the only source; it might be traced, with good reason, to bad water and sewage contamination.

EXISTENCE OF AMMONIA IN THE BLOOD.

By Dr. A. Gamgee.

Dr. A. Gamgee read a note of experiments confirmatory of those of Kühne on the non-existence of ammonia in the blood. The paper mentioned that the highly interesting and elaborate researches of Dr. Benjamin Richardson had led him to the conclusion that the blood circulating in the living body contains free ammonia, which escapes when the blood leaves the body—the escape causing coagulation. Professor Lister's experiments controverted this hypothesis, and showed that coagulation could not depend upon the escape of a volatile substance. Dr. Kühne, of Berlin, assisted by Dr. Strauch, had also made experiments which led him to conclude that the blood does not contain ammonia. Dr. Kühne had adopted a different method from that of Dr. Richardson, using a re-agent which was unknown to the latter gentleman. This re-agent, called after its inventor, Nersler, was the most delicate existing test for ammonia. Dr. Gamgee had repeated Kühne's experiments on a larger scale, and with the most rigid care, and the results confirmed the conclusions of Kühne. It was a question whether the experiments were equally conclusive as to the absence from the blood of compound ammonia as well as of ordinary ammonia. Dr. Gamgee was, however, disposed to answer the question in the affirmative. Further researches would, he believed, confirm the results of his experiments, and prove that Nersler's re-agent is as delicate a test for the compound as for the simple ammonia. After stating these conclusions, Dr. Gamgee offered an hypothesis

which would, he thought, explain the differences that existed between experimentalists. The hypothesis was, that Dr. Richardson having used air in driving over the vapour of blood in his experiments instead of hydrogen gas, which was used in the new test, ammonia had actually been formed in the blood by the passage of the air through it. In this way ammonia could be produced, and so produced it was liable to become a source of error.

Dr. Richardson said that he had always avoided entering into any personal controversy on his own labours. He held it right to do his best in every work he had in hand, and then to leave it, assured that if the work were true, criticism, however adverse, would only confirm the truth, and if it were false, no defence would make the false true. The work he had done was therefore to him always as dead as was the work of other men, and as open to his own criticism as was the work of other men. By resolutely pursuing this course, he had saved himself from all those heart-burnings and disputations over which many frittered away their lives. As regards what had been said by Dr. Gamgee, this was the first time he had heard of the new test for ammonia, and, consequently, he could not give any opinion as to its value. He would confine himself to one or two points in debate. In the first place Dr. Gamgee had put forth as a fact what was in truth only an assumption, viz., that Professor Lister had disproved the view that the coagulation of blood did not depend on the evolution of volatile matter from blood. When read in all their bearings, Mr. Lister's experiments, in fact, went in favour of that view, in spite of his own construction of their meaning. In the second place, and as bearing specially on Dr. Gamgee's experiments with Nersler's test, those experiments, four altogether, were far too few in number to be reliable when they were placed by the side of the large number of experiments which he (the speaker) had made; the test itself was also possibly open to objection, since a test for simple ammonia evolved from water was not necessarily a test for ammonia evolved from an organic fluid, and accompanied by organic substances. Again it was certain that this new test gave results in direct contradiction to the old and, he believed, still reliable tests that had been applied with a positive result,—he meant the chemical test with the chloride of platinum, and the microscope test. Dr. Gamgee had advanced the hypothesis that the ammonia substance which he (Dr. Richardson) had obtained from blood was an unforeseen product of experiment; that the ammonia was made by the act of passing air through blood. He (the speaker) could not accept this explanation as it was offered, because it was not necessary to pass air through blood to prove the presence of ammonia; but he could accept it in another sense. If, for instance, it were true that the contact of air with blood gave rise to the formation of an ammonia even when air was merely carried through blood in column, what must not be the production of ammonia in the contact of air with blood in the lungs, where the distribution of air over blood was so complete and over so extended a surface? On Dr. Gamgee's proving, ammonia must be made in respiration; and what then became of it? Some of it must be taken up by the blood, and ought to be found in blood. He (Dr. Richardson) thought it probable that ammonia was made in respiration in the manner suggested, and that the ammonia evolved from blood had such origin. In conclusion, he repeated that the question raised by Dr. Gamgee rested upon the accuracy of the new test, and in its applicability to the special question under discussion. He was not prepared to accept the test as reliable and as subversive of all other tests, from what he now heard, but if the Section would suspend its judgment, he promised that on his part he would look into the subject carefully, and should the new test prove the old tests to be fallacious, he would be amongst the first to accept the truth. (Cheers.)

Dr. Rolleston thought Dr. Gamgee's paper most important, and believed that the new ammonia test would possibly prove the most delicate of all the tests yet employed. He was of opinion that coagulation depended on the contact of blood with a foreign substance, and affirmed that the addition of ammonia to blood did not suspend or interfere with the process of coagulation. The latter statement gave rise to a double experimental challenge between Drs. Rolleston and Richardson for next year, which excited a round of laughter not often seen in so grave an assembly, the combatants joining in most heartily.

Professor Wanklyn pointed out probable sources of fallacy in the application of the new test.

Dr. Gamgee, in reply, said that it was not his intention to repeat any of his experiments. He thought that three or four were sufficient if performed with due care, and for his own part he was satisfied. In reply to a question, he said that ammonia was exhaled by the breath,—of that fact he had no doubt; but it was not exhaled by the blood,—that was the point he contended for. It was very probable that ammonia was formed in respiration by contact of the air and blood. As regarded the action of ammonia on blood, he must state that by adding ammonia to blood removed from an ox, the process of coagulation was suspended. He presumed this was due to the ammonia, but in some cases blood did not coagulate.

The President, in proposing a vote of thanks to Dr. Gamgee, for his able paper, which was warmly carried, said he must congratulate Dr. Richardson on the temperate and open manner in which he had met the objections that had been made to his views. It was in this spirit that men of science should always conduct their inquiries, holding nothing by prejudice, and anxious for one simple object, the elucidation of truth and the advancement of knowledge based upon the sound and accurate observation of natural phenomena.

REFUTATION OF THE VIEW RECENTLY PROPOUNDED THAT THE FOOD COMES IN CONTACT WITH THE VOCAL CORDS IN DEGLUTITION.

By Dr. Gibb, M.D.

Dr. George D. Gibb read a paper which formed the refutation of the view recently propounded, that the food comes into contact with the vocal cords in deglutition. He referred to the recent experiments of M. Guinier, of Montpellier, in relation to the function of deglutition, which were brought before the Academy of Sciences in Paris, and given briefly in the *Comptes Rendus* for May last. These experiments by M. Guinier were performed upon himself by means of autolaryngoscopy, and consisted in the introduction of food into the larynx whilst the little mirror was in the mouth, the epiglottis remaining erect; and he therefore inferred that, in swallowing, the food passed into the top of the windpipe, glided over the vocal cords, and tumbled into the gullet, the epiglottis still being erect. He inferred also that fluids always passed under the epiglottis in gargling or swallowing fluids. Dr. Gibb questioned the conclusions drawn from the experiments, and maintained that the act of swallowing food could not be demonstrated with a mirror at the back of the mouth, and that the introduction of food into the larynx behind the epiglottis showed the tolerance of the larynx under certain circumstances, but did not show that this cartilage remained erect in deglutition. This tolerance was further shown by the still later experiments of M. Krishaber, who passed chewed bread into the larynx with his finger, along the posterior surface of the epiglottis, and on a deep inspiration this was drawn downwards into the trachea, and could be retained there as long as the bolus remained warm and soft. Dr. Gibb referred to cases in his own experience, where the epiglottis was destroyed by disease, and, notwithstanding, the food did not glide over the vocal cords, as the soft parts at the top of the windpipe approximated and allowed the food to slip into the gullet. It could be seen also, that when the act of deglutition was examined with the laryngoscope, the cavity of the larynx was quite closed up, and then covered by the depressed epiglottis, so that food could not enter in the natural way. From these well known facts, with others which he mentioned, Dr. Gibb stated that our well-known views in relation to deglutition, and the part the epiglottis played in it, remained sound, and could not be controverted by any experiments that might be made with the aid of the laryngoscope.

OBSERVATIONS ON A FEMALE SKELETON AGED 104.

By Dr. Humphry, F.R.S.

The author commenced by saying that he had no exact authority for the stated age, but that he had no doubt of its authenticity, it having been corroborated by other circumstances than her own statement. He wished to call attention to peculiarities in the skull and thigh-bone, both of which were exhibited. The female had been a fine, healthy, strong woman, troubled with no other disease than a slight affection of the bronchial tubes and mucous membrane, accompanied with a little cough and expectoration. The peculiarities noticed were an unusual heaviness and thickness of the skull bones, which were some six ounces heavier than usually found in old persons. On the contrary, the neck of the femur was singularly light, and why this should be the case, and the opposite result obtain in the bones of the skull,

seemed a striking anomaly. Where absorption appeared to have affected the other bones in the usual manner, why should the skull prove an exception? Dr. Humphry attributed this and other noticeable differences found in old persons to what he called the capriciousness of old age.

Dr. Richardson said that a few months back he examined at the Birmingham workhouse an old woman 104 years of age, and in her case he noticed the peculiar flexibility of the walls of the chest. The heart-beat was perfectly true, and the respiration good. The mental faculties were declining, and there was considerable deafness.

A Member remarked that he knew of two cases in Gloucestershire at the present time, the one a woman nearly a hundred, and the other a man said to be a hundred and seven years of age. The old lady was able to relate gossip of eighty years ago, and the old man still regularly attended church, walked about the village, and conversed with his neighbours.

Dr. Rolleston gave the results of his observations in the post-mortem of a man supposed to be 106 years old. He noticed one very great contrast between his case and that of Dr. Humphry; that whereas the skull-cap in Dr. Humphry's specimen was exceedingly thick, in the case which came under his notice the walls were very thin indeed. The skull-cap was entirely soft, and could be cut without difficulty; but when he got through the osseous process, he found the dura mater was strongly adherent. Dr. Rolleston added that in most cases of people of advanced age, he had found they had eaten largely of sugar.

Mr. Furneaux Jordan thought it would have been very beneficial to science if Dr. Humphry had made sections of the thigh bone to ascertain the cause of lightness. Was it a pure atrophy, or was it simply a fatty change?

Dr. Humphry, in reply, thought we could obtain no definite idea of the causes which led to old age, but he believed it was absolutely requisite to be born to live long. That is, a person must be born with all the organs perfect and healthy. The causes affecting these during the rest of life were very secondary, for he found that all kinds of life led to old age—early and late rising, temperance and the reverse. He thought, however, that it was better to work on without troubling ourselves with the question, "Shall I become an old man?" He differed from Professor Rolleston in his opinion respecting the action of the arteries causing the thickening of the skull, as from the same cause the femur ought to have been affected.

ON THE CAPILLARIES OF THE CORNEA.

By Dr. W. H. Lightbody.

Mr. Turner read this paper by Dr. W. H. Lightbody. The object of the paper was to show that the capillaries of the cornea were surrounded by spaces which, from the corpuscles they contained, Dr. Lightbody believed to be lymphatics. The paper, we learned, was a part of an academic thesis which had been approved of as a remarkable specimen of original and earnest work. The illustrations, all made by the author, were perfect.

THE PARASTOID FORM OF FŒTAL DEVELOPMENT.

By Professor Macdonald.

The Professor said the object of the paper was to challenge a re-examination of the circulation in the human embryo during its earlier stages, in order to discover the true course of the blood circulation. After entering at detail into this subject, Professor Macdonald went on to say that his intention had been to point out the following postulates:—1st. That the blood circulation arises from the inherent powers and properties of the embryo itself. 2nd. That when it became necessary for the embryo to connect itself with a wider circulation, it protruded its venous trunk to ramify among the branches of the vascular area, and by its capillaries to return to the heart for nutritive distribution by means of the two trunks to the chorda centralis, along whose sides these trunks passed onwards to the heart and lungs for the progressive development of the fœtus. 3rd. That the course of the circulation thus established continues during the whole intra-uterine life of the fœtus, after the abdomen has been closed, and the heart fully formed into auricular and ventricular cavities, and that the blood sent by the umbilical vein to the placenta is returned to the fœtus by the umbilical arteries. 4th. That the action of the heart forces on the circulation, partly to the head, and partly against the stream of aortic flow, and by this means the blood is forced laterally into the intestinal ramification of the arterial circulation. 5th. That with the first respiration of the fœtus the whole course is changed; the auricular blood is at once sent by means of the action of the right ventricle to the now opened pulmonary circulation around the first-inflated air-cells, to be sent to the left auricle and ventricle, to be transmitted by the aorta and its branches to all parts of the body.

Professor Rolleston made some remarks on the paper, observing that it entirely reversed the opinions previously held on the subject. He supposed the paper was read with the view to bring the subject forward merely in a tentative form.

RIGOR MORTIS NOT MUSCULAR CONTRACTION.

By Dr. Richard Norris.

Dr. Norris held that the commonly received theory of *rigor mortis* is, that it is an energetic muscular contraction. That this view is erroneous is proved by the following considerations:—1. That the *rigor* of opposing sets of muscles does not cause the redisposition of limbs in obedience to the superior powers of the stronger sets of opponents. 2. That it does not cause the rupture of the weaker set of opponents. 3. That if either the flexors or the extensors of a limb be divided, and the limb be placed, before *rigor* has set in, in the position in which it should be drawn by the cut set of muscles had the action of these been unopposed, the uncut set of muscles do not alter that position. 4. Contraction and the presence of irritability being an inseparable association, it follows that if irritability be absent for a long time, immediately prior to the supervention of *rigor mortis*, the latter cannot be regarded as a contraction. 5. The microscopical appearance of muscular tissue affected with *rigor mortis* is entirely different from that of muscular tissue in a state of contraction. The truth of these arguments he had demonstrated by a variety of experiments, selections from which were set forth in detail. Photographs of some of his results, and examples of others were submitted to the Section. *Rigor mortis* is, therefore, not a contraction, either energetic or otherwise, of muscular tissue. It is a suspension of the property of extensibility, probably due to a solidification (coagulation?) of a fibrinous (?) material contained in the interfibrillar juices of the muscles, as asserted by Brucke and Kühne, the resolution of which, by incipient decomposition, restores to the muscles their mobility.

ON PHYSIOLOGICAL EXPERIMENTS WITH OZONE.

By Dr. Richardson, M.A., M.D.

The author commenced by remarking that the physiologist was much better placed than the chemist for examining a question of this kind. The one had to inquire into the nature of the substance, while the other was satisfied to know that there existed a body which produced such marked effects. He thought it was only due to the memory of Cavallo (who lived in the last century, and who first suggested and actually transmitted electrical messages) to state that he was the first discoverer of electrified air or ozone. The author then proceeded to describe the various methods of producing ozone, and the results of experiments he had made upon rabbits and other animals. These proved that ozone imparted to oxygen supports animal life, but when present in too great quantities, it tends to produce diseases of the chest and mucous membrane. In its natural state ozone is present in the air in minute proportions, viz., one part in 10,000, and it has been conjectured that it is produced in the higher regions of the currents of air rising at the equator, and distributed by the winds blowing from thence.

In conclusion, he offered the following as the most reliable facts known up to this time respecting ozone:—

1.—Ozone in a natural state is always present in the air in minute proportions, viz., one part in ten thousand.

2.—It is destroyed in large towns, and with special rapidity in crowded, close, and filthy localities.

3.—Ozone gives to oxygen properties which enables it to support life. In this respect it acts like heat—its effects are destroyed by great heat.

4.—Ozone diffused through air in minute quantities produces, on inhalation, distinct symptoms of acute catarrh—common cold.

5.—When animals are subjected to ozone in large quantities, the symptoms produced, at a temperature of 76°, are those of inflammation of the throat and mucous membranes generally, and, at last, congestive bronchitis, which in carnivorous animals is often rapidly fatal.

6.—When animals are subjected for a long period to ozone in small proportions, the agent acts differently, according to

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the animal. The carnivora die, after some hours, from disorganisation of the blood and fibrinous separation; but the herbivora will live for weeks, and will suffer from no acute disease.

7.—The question whether the presence of ozone in the air can produce actual disease must be answered cautiously. Science has yet no actual demonstrative evidence on the point. But the facts approach to demonstration that common cold—catarrh—is induced by this agent. All else is as yet speculative.

8.—During periods of intense heat of weather, the ozone loses its active power.

9.—On dead organic matter undergoing putrefaction ozone acts rapidly—it entirely deodorises by breaking up the ammoniacal products of decomposition, at the same time it hastens the organic destruction.

10.—There is an opposite condition of air in which the oxygen is rendered negative in its action, as compared with the air when it is charged with ozone. Air can thus be rendered negative by merely subjecting it, over and over again, to animals for respiration. The purification of such air from carbonic acid and other tangible impurities, does not render it capable of supporting healthy life; but ozone restores the power. In a negative condition of air, the purification of the organic matter is greatly modified, and the offensive products are increased. Wounds become unhealthy, and heal slowly in such negative air.

11.—There is no demonstrative evidence, as yet, that any diseases are actually caused by this negative condition of air; but the inference is fair—that diseases which show a putrefactive tendency are influenced injuriously by a negative condition of the oxygen of the air. It is also probable that during this state decomposing organic poisonous matters become more injurious.

12.—As ozone is used up in crowded localities, and as it is essential that ozone should be constantly supplied in order to sustain the removal of decomposing substances and their products, no mere attention to ventilation and other mechanical measures of a sanitary kind can be fully effective unless the air introduced be made active by ozone. Fever Hospitals and other large buildings in towns should be artificially fed with ozonized air.

(To be continued.)

REVIEWS.

The Practice of Medicine. By THOMAS H. TANNER, M.D., F.R.S., &c. &c. Henry Renshaw, London, 1865. 8vo, pp. 938. 5th edition.

DR. TANNER has, we believe, long since renounced all Hospital appointments, and those opportunities of public teaching which such appointments afford to men who have not yet made their way in practice. Nevertheless his great industry and good sense were so apparent in various works for students which have appeared from his pen, that they seem to have become extremely popular, and the volume before us—a fifth edition—has burst the small manual size, and appears in the guise of a Professional treatise. We are not certain that it was altogether wise in him to increase his book to its present dimensions. We look upon the fourth edition of "The Practice of Medicine," by Dr. Tanner, as a book *sui generis*. It is the prince of students' manuals, a book dear to the candidate for medical diplomas, a book always serviceable at an emergency, a book where one knows where to look, and where, looking, one may be certain of finding a common sense view of the subject considered, and a large stock of the best ready-made prescriptions always at hand.

But there is a great difference between a little duodecimo manual and an octavo volume of nearly 1,000 pages.

A library edition may suit the seniors, whose eyes are getting dim; but it is too large for the pocket, and is, therefore, rarely at hand just when it is wanted. There ought at least to have been a reprint of the 12mo for the student.

The amount of information which is compressed into the present edition of Dr. Tanner's work is perfectly marvellous. It is not merely a Manual of Practical Medicine, but it also contains not a little Surgical lore, and a very great deal which belongs to the Obstetric Physician, and which is usually treated of in obstetrical works. In it there is a distinct section on diseases of the skin, a dissertation on climate, a description of most of the European watering-places; and seventy-four pages of closely-printed type are filled with formulæ for prescriptions.

Dr. Tanner somewhat astonishes us by continuing to adopt Willan's classification of skin diseases, a classification which we thought reckoned with things of the past. We cannot help thinking that it is a bad plan to teach a student to separate in his mental classification two appearances which are pathologically identical, or at least similar in kind, if not in degree.

The distinguishing feature of the present edition is, however, the section on "Diseases Peculiar to Females." Nearly ninety pages are occupied by this section, and in those ninety pages are given most of the details necessary to be *got up* by the student or young Practitioner who wishes to make a respectable appearance when the subject of conversation is gynæcological.

There are one or two strange omissions. For instance, not a word is said of the treatment of vesico-vaginal fistula—an operation certainly not so strictly Surgical as that of ovariotomy, which is described at length. To give the reader an idea of the manner in which Dr. Tanner treats his subject, we may select "Polypus of the Uterus," under which head are comprised the "fibroid," the "mucous" or "gelatinous," and the "placental" (the fibrinous of Scanzoni). A few words give the general character of these varieties, then follow their most prominent symptoms, then their terminations, if left to themselves. And here Dr. Tanner quotes tersely a very interesting case where an attempt was made by nature to expel a polypus from the womb by a kind of natural Cæsarean section. Lastly, we come to the treatment. Dr. Tanner deprecates wasting time with astringent injections, etc. "The only question is, How the polypus is to be removed?" He then recommends snipping through the pedicle with scissors, or "if the Practitioner be nervous, or if the neck of the growth be unusually large, there can be no harm in using the écraseur, but the old plan of ligaturing and leaving the polypus to slough is not to be defended." He insists that the Practitioner shall before operating introduce the sound, and convince himself that he has really to deal with a tumour, and not with an inverted uterus.

He continues:—"Now, although nothing can be more simple than the treatment of uterine polypus when the growth has been expelled into the vagina, and is merely attached by a pedicle, yet the removal of the tumour is not so easy while it is still retained *in utero*. Under these circumstances the os and cervix have to be thoroughly dilated with sponge or seatangle tents." Dr. Tanner then shows how these tents are to be used. After the dilatation of the os uteri, the tumour is to be removed by torsion, or by a wire écraseur, or by passing a piece of whipcord round, and tightening it enough to cut through the pedicle either at once or next day.

Such is Dr. Tanner's description of uterine polypi, and such is their treatment. We cannot object to it. It is very good as far as it goes. It is perfectly correct to impress upon the student the enormity of leaving a putrifying polypus in contact for days with an absorbing surface. It is right to tell him that he will often require to do nothing more than to snip the pedicle with a pair of scissors, and that in intra-uterine cases he must dilate the os before he can find the point of attachment. Perhaps a word might have been advantageously said about scraping off the smaller mucoid polypi; it might have been well to hint that the greatest difficulty with a polypus is sometimes not to detach its pedicle, but to pull it through the vagina. But the description as it stands gives a beginner a fair initiatory idea of polypi and their treatment.

What is true of this article is also true of most others in Dr. Tanner's book. Occasionally, however, Dr. Tanner goes out of the beaten track. Thus he recommends that in most cases the abscesses which constitute the suppurative stage of pelvic cellulitis should be allowed to open spontaneously. We cannot concur in this opinion. We have known several lives lost by non-interference in such cases. We believe that very few of our Medical brethren will agree with Dr. Tanner, and we think that it is a pity that such a doctrine should have found its way into a volume peculiarly adapted for the young and inexperienced.

On the whole, clearness, good sense, and a moderately conservative or tonic system of treatment are met with throughout Dr. Tanner's book. It may seem a small matter, but on glancing over the chapter on Delirium Tremens, we are struck by the author's sensible remarks in opposition to a

host of "authorities." He justly denounces the attempt to treat delirium tremens by fresh doses of the poison which caused it; and he denies to the "dipsomaniac," so called, any exemption from responsibility. He looks on him, in fact, as a very drunken beast, and not as a madman.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

ITALY.

Rome, August 27.

This summer has been very hot in Italy, but the heat has not been so excesive as it seems to have been in Central Europe. The day maximum of temperature was 95° F.; the average minimum 70° to 77°. The nightly decrease of temperature, which on the other side of the Alps is considerable even after a very hot day, is always very trifling here. The weather has been very dry, as, since the commencement of June, we have had rain only three or four times. Those days where there was no sirocco were under these circumstances very pleasant, but when that wind was blowing, it was exceedingly oppressive. Fruit has been unusually abundant and fine, but it seems that we shall not be allowed to partake of it to any extent, as our old enemy the cholera threatens to spread over Italy from the Adriatic. The epidemic was brought to Ancona from Alexandria, and crept from there to several neighbouring towns, such as Osima, Foggia, etc. A quarantine of twenty days has been instituted in Civita Castellana, on the Papal frontier towards Ancona; but this, of course, will be of little use, as such a line of demarcation can never remain unbroken. The observations and researches which have been made here during the last epidemic of 1854 agree with those made in other parts of Europe and India. We have always found that the alvine evacuations were the chief vehicle of the cholera-poison, and that the reproduction of this latter was promoted by further decomposition of those matters. Infiltration of fæces in damp soil favoured the development of the poison, while the impossibility of such infiltration in rocky soil frequently prevented its propagation. The premonitory diarrhœa was curable in the majority of cases. As regards the treatment, we found that small pieces of ice or snow taken repeatedly every few minutes, according to the desire of the patients, answered best. Within the first few hours opium was also given; at a later period of the complaint, ether, wine, and similar remedies seemed to prove useful, while the limbs were continually rubbed with warm flannel, and cold compresses were put on the abdomen. Vapour baths, which have been much recommended by French Army Surgeons, who employed them a good deal in the Crimea, only seemed to help within the first few hours, but not after asphyxia had supervened.

Although Medical men in France are still inclined to doubt the contagiosity of cholera, so many facts have now been collected which show that not only the choleraic evacuations, but also the matters voided in the premonitory stage, may propagate the disease, that it would seem foolhardiness to doubt this any longer. The following case, which occurred a short time ago at Ravenna, is one in point. An inhabitant of this latter place, where there was no cholera at all, went to Ancona to visit his aunt, who some time after died of the epidemic; he then returned to Ravenna and continued quite well, but two of his brothers were seized by cholera and died. The mortality at Ancona, which has now about thirty thousand inhabitants, was fifty per cent. of those seized, so that the character of the epidemic has been less severe than it was in 1836 and 1854. On this occasion the disease travelled to Ancona from the East directly by the ships, while in 1836 it came from France by Upper Italy to the coast of the Adriatic, passed from there to Naples, and reached Rome only a year afterwards overland by way of Cepraro.

The connection of cholera with intermittent fever has often been supposed; I can only say that in the epidemic of 1854 nothing of the kind was to be observed here. Places in which ague is endemic were not more extensively visited by cholera than others, nor were persons infected by malaria more disposed to catch the disease than others. This summer ague has, generally speaking, not been so prevalent as it often is, and pernicious forms have on the whole been rare. The treatment of ague by means of subcutaneous injections has yielded very successful results in hospital as well as in private practice. We find that if we use the disulphate of quinine in this way, only the third part of the quantity is required which is necessary for stomachic administration. Thus, for instance, the injection of 15 grains by several punctures at one time, is quite sufficient to cure a very strong attack. Thirty grains injected within twelve hours cuts short a pernicious fever which would require at least a drachm by the usual method. Subcutaneous injection is preferable to stomachic administration in cases where the quinine is vomited, or where the patients are comatose and cannot be made to swallow it, also in children who cannot take pills and will not take quinine in solution. Another advantage of this method is its cheapness. In old and very obstinate cases the arseniate of quinine has been successfully used; a solution of one-fifth of a grain in ten minims of water being injected once, twice, or three times per diem.

I conclude with a short retrospect on the last winter season. At first we had a great deal of rain, and patients suffering from diseases of the respiratory organs were obliged to be exceedingly cautious. After January an improvement took place in the weather, and some good results were obtained. On the whole, people should not come here who are not very comfortably situated. They ought to have first-rate accommodation, and more carriage than walking exercise. The worst is if people travel during the winter from one place to another. This should only be done if a decided mistake has been made in the selection of a health-resort; for instance, if Nice should prove too exciting, or Rome too depressing.

Typhoid fever was, towards the end of winter, brought here from Naples, where it had been produced in the Riva di Chiaja by the influence of bad sewerage. In several Neapolitan hotels visitors fell ill with the fever. Others who came here from Naples only got it here. There was at one time scarcely an hotel in Rome in which there were not people lying ill with fever imported from Naples; and at a later period other strangers in the same hotels were likewise affected. The epidemic was entirely confined to the hotels, and most patients recovered. It lasted for several months, but ceased in May, and since then the sanitary condition of the now empty town and its neighbourhood has been very satisfactory.

IRELAND.

Dublin, Sept. 13, 1865.

Since I last addressed you on the subject of our International Exhibition, the admirable plan has been fully developed of opening it on three evenings in the week (Monday, Tuesday, and Thursday), at the ordinary charge of one shilling. On these occasions the building is brilliantly lighted, the unequalled collection of statuary especially is seen to great advantage, a variety of most excellent music is provided, the numerous visitors who at present crowd our city are enabled to pass their evenings in a most agreeable and rational manner; while those citizens whose avocations might make a visit in the day time hurried and anxious, are enabled at their leisure to study the many objects of art, science, industry, and nature here brought within their reach.

Among the collections calculated more particularly to interest the Medical visitor are some extensive series of Materia Medica. Of these, the Indian collection consists of eighty different articles, many of which are already officinal in this country, while some are merely native remedies. The Siamese collection is composed chiefly of drugs of the latter class, and I may be permitted to quote the uses of some, as given in the catalogue. Those which I would mention are:—

"Munnack, used as a stomachic. Luk rheu, bastard cardamoms, seeds stomachic, used in headache. Manglack, basil seeds (ocymum sp.). The seeds, placed in water, swell to a large size, and form a mucilage like that of the bungtalai seeds, which, mixed with cocoanut water and sugar, makes a refreshing beverage. Kamyan, gum Benjamin (benzoin), is placed in hot water, and when cooled is used as a drink for inward pains; it is likewise employed in rheumatic pains. The gum is sometimes mixed with leeplee and prickthai (black pepper), to increase its efficacy in rheumatic complaints. Ngah-met, till-seed (sesamum orientale, Lin.), the seeds yield a fine bland oil, which is employed in ulcerations of the head. Luk makan liqui (soap nuts), the seeds are roasted, and an infusion made of them is used as a cooling drink. Leeplee, an infusion, is employed in colds and catarrhs. Bungtalai seeds (sapindus rubiginosa), immersed in water, they form a gelatinous mass; which, flavoured with sugar and limejuice,

forms an agreeable beverage, considered abroad as an excellent remedy in diarrhœa and dysentery. Zaropi and pihkoon, used as stomachics. Prickhang, infusions of the pounded seeds are used inwardly against headaches and fevers. Bilang karta, a decoction of the pounded seeds, is used against vomiting. Prickhom (xanthoxylon sp.), pounded and placed in cold water, the infusion is used against eructations. Luk hang tshikat, an infusion of it is used as a strengthening remedy after childbirth. Luet nangret, coagulated blood of the rhinoceros, used as medicine in cases of inward hurts. Enn'ana, deer sinews, the hoofs grated, are used for the curing of wounds."

The Japanese collection, in the west gallery of the transept, contains some very curious illustrated treatises on anatomy, botany, zoology, and physics. These, of course, are sealed books, so far as the "letterpress" is concerned, to all who are likely to inspect them, but the illustrations are excellent, and indicate advanced knowledge in the several subjects to which they relate. The cuts representing bandaging, amputation, the use of the lancet, etc., are precisely similar to those to be met with in a European work on Surgery; the same may be said, *mutatis mutandis*, of many of the plates on osteology, midwifery, natural history, etc.

Among the Surgical instruments in the Exhibition which I have not as yet noticed is a "Patent Dentiscope, Laryngoscope, Light-intensifying and Concentrating Apparatus, constructed for the purpose of illuminating the inside of the mouth with a concentrated and intensified light, for Dental or Surgical operations." This instrument is the invention of Mr. Rahn, the eminent London dentist. The name given to it is another example of the barbarous mode of deriving words partly from the Latin and partly from the Greek language. "Odonatoscope" would not be much longer, and would not grate upon the ear as a mongrel production. It would be well, too, if Mr. Rahn had taken the trouble himself to revise the little pamphlet which is left in the Exhibition near the instrument, as its composition is calculated to give an unfavourable idea of the writer's knowledge of the structure of the English language. The following description is appended to the pamphlet in question:—

"The dentiscope consists of an optical arrangement of lenses in a cone and tube, with a rack and pinion adjustment for focussing. This is mounted upon a plate, which moves in dovetails upon a larger plate, that forms a screen, with racks and pinions to raise and lower the optical arrangement at pleasure. The screen is jointed to a massive foot or stand, provided with a double-threaded tangent screw, with a bold milled-head nut for adjusting the screen to angles of elevation or depression. At the back of the screen, and upon the foot, or stand, is fitted a branch with pillar, carrying a Leslie's patent Argand gas-burner, with stop-cock and connecting piece, to which may be attached any length of india-rubber flexible gas-tubing to communicate with any gas supply on the premises, or provided in a portable india-rubber gas-bag, to be placed in a suitable and convenient place for the performance of the operation. The branch and pillar carrying the gas-burner is fitted also with racks, pinions, and milled-head nuts, to adjust the flame to the necessary distance and height required by the variable position at which the optical arrangement may be required at. The whole of this structure is fitted upon a circular plate, with centre cone or turntable; thus the instrument may be brought instantly into any position required."

I cannot send off this letter without urging such of your readers as may not yet have seen this really most interesting and very varied Exhibition not to lose the opportunity which the short time that must now elapse before its closing will afford them of visiting it. Those who have not yet taken their holiday may be reminded that a trip to the Exhibition and an excursion to Killarney may be easily combined, and that October is generally considered to be the best month for seeing the latter, as the arbutus, which is so abundant in that favoured locality, is then in the greatest perfection.

SMALL-POX ON THE GABOON. — At one of the recent meetings of the British Association a letter was read from Mr. R. B. Walker, dated Gaboon, Western Africa, June 23, 1865, which stated that small-pox had been very prevalent on the Western Coast of Africa, and had produced a great mortality amongst the natives. It was attributed to intercourse with the white man. It had broken out in the Ashira tribe (about 160 miles from the coast) simultaneously with the arrival amongst them of M. Du Chaillu and his people.

GENERAL CORRESPONDENCE.

THE MOWER MILITARY HOSPITAL.

LETTER FROM MR. J. W. TURNER.

[To the Editor of the Medical Times and Gazette.]

SIR,—I send you the following sketch of the Mower Military Hospital, thinking it might be a model for a temporary Hospital, if need be, at this time of fear and dread arising from the ravages of cholera in the South and East, and from the evidence at home of some subtle atmospheric influences inducing the present disease amongst the lower animals, and urging us to adopt any sanitary measures likely to be anti-miasmic, whatever the enemy. This temporary Military Hospital I imagined to be the most efficient and excellent met with during a recent Surgical tour through the United States.

The Mower United States' Army General Hospital is situated on an elevated plateau in one of the rural districts of Philadelphia, about ten miles away from the city. It is constructed of wood, lined with dressed boards on the inside, and lathed and plastered on the outside. It consists of fifty pavilions, or wards, extending from a corridor, of flattened ellipsoidal form. The corridor is sixteen feet wide and two thousand four hundred feet long, enclosing a space of seven acres.

In the centre of this enclosed space is the Administration Building. This building is connected with the wards by means of a transverse corridor, and another corridor connects it with the front entrance of the Hospital. In the enclosed space are the chapel, schoolroom, post-office, barber's-shop, band's quarters, general dining-room for attendants, laboratory, boiler-house, engine-room, and manufactory for roasting and grinding coffee and making ice-creams by steam, conservatory, general kitchen, carpenters' shop, band stand, operating room, dead house, guard house, suttler's shop, extra diet kitchen, butchers' room, ice and milk house, and deposit rooms for the kitchen offal.

On each side of the rear of the hospital are the barracks, built ⌊ shaped, and connected with the body of the Hospital by corridors. The capacity of the Hospital is 3600 beds; of these 3100 are for patients. Forty-seven of the pavilions are wards for patients, 175 feet long by 20 feet wide. The Hospital is ventilated by the ridge ventilation, and openings 1 foot square flush with the floor between each bed. The drainage is by a culvert 20 by 30 with 19 feet grade.

The security against fire consists of a fire-alarm telegraph, which strikes the districts, 4000 feet of hose, 3 hose carriages, 1200 fire buckets, 200 fire axes, 24 ladders, stationary fire pump, and a well-drilled fire brigade. The Hospital is supplied with gas from the City works.

This Hospital was to my mind one of the cheapest, best ordered, and most effective I ever saw. The site is particularly well chosen, being on an elevation with a railway from Philadelphia passing within a few yards of the outer receiving room. The water supply is excellent, the ventilation and isolation of the wards perfect. I did not see a single instance of Hospital gangrene nor erysipelas in this vast collection of surgical cases. Each ward is 25 feet high, and contains 63 beds; so there is plenty of space and breathing room. The ridge of the roof can be raised and the lower skirting boards opened, to ventilate more freely if required. A railway, or rather tramway, strikes the head of each radiating ward, and carries from the central administrative departments the rations, linen, medicaments, and even sometimes the Doctors themselves, who do not spurn a lift, I tell you, during the heats of July in that region. Separated by partitions from the distant extremity of each ward are the lavatories and other conveniences, well supplied with living water, which emptying their putrid and decomposing matters into an external drain, keep the wards perfectly free from disagreeable and noxious odours. Each ward is sufficiently detached to prevent the great risk of infection which would occur in a storied building. The patients also, especially the Surgical ones, are much more conveniently placed for themselves, their attendants, and supplies on a ground floor than when up-stairs.

I was glad to find that water dressings and oakum had quite superseded poultices throughout the Hospitals (military and civil, as far as I saw). Anything is better than a stinking, sour poultice in a ward, and nothing worse to my nose. The oakum forms a capital soft support for absorbing dis-

charges, and it is at the same time an agreeable smelling disinfectant, light, and easy work for the convalescing to prepare, from old ropes, for their fellow sufferers. I also observed the use of thin metal (lead) ribbons in place of adhesive strapping for bringing together the opposing surfaces of wounds or other lesions; the ends of the ribbon being slit up, and expanded in rays on the sound skin, to which it was fastened down with a collodion (made from gutta percha dissolved in chloroform or methylated spirit). By this means wounds and stumps can be kept clean and free from irritating discharges without removing the supporting bands or disturbing the adhesions already formed. Such bands often remain undisturbed for days, and even weeks, the lateral edges at times being turned up if irritating the surface of the wound.

Nothing can exceed the kind good fellowship and generous spirit of the Medical men with whom I came in contact, North and South. They were ever willing and ready to render any aid or communicate any information as to results of amputations, modes of treatment, plans of operations, splints, &c. &c. I feel indebted to them for much kindness and goodfellowship generally, and can only object to some few of them as companions on account of their habit of chewing and spitting about, which is disgusting to yours, &c.

J. W. Turner, F.R.C.S.

31, Lower Phillimore-place, Kensington,
Sept. 13, 1865.

THE REPUTED FEMALE ARMY SURGEON.

Letter from Dr. J. C. Cookworthy.

[To the Editor of the Medical Times and Gazette.]

Sir,—Referring to a letter in the *Medical Times and Gazette* of the 9th inst., I would respectfully observe that, whilst I agree with the writer in his estimate of Dr. J. B.'s physical and mental character, I think him mistaken in stating his age at death, in July last, as 65.

When a student at Edinburgh, in 1811 and 12, I was personally known to J. B. He was small of stature, yet proportionate, juvenile, and apparently of delicate constitution, but he in no respect wore the aspect of a girl or woman. He seemed to be vain, and could be frivolous, yet was prompt to resent an offence. On one occasion, when sitting in class behind an acquaintance of mine, a Mr. O'C., rebuked him and bade him "Be quiet." A hostile message followed immediately, requiring O'C. to apologise or fight. O'C. was as manly as J. B. was boyish, and treated the message as it deserved.

In the spring of 1812 J. B. offered himself as a candidate for the Degree of M.D., and was refused on account of his youth. My old master, John Bell, *may* have interfered on his behalf; but being at war with the Professors, and especially with Gregory, then in the ascendant, he was little likely to be of use to him. With more probability, it was reported that the Earl of Buchan exerted himself in B.'s favour, and prevailed; contending that, as the Senate had (then) not fixed the age of the candidates, whoever had observed the specified curriculum of studies might claim to be admitted to examination, and to his Degree if competent.

J. B. passed the examination and took his Degree in 1812, and was then, I have no doubt, 20 years old; and if so, he was 73 at his death in July. But if, as stated in the letter, he was only 65 at his death, he could not have been more than 12 when he took his Degree, and only 9 when he matriculated! In the Army he may have been a second "Dowb," "to be taken care of" and promoted at all hazards; but it may be safely asserted that by the Edinburgh Senate no such job as that assumed was ever perpetrated.

In 1813 Dr. J. B. called on me in Plymouth, then settled here as a Physician, he having been appointed Assistant in the Military Hospital under Dr. S——g. Shortly after he was removed to the Cape of Good Hope, and was admitted to great intimacy with the family of the Governor; and having, as I was at the time reliably informed, succeeded in restoring one of the young ladies to health by following the practice of the elder Hamilton, he gained considerable reputation as a Medical man in the colony; but that "he was educated with Lord C. Somerset's children" is about as probable as that he matriculated at 9 and took his Degree at 12.

I am, &c.

J. C. Cookworthy, M.D.

Plymouth, Sept. 13, 1865.

LEGAL INTELLIGENCE.

IRVINE *v.* WILSON AND ANOTHER.

In this case the plaintiff, Mr. Johnstone Irvine, Surgeon, of Walton-on-the-Hill, sued the defendants, the executors of the late Mr. Lace, a gentleman of considerable property, for the sum of £250, for Professional advice, visits, medicines, and operations. The case first came before Mr. Baron Bramwell at the late Liverpool Assizes, when Mr. Monk and Mr. Pope, instructed by Mr. Dodd, appeared on behalf of the plaintiff, and Mr. Brett and Mr. Temple, instructed by Mr. Wright, for the defence. His Lordship, however, referred the case to arbitration, and Mr. Martin, of Liverpool, who was named as the arbitrator, entered the case for trial at the Liverpool Law Association Rooms on August 31, when Mr. McOubrey, instructed by Mr. Dodd, appeared for the plaintiff, and Mr. Temple, instructed by Mr. Wright, for the defendants.

William Johnstone Irvine, being sworn, said: I am a Surgeon, practising at Walton-on-the-Hill. I have been in practice at Walton-on-the-Hill since the death of the late Mr. Woods, having succeeded that gentleman. Towards the end of November, 1863, I was called by the late Mr. Lace, of Columbia Villa, Warbeck Moor, to attend his niece's child, which was under my care for some days. During my attendance upon the child Mr. Lace complained to me of a gleety discharge from his urethra, and of difficulty in making water. I passed a small catheter with difficulty, and gave Mr. Lace my opinion that he was labouring under stricture. He asked me to pursue the necessary treatment, and I promised to do so, at the same time prescribing for him what was necessary. I saw no more of Mr. Lace for a month or so after prescribing, when, on the 1st of January, 1864, he presented himself at my surgery, suffering from a most virulent gonorrhœa. From that day he was constantly under my care. I examined the prostate, and found it enlarged. This enlargement, together with the stricture, rendered it necessary for me to constantly use the catheter. In the account I have rendered my charge for advice at my own house is 2s. 6d.; that for giving an injection, 2s. 6d.; that for a visit, 5s.; and that for passing the catheter, 10s. 6d. These charges I look upon as reasonable. I do not consider 10s. 6d. by any means an unreasonable charge for passing a catheter in a case of stricture. Mr. Fergusson, of London, might charge ten or twenty guineas for such an operation. All the visits I made were necessary. I was mostly sent for when wanted. It is usual for a Surgeon to charge double at night, but being in constant attendance on Mr. Lace I did not do so. The testicles became swollen during my attendance. Such swelling renders gonorrhœa more serious. I had to incise the scrotum on two occasions to let out matter. Mr. Lace became typhoid, and I visited him then. On June 30, 1864, Mr. Lace got married. I attended him until his death on March 4, 1865. The lady whom he married was the widow of a captain, I believe. The habits of Mr. Lace were very intemperate, and I endeavoured to restrain him. I spoke to his wife about his loose conduct. I ordered moderate quantities of spirits, but they were given in excess. Mr. Lace's brain became affected, and I requested further advice. I suggested to meet my father, who was staying in Liverpool, and my brother, Dr. Irvine, of St. Paul's-square. I met them both. Mrs. Lace also called in Dr. Sinclair, of Liverpool. I found it necessary to attend every visit. I was educated at the University of Glasgow, and am a Licentiate of the Royal College of Surgeons of Edinburgh, and of the Apothecaries' Hall, London.

Cross-examined: The mother of the child I attended was Mr. Lace's niece. She is married, and her husband, I believe, is abroad. She lived with Mr. Lace. The entries in my day-book were made day by day. The copy in the ledger was made after this amount of my account had been sent to the executors. I only enter from my day-book into my ledger every half-year. I never sent the items of my account until I was asked to do so. It is not my custom to give items when I send in an account. I do not think the intrinsic value of zinc is much. The zinc in an injection may cost less than 2d., but I charge for my time and skill as a Professional man, in preparing it. I am not a druggist, and do not make a trade of my Profession. I generally use warm water when I pass a catheter, but sometimes I didn't want it, and sometimes I couldn't get it. I have charged 10s. 6d. each time for introducing the catheter. I could not say Mr. Lace was well when he married. On the 29th of

January I made ten visits, two being in the night; and on most occasions I was sent for. On the 26th of June the discharge was better, but he was not fit to marry. I noticed a chancre just within the urethra on the 13th of July, fourteen days after the marriage. On the 24th of July Mr. Lace was seized with convulsions, and on that day and during the night ten visits were made by me. On the 26th the typhoid fever commenced. I then found it advisable to give brandy and eggs. I carried brandy and eggs very often in my pocket, and gave them to him, because I thought he was not properly attended, so far as his wants were concerned. I had to apply iodine to the testicles, but no one was present when I did so. I don't think medicines are of much service in softening of the brain, and for that reason gave him little or none. I prescribed sedative draughts when required. Mr. Lace died of great prostration and softening of the brain. In November and December, 1864, he was not confined to bed, but I visited him as often as requested.

Re-examined: I made no unnecessary visits, most certainly. The stricture was of long duration.

John William Irvine being sworn, said: I am the plaintiff's brother, I am Honorary Surgeon to the Liverpool Dispensary, and Lecture on Physiology at Queen's College, practising at St. Paul's-square. I visited Mr. Lace for the first time on the 31st of August, 1864, when I found him suffering from low typhoid fever, the result of exhaustion from acute disease. I noticed an abominable stench directly I entered the bedroom. The room was of very large size, and admitted of free ventilation, and I suggested immediately that one of the windows should be thrown open. My attention was drawn by my brother to Mr. Lace's person. I examined him and found the scrotum three times its natural size, and discharging pus of a very fœtid nature. I attempted to pass a catheter into the bladder, but failed in my endeavours, which were continued for twenty minutes or half an hour. My brother subsequently passed a catheter in my presence, and from the difficulty experienced in its introduction I proposed that the catheter should be retained *in situ*; but in a few moments I found it necessary to have it withdrawn, owing to the uneasiness it occasioned. I suggested an enlargement of the wound in the scrotum, and that was made. The clothes about the bed were in a more filthy state than I ever found, amongst even Dispensary patients, being soiled with fœces, &c. I declined to attend a midwifery case on the evening of the day on which I had handled the scrotum of Mr. Lace, because I considered it advisable to decline, fearing evil consequences. I visited Mr. Lace again, in company with my brother, on the following day, and then succeeded in passing a catheter. The wound in the scrotum was discharging more freely. I noticed the remains of a chancre just within the urethra, and a cicatrix of another chancre between the glans and prepuce. I visited him also on the 6th of September, 1864, and 10th February, 1865.

Cross-examined: I washed my hands, of course, after handling the scrotum. Washing the hands will not remove the danger of infecting a midwifery patient. I have sent in my account for my visits, and expect to be paid. My fees amount to nine guineas. I sent in my account yesterday. I did not send it in then, waiting the result of this action most certainly, but because it was the last day on which accounts could be sent in to the executors. I did not see the notice in the papers, but was told by a friend. I have been fortunate to send it in time. I have very frequently been careless enough after the death of a patient not to send in my account at all within the required time. I should have made larger charges for so serious a case than my brother has made. I have no objection to attend a great many cases of the same kind, if it is any pleasure to you (the defending counsel) to have a desire to defend them. Well, then, if you have no desire to defend them, I have no desire to attend them. I do not consider a catheter judiciously used would produce ill effects. The most eminent Surgeons even advocate the repeated introduction of a bougie or catheter for the cure of gleet.

Re-examined: Retention of urine in the bladder would result in uræmic poisoning,—one of the most fatal diseases.

Robert Robertson, being sworn, said: I am a Doctor of Medicine of the University of Edinburgh. On August 24 I saw Mr. Lace, who then was apparently recovering from a low typhus fever. He was extremely prostrate, and required very great attention. There was a very offensive smell in his bedroom. I examined his scrotum, and found that it contained a quantity of matter. I noticed a slight discharge from the urethra. I also noticed an ulcer just within the urethra. Mr. Lace could not perform sexual intercourse, in my opinion, at the time I saw him; therefore he would not then be likely to communicate infection to his wife. In December I attended the plaintiff's practice for a week whilst he was on a visit to his father at Lancaster. At that time Mr. Lace had all the symptoms of cerebral softening.

The Court adjourned.

On Saturday, September 2, the case was resumed. Mr. Dodd, in the absence of Mr. McOubrey, undertook to conduct the case on his own responsibility for the plaintiff.

Examination of Mr. Robertson continued: I attended the plaintiff's practice from December 12 till 19. The catheter was introduced by the plaintiff in my presence on December 19. In that month I saw the cicatrices of the two chancres and the marks which had resulted from incision of the testicles. I assisted Mr. Spence for six months. The lowest charge I have known him make for passing a catheter is two guineas. I have received five guineas on his behalf for passing a catheter. I consider Mr. Irvine's charges very moderate. If my assistance were required in the case of a man in violent convulsions, I should go whenever I was sent for. When the prostate is enlarged it is often requisite to introduce the finger in the rectum.

Cross-examined: In Mr. Irvine's absence I made a memmorandum of my visits, etc., and gave him the document on his return. I made no entry in the day-book. I noticed a sore within the urethra in August, but I only made one visit at that time. I next saw Mr. Lace in December, and then managed to pass No. 5 or 6 catheter. I have not often seen Mr. Spence take less than five guineas in such a case: that amount I have often. I have no charge of my own. I am in a public institution. There was no false passage, in my opinion. In August I saw a discharge from the urethra, but not in December.

Mr. Johnstone Irvine, recalled by Mr. Dodd, said: The distance from my house to Mr. Lace's is not 500 yards. The certificate I have charged for was given to enable Mrs. Lace to get money out of the bank at the time Mr. Lace's intellect was affected. I never give particulars in my bills unless requested. I frequently give the amount for each month's attendance. I introduced the catheter 194 times, applied nitrate of silver to chancre thirty-one times, used the bougie five times, and gave twelve injections per urethra. Mr. Lace promised to pay my fees for attending the child.

Cross-examined: Dr. Robertson furnished me with a paper stating what work he had done in my absence. I will not swear the distance is 300 yards, but will swear I was kept waiting a long time each visit. I can show many visits in my book at 5s. each. Those charged at a smaller rate, say 2s. 6d. a visit, are poor people or servants. On one particular day I passed the catheter three times. I used No. 3 in September.

Philip Lace, being sworn, said: I am the brother of the late Mr. Lace. I went to my brother's house morning, noon, and night when my brother was at the worst. In the earlier part I went morning and evening. I was interrupted in my visits by Mrs. Lace. On entering the bedroom I met an intolerable smell, and had to take a glass of something before I went, especially on Sundays. I felt inclined to stop often, but could not stand it. I was accompanied by Thomas Miller once, when my brother spoke about the Doctor putting something up his person, and hurting him very much.

Cross-examined: I have no liking for the widow of my brother; but she is married again now.

James Johnson, being sworn, said: I am a Member of the Royal College of Surgeons and a Licentiate of the Apothecaries' Hall of London. I am Surgeon to the County Gaol and Medical visitor to the Tue Brook Asylum. I have been in practice thirty-three years. Stricture or enlarged prostate renders the passage of a catheter difficult; both diseases together render it very difficult. Assuming that Mr. Irvine's bill is correct, the charges are reasonable. The charges of a Medical man vary according to the position of the patient. Couldn't say distinctly what would be a fair charge in Mr. Lace's case. Would not soil my hands with such a case at any price. I consider that payment in full for the attendance cannot be measured in guineas. Spence would charge up to 20 guineas for passing a catheter. A guinea is not an unreasonable charge. I have had cases, and would have given 5 guineas to have had the work done for me. I consider 5s. a fair charge for each visit, making an extra charge for medicines. I should charge 7s. 6d. or 10s. 6d. a visit without supplying medicines. I usually charge more now for my visits. I never visit for less than 5s. If I had to make ten

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visits a day I should not enter each visit in furnishing items of an account; I should make an extraordinary charge for extraordinary services.

Cross-examined: I have had cases requiring ten visits on one day. I can't say what visits would be requisite in this case; no one can but the Surgeon who is in attendance. People often become impatient in illness, and send very frequently for a Medical man; but when the bill is sent in they are forgetful of the services that have been rendered and the visits that have been made. I should make no difference in charging a patient living next door to my house and one living a mile off.

Re-examined: Death would result if the catheter were required and not used. I concur with the plaintiff's brother in thinking it unwise and unsafe to attend a woman in labour after visiting a case such as that of the late Mr. Lace. I think he exercised wise discretion in foregoing Midwifery.

Ebenezer Hughes, being sworn, said: I am a Doctor of Medicine and Surgeon to the Liverpool Dispensaries. I have looked at the bill of particulars, and, granting that the items are correct, the charges are fair and reasonable. I consider 10s. 6d. the least charge that could be made for passing a catheter in the case described.

Cross-examined: I did not become a Practitioner of Medicine and Surgery until 1860. I was a chemist before that time.

Henry B. Watters, being sworn, said: I am a Licentiate of the Royal College of Physicians of Edinburgh, and a Member of the Royal College of Surgeons of London. I consider that Mr. Irvine's charges are not by any means unreasonable. They are very reasonable. I consider a guinea fair remuneration for the passing of a catheter in stricture. Butcher, of Dublin, would consider five guineas a moderate fee for the operation with Holt's instrument. Mr. Irvine has only charged 10s. 6d. for that operation. All the charges are very reasonable.

James Walter Cavanagh, being sworn, said: I am a M.R.C.S. Eng., and Honorary Surgeon to the Liverpool Dispensaries. I am sure no respectable Surgeon would charge less fees than Mr. Irvine has charged. The charges stated in the bill are very reasonable. Some Surgeons there are who would take 2s. 6d. as a fee for an operation that another Surgeon would not perform for less than a guinea.

Cross-examined: I have not had cases exactly like that of Mr. Lace, but I have received better fees than those now claimed for much less difficult work. Tapping for hydrocele is easier of performance than passing a catheter in stricture, and for such tapping I am paid a guinea and a-half.

Stewart McNicoll being sworn said: I am a Licentiate of the Royal College of Surgeons of Edinburgh, and am Certifying Factory Surgeon. I have examined Mr. Irvine's bill of particulars, and I consider the charges in every way reasonable. I am of the belief that Mr. Lace would readily have paid a guinea for each operation at the time.

Cross-examined: I might make a difference in charging for a long attendance.

Re-examined: In the case of a man in Mr. Lace's position I should make no smaller charges than Mr. Irvine has done.

This closed the case for the plaintiff.

Mr. Temple called for the defence Elizabeth Miller, niece of the late Mr. Lace; Mrs. Miller, married widow of the late Mr. Lace; Margery Harrison, a nurse; Ellen Woosey, a washerwoman; and Edward Remnant, a man-servant. All these witnesses gave evidence to show that the number of visits claimed for had never been made. Then Mr. Temple said he should call two Surgeons, Mr. Alfred Whittle and Mr. Arthur Wigglesworth.

Alfred Whittle, Licentiate of the Royal College of Physicians of Edinburgh and Honorary Surgeon to the Liverpool Dispensaries, being sworn, said: I am in practice in Liverpool. I have examined the bill, and do not consider it a reasonable one. Taking it by items, I can reduce it very considerably. Under my advice and at my suggestion £80 9s. 6d. had been paid into court. I fixed the charges I thought reasonable for each item, and the amount was drawn up. A Medical man frequently takes another Medical man to see any interesting case, without the expectation of a second fee. I say the charges are very unreasonable. The usual fee for passing a catheter is 2s. 6d. That is the extreme fee for a young Practitioner. A Surgeon might get 5s. a visit, but it would make a great difference if a man were a constant patient. I might charge a guinea myself for a catheter, but certainly not after the first time. A young Practitioner ought only to expect small fees.

Cross-examined: I don't know that it is a misfortune to be a young Practitioner. The men named by the witnesses would not charge the fees stated. Mr. Bickersteth met me at night at Marsh-lane, and only charged two guineas. The passage of a catheter is easy, of course, when there is no stricture; but a catheter is never required unless there is stricture. It is very likely that a Surgeon might try for twenty minutes to pass a catheter, because it requires great practice. I am sure 2s. 6d. for the catheter and 5s. a visit would be quite enough. Stricture begins to yield after a time. I think passing a catheter undid what it was desirable to do. I consider 2s. 6d. for the catheter quite enough. I gave evidence at the late Assizes in the case of Dr. Dickinson, of Wrexham.

Arthur Wigglesworth, Honorary Surgeon to the Liverpool Dispensaries, being sworn, said: I am a member of the Royal College of Surgeons and L.S.A., residing in West Derby-road. I have looked over the account, and find the charges very unreasonable. I gave a conjoined opinion with Mr. Whittle about the £80 9s. 6d. paid into court. I reduced the amount to that with Mr. Whittle. I reduced it very much, the attendance being long. If I had attended, 2s. 6d. would have been my fee for the catheter; 3s. 6d. would be ample remuneration. Some Surgeons making their £2000 or £3000 a-year would charge no fee for the catheter, or at any rate only 2s. 6d. or 3s. 6d.

Cross-examined: I mean to say there should have been no charge for the catheter, as Mr. Irvine was in long attendance. If a catheter be used once a Surgeon may ordinarily charge 10s. 6d. If a regular patient came he would be charged 2s. 6d. very likely. Passing a catheter is not difficult. The case was not one of impermeable stricture. It could not be impermeable when Mr. Irvine could pass a catheter. I have heard of Professor Pirrie's "Surgery," but have not read it. It is obsolete now. Mr. Arnold, of St. Homer-street, and Mr. Steele, who have been many years in practice, both told me they would only charge 2s. 6d. for passing a catheter. I gave evidence together with last witness in the case against Dr. Dickenson, of Wrexham.

This ended the case; and after Mr. Temple had addressed the arbitrator on behalf of the defendants, and Mr. Dodd on behalf of the plaintiff, the Court retired.

On Tuesday, the 5th inst., the arbitrator gave his decision for the plaintiff, £110 in addition to the £80 9s. 6d. previously paid into court.

It is gratifying to observe that the Medical men who gave evidence in the above case are gentlemen who voluntarily offered to give their opinions in favour of the plaintiff's claim, without being specially called upon as witnesses.

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, August 31, September 7, and September 14, 1865:—

James Fitzpatrick, Northampton; Edward Horne, Isleworth; Henry Cheesman, Brighton; Napoleon Bisdee Major, Hungerford, Berks; John Charles Compson, Edinburgh Royal Infirmary; John Lloyd, Birmingham; Robert Stuart, Woolwich.

The following gentleman, also on September 14, passed his First Examination:—

Frederic Morell Mackenzie, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CUMING, JAMES, M.D. Q.U.I., has been appointed one of the Physicians to the Belfast General Hospital.

DAWSON, JOHN, M.B., C.M., Aberd., has been appointed House-Surgeon to the London Hospital.

GODFREY, JAMES, L.R.C.S. Edin., has been appointed substitute Medical officer to the Govan Parochial Board, Glasgow.

GRIMSHAW, THOMAS W., M.D. Dub., has been appointed Lecturer on Materia Medica at Steevens' Hospital, Dublin.

METCALFE, FENWICK, M.R.C.S. Eng., has been appointed Medical Officer to the Bishop's Lydeard district of the Taunton Union.

MINNS, PEMBROKE R. J. B., M.D. St. And., has been elected Medical Officer for the Thetford Union Workhouse, Norfolk.

POWNE, BENJAMIN L., M.R.C.S. Eng., has been appointed Resident Surgeon to the Nottingham Dispensary.

ROBERTS, E. C., M.R.C.S. Eng., has been appointed Resident Medical Officer to the York Dispensary.

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ROBERTS, FREDERICK T., M.B., has been appointed Demonstrator of Anatomy at the Liverpool Royal Infirmary School of Medicine.

ROGERS, ROBERT J., M.R.C.S. Eng., has been elected District Medical Officer to the Brighton and Hove Dispensary.

STAMFORD, W. A., M.R.C.S. Eng., has been elected House-Surgeon and Dispenser to the Chesterfield and North Derbyshire Hospital.

THOMAS, JABEZ, L.R.C.P. Edin., has been elected Physician to the Out-patients Swansea Infirmary.

WANE, W. J., M.R.C.S. Eng., has been appointed House-Surgeon to the South Shields and Westoe Dispensary.

WEARING, ALLEN, M.R.C.S. Eng., has been elected Assistant Resident Surgeon to the Nottingham Dispensary.

YARROW, GEORGE E., M.R.C.S. Eng., has been appointed Surgeon to the G Division of the Metropolitan Police.

DEATHS.

ALDRIDGE, CHARLES J., M.R.C.S. Eng., at 29, Myddelton-square, Clerkenwell, W.C., on August 13, aged 38.

BAKEWELL, SAMUEL G., M.D. Edin., at Church Stretton, Shropshire, on August 30, aged 55.

CRAIG, Dr. J., at Mount Pellier, Jamaica, on June 5, aged 79, formerly of Liverpool.

DRUST, JOHN, M.R.C.S. Eng., at North Wheatley, near Gainsborough, on August 24, aged 27.

EDWARDS, EDWIN, F.R.C.S. Eng., at Westbank, Crewe, Cheshire, on September 10, aged 49.

FORREST, Dr. JOHN, C.B., Inspector-General of Hospitals, at 10, Queen's-parade, Bath, on September 10, aged 61.

GRABHAM, JOHN, M.D., F.R.C.S., at Rochford, Essex, on September 18, aged 71.

HUTCHINSON, WILLIAM, F.R.C.S.I., at Southsea, on August 22, formerly of the Co. Leitrim Infirmary, Carrick-on-Shannon.

REYNOLDS, THOMAS F., M.D., at 14, Lansdowne-place, Cheltenham, on August 30, aged 67, late of Carshalton.

SAUNDERS, DANIEL, M.R.C.S. Eng., R.N., Surgeon of H.M.S. *Conqueror*, on the homeward voyage from Japan, on July 4, aged 36.

TOWNSEND, WILLIAM, M.R.C.S. Eng., at Bury, Lancashire, on September 4, aged 33.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bethnal-green Parish.—Mr. Vandenberg has resigned the Third District; salary, £70 per annum.

Bridgnorth Union.—Mr. Thomas Haslehurst has resigned the Fifth District; area, 18,465; population, 3452; salary, £40 per annum.

Hackney Union.—Mr. Wright has resigned the Homerton District; area, 950; population, 26,354; salary, £90 per annum.

Plympton St. Mary Union.—Mr. Edmund Hartley has resigned the Second District; area, 14,360; population, 1245; salary, £30 per annum.

Sturminster Union.—Mr. Charles Hammond has resigned the Sturminster District; area, 8093; population, 3524; salary, £65 per annum.

Woodstock Union.—Dr. Bomford has resigned the Workhouse; salary, £15 per annum.

APPOINTMENTS.

Cuckfield Union.—Thomas S. Byass, M.D. St. And., M.R.C.S.E., L.S.A., to the Second District.

Downham Union.—Frederick W. Johnson, M.R.C.S.E., L.S.A., to the Fourth District.

Erpingham Union.—James Cooper, M.R.C.S. Edin., L.S.A., to the Cromer and Northrepps Districts.

New Winchester Union.—Wm. England, M.D. Edin., M.R.C.S.E., L.S.A., to the Workhouse.

Stockton Union.—Arthur E. H. Trotter, M.R.C.S.E., L.S.A., to the Stockton District and the Workhouse.

Thetford Union.—P. R. J. B. Minns, M.D. St. And., M.R.C.S.E., to the Thetford District and the Workhouse.

Woburn Union.—Thomas Magor, M.R.C.S.E., L.R.C.P., to the Toddington District.

DEATH OF DR. FORREST, C.B.—Inspector-General of Hospitals, John Forrest, M.D., C.B., died at 10, Queen's-parade, Bath, on the the 10th inst., aged 61 years. Dr. Forrest, who was an Honorary Physician to the Queen, entered the army November 10, 1825, and served in the expedition against the Rajah of Kolapore, in 1827; he was also employed during the expedition against the insurgent Boers beyond the Orange river in 1845; and in the Kaffir war of 1846, for which he received a medal. He was in Medical charge of the 3rd division of the Eastern army at Gallipoli and Bulgaria, and accompanied the expedition to the Crimea in September, 1854, and was present at the affair at Bulgarnac, capture of Balaklava, battles of the Alma and Inkerman, and siege of Sebastopol, and was noticed in Lord Raglan's despatch after Inkerman "for his able exertions as deserving to be most honourably mentioned." He was rewarded with the medal with three clasps, made a C.B., and received the fourth-class order of the Medjidie. He became Inspector-General December 31, 1858, and was stationed at Malta until December, 1861.

UNQUALIFIED PRACTITIONERS. — We have received accounts of two inquests on persons who met their deaths under the care of illegal Practitioners. One case was that of a woman at the full period of pregnancy, who died somewhat suddenly from disease of the heart. In her case no effort was made, either by the chemist and druggist who was called in, or by a Medical man who accompanied him, to save the life of the child by Cæsarean section. The other case was one of compound fracture, in a healthy man, treated by a bonesetter. The limb became gangrenous, and the bonesetter alarmed. The latter therefore called in a Surgeon, who met him in consultation, and the limb was finally amputated by a neighbouring Practitioner, a relative of the Surgeon's, in the presence of the bonesetter, with whom, it would appear, both Surgeons consulted. The man died soon after. What is to be said of such cases? If the public choose to be maltreated and victimised by charlatans, how can the thing be prevented when registered Practitioners lend these fellows their countenance, and allow them to rob and murder under their protection?

IN MEMORIAM.

SIDNEY, LORD HERBERT OF LEA,

DIED AUGUST 2, 1861.

Lines on Laying the Foundation-stone of the Herbert Convalescent Home, at Bournemouth, September 16, 1865.

By J. STEVENSON BUSHNAN, M.D.

I.

Not in the silent tomb!
Though there, what once was He, we lately laid,
What time his death in hearts that loved him made
A dark funereal gloom.

II.

Not there he lies. Dust has returned to dust.
Not he: but his worn vestments, cast aside;
The brave knight's armour, long in battle tried,
Laid by to rust.

III.

The husk of corn, predestined to decay,
That the rich germ within may bloom for aye;
The worthless shell from which the bird has flown;
The empty casket, whence the jewel's gone;
This buried we—not him—the good, the brave!
'Tis Herbert's form—not self—lies in the grave.

IV.

Not all in Heaven! Though there
We know his soul its rich reward has won,
Of a life nobly lived—of duty done!
God's bounty will not our poor earth deprive
Of all the good his presence, when alive,
Worked in this world so fair!

V.

Herbert still lives on earth!
Lives in the noble deeds while here he wrought;
Lives in the deathless lessons here he taught
Of virtue's worth.

VI.

His generous spirit lives among us still,
Unseen to mortal eye.
Where'er men strive hard duty to fulfil,
By his example nerved to conquer ill,
There is he nigh!
Where'er a fainting soul, outworn with care,
Thinking on him, finds life less hard to bear;
Where one who'd falter ere life's race is run,
Takes heart of grace, thinking what Herbert's done,
There stands he by!
What though he's left us? Summer's sun may rest—
The ripened corn tells of his presence yet;
Nor deem we lost the Spring's soft genial show'r,
When seen transmuted into fruit and flow'r,
So live men in the good they do: so trace
A record Death itself cannot efface.
Good deeds ne'er die.

VII.

True to the last
O'ertaken by grim Death, still at his post,
Faithful to duty—counting not the cost;
Dying in harness, like a knight of old,
His strength succumbing—not his spirit bold—
So from our sight he passed!

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VIII.

But as the flow'r yields choicest scent when crushed,
So he, when Death his gentle spirit hushed,
Left to the world the odour of a name,
Spotless, undying on the roll of Fame.

IX.

The monument we raise
This day, to after time his fame shall sound—
He left earth better than the earth he found!
Who dare ask higher praise?

X.

This Home we dedicate
To Herbert's memory! Fit monument
For one whose life in doing good was spent!
Aiding the helpless—strengthening the weak.
That which he did, the Home we rear shall seek
To imitate!

XI.

Here shall the poor and ailing rest at ease,
Drinking in health from Heav'n's pure ocean breeze;
Their tottering steps uphold, through the drear length
Of toilsome road from sickness back to strength!
This his Memorial! Could we better find
For one who loved, and served so well his kind?

Thus lives he to all time, as lived he here,
Friend of the friendless! evermore held dear
To unborn ages, who shall Herbert's name revere.

Laverstock House, Salisbury, September, 1865.

THE EDINBURGH REPORT ON THE RINDERPEST.

By Dr. SMART.

In compliance with the request of the magistrates of Edinburgh, Dr. Smart has investigated the pathological appearance and conditions of the cattle affected with rinderpest and other forms of epizootic diseases at present prevailing among cows in the city, with a view to ascertaining the real nature of the disease or diseases, and the proper treatment thereof, and has made the following *interim* report:—

Interim report to the Lord Provost and magistrates of Edinburgh on the Pathological appearances of the cattle plague and other epizootic diseases at present prevailing among the cows in Edinburgh.

This *interim* report is restricted to a description of the pathological condition of the animals inspected. The dissections were made, with the assistance of Professor Strangeways, at the Edinburgh Sanatorium and at Tyne Castle, and the appearances noted were seen by many persons who were present on these occasions. The parts described and illustrated by drawings and preparations were selected only from examples of the pure and uncomplicated form of the disease.

DESCRIPTION OF PARTS.

I. *Windpipe and Lungs.*—The entire mucous membrane lining the respiratory passages is reddened and highly vascular, presenting the appearance seen in the early stage of acute bronchial catarrh. It is sometimes nearly dry, but more frequently, especially in the smaller tubes, there is an abundance of frothy mucus, often of a slightly red or sanguineous tinge. The membrane is entirely free of the aphthous eruption which appears in the mouth; and very rarely are there any indications of an effusive or depositive inflammatory condition. The air cells of the lung, in uncomplicated cases, are healthy: and when an emphysematous condition of the organ exists it is evidently chronic, and not, as represented, one of the morbid states superinduced by the disease.

II. *The Mouth, Pharynx, and Gullet.*—The appearance presented by the mouth is characteristic. The gums, lips, hard and soft palates, under-surface and root of upper-surface of the tongue, the superior surface of the epiglottis and epiglottic folds of membrane, and the pharynx, are marked to a greater or less extent by an aphthous eruption. This condition has been termed "ulcerous," but we have repeatedly shown that the subjacent membrane is entire. The roughened and granular aspect presented to the eye readily scrapes off, and consists of accumulated epithelium. It collects on the surface of the membrane around the orifices of the follicles. This gives it a punctuated or honeycomb appearance, resembling minute ulcers. It enters the pharynx, but is not at all found on the gullet or air passages. It occurs in only one other situation—namely, on the vulva at the junction of the mucous membrane with the integument. The gullet itself exhibits no trace of disease.

III. *The Stomachs.*—The first and second stomachs are generally loaded and distended with undigested food, which indicates their suspended function. No observable change of structure is apparent in either organ, and their lining membranes, as in other portions of the alimentary tract, are not reddened and congested. It is in the third stomach or omasom that the first marked changes of structure occur. These consist of irregular circular patches varying from the size of a pin-head to a crown piece. They are characterised by bright red or scarlet margins, which in the larger patches enclose a central portion of the dirty yellow and somewhat gangrenous colour. These very remarkable appearances are not invariably present, and have been met with in only one-half of the animals dissected. They are found on the gastric folds or manyplies, and occur at varying intervals. The central portion of the patch is slightly depressed, friable, quite bloodless, and the papillæ on its surface shrunken, especially towards the middle; but there is not any breach of substance. The spots are found in every stage of advancement, and pass through the following changes:—A single papilla is first attacked, and its vessels become extremely congested. The congestion quickly extends to the neighbouring papillæ, and as the circle widens those first affected entirely lose their vascularity; hence their vitality is destroyed, and death proceeds from the centre towards the circumference. The bright colour of the outer ring, as determined by the microscope, is due, not to ecchymosis, but to the confluence of the congested papillary vessels. The knowledge of this fact explains at once the sharply defined marginate character of the patches, and their mode of extension.

I would here beg leave to point out a double error into which many observers have fallen. The superficial membrane of this stomach which so readily peels off in sheets, and is found adhering to the plastic surface of the food with which the stomach is usually found distended, is not, as often represented, a diagnostic mark of the disease. Neither is it the mucous membrane, as supposed, that shows so much facility of being removed. It is the epithelial layer which is cast, and the subjacent mucous membrane is left perfectly intact. This change is constantly going on in health, and the membrane can be removed (as I have often done) with like facility from the folds of the third stomach of a freshly slaughtered perfectly healthy animal.

It is in a very special manner the mucous lining of the fourth stomach, or abomasom, that suffers from the inflammatory change, if such a term can be applied where there are no inflammatory products. The morbid condition appears earlier in some portions of the membrane, but eventually every part is involved in the destructive process. In the earlier stage of the disease the membrane is reddened only a little deeper than in health, but deepens as it advances, and towards the termination is dusky red with interspersed claret-coloured patches. The latter condition indicates a more, perhaps the most, advanced stage of morbid degeneration of mucous tissue.

The membrane, on more careful inspection, presents the following deviations from health. Firstly, its vital attachment to the muscular coat is generally loosened, and at many parts destroyed. Secondly, it is soft and friable, easily breaks down under any pressure, and, where the change is furthest advanced, peels off as if cohering mechanically to its sub-mucous connections. Cracks and abrasions are thus readily formed, which have been mistaken for ulcers. Thirdly, the epithelium of the entire membrane is deficient and imperfect, and at many parts quite absent. Fourthly, the high colour of the tissue, as microscopically determined, is due, not, as has been stated, to sub-mucous or intra-mucous extravasation, but to vascular congestion in its most extreme form. The vessels being distended to their limits are greatly enlarged, but without rupture or dispersion of their contents unless artificially produced. Fifthly, in some instances, generally in stomachs of animals examined a few hours after death, some small ulcer-like depressed abrasions have been found. These are not true ulcers, and do not penetrate beyond the epithelium. In other instances, black spots, without breach of surface, and evidently due to pigmentation, were met with.

IV. *The Intestines.*—Passing from the abomasom to the lower bowel, the latter is seen to participate in the changes already described, although not to the same extent. The lining membrane of the whole of the intestine is in a state of nearly uniform congestive vascularity, resembling the condition existing in the muco-enteritis of cattle. It is the minuter vessels in the smaller intestine that are mostly injected. These are well seen by the naked eye in the various aborescent forms of their numerous and intricate reticulations. In the large intestine, on the contrary, it is the considerable vessels that are mainly and in a higher degree affected. This imparts to the gut a peculiarly striped aspect. This vascular engorgement increases towards the terminal portion of the canal, and the mucous folds of the rectum exhibit the tumid and deeply purple appearance of internal hæmorrhoids. The whole mucous lining of the bowels is unduly soft, and its epithelium imperfect. There are no true ulcerations, and in this respect its condition differs broadly from the ulcerative typhoid of man. Not unfrequently a viscid fetid mucus covers the membranous surface. The bowel is usually empty, or its contents are fluid and slimy, but not sanguineous; sometimes there is (as first pointed out by Mr. Scott) a discharge resembling the "rice-water" stools of cholera. The ileo-cæcal valve is, as regards function, healthy, but its lining membrane, as also that of the cæcal appendage, is involved in the general hyper-vascularity. There is no sloughing or invagination of the bowel, nor any desquamation of its mucous surface in the form of casts.

V. *Glands.*—There has been much discussion as to the condition of the intestinal-glands. I have repeatedly had occasion during the dissections to show that they did not share to any marked extent in the altered condition of the membrane with which they are so intimately connected. They are less prominent, and their outline is obscured by the discoloration of the superjacent membrane. They are never ulcerated, but a chronic tuberculous condition of the solitary glands is of frequent occurrence. This is commonly met with in healthy animals, and is not significant of any particular form of disease. The mesenteric glands show no lesion of structure. They are bloodless and shrunken, and their lacteal vessels are generally empty.

VI. *Kidneys, Bladder, Uterus, etc.*—The pyramids of the kidneys are usually the congested portions, while the cortex is pale, but the structure is entire.

The condition of the lining membrane of the bladder and urethra are variable, but in no instance seriously involved. The uterus exhibits no peculiar feature, but the state of the vagina is characteristic. The vulva is swollen, its membrane tense, and has a very red and irritable aspect. An aphthous eruption appears where the mucous surface joins the integument. A glairy ropy mucus flows from the orifice, and hangs in strings from the vulva.

VII. *Heart, Liver, Spleen, Blood, etc.*—The muscular substance of the heart, like the muscular system generally, is flabby and pale. Its condition is not peculiar, but such as is ordinarily induced by many exhausting diseases. There is no valvular lesion or structural change. The large vessels and their lining membranes are healthy.

The *liver* is of natural size, pale in colour, but sound in structure. The gall-bladder is usually filled with bile, which is thin and of a light green colour.

The *spleen* is too pulpy, and breaks down under slight pressure. The pulp is composed of broken-down tissue and blood cells of very dark colour. It is the splenic condition of exhausting fever.

The *blood*, when retained in the vessels of a dead animal, remains fluid for a considerable period after death (Professor Lister). Forgetful of this fact, it has been assumed that the blood in this disease is "watery and deficient in fibrine." In the single instance in which I have been able to examine the blood, excess of the fibrinous element was found. Should our further researches confirm this observation, additional light will thus be thrown on the pathology of the disease.

The blood is unusually dark in colour, and coagulates quickly and firmly out of the body.

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The serous membranes, when the disease is uncomplicated, are healthy, and without effusion into their sacs.

The cellular connective tissue of the loins in some animals is in a perfectly emphysematous condition. It is quite blown up and distended with air, and the appearance presented is unusual and remarkable, but not singular.

The parts not yet examined are the brain, spinal cord, and udder.

SUMMARY.

The number of cases examined and reported upon are insufficient as a basis of general inference, and the following conclusions are not intended to go beyond our present information :—

1. It is the mucous membranes that manifest the diseased condition principally.
2. They do not all exhibit precisely similar morbid states, nor suffer to the same extent.
3. In some of the membranes the pathological condition is constant and characteristic; in others it is variable.
4. Many of the pathological appearances present in the diseased organs are not peculiar to this malady, and are not distinctive. Thus (*e.g.*), the state of the bowel in the muco-enteritis of cattle closely resembles that presented in this disease.
5. The condition of the bladder and uterus is such as occurs in all congested states of these organs.
6. The heart, liver, kidneys, and spleen may be regarded as functionally healthy. They are in the condition which results from exhausting disease of any kind, while the lining membrane of the air-passages exhibits the morbid change which occurs in acute bronchial catarrh.
7. The remarkable rings or patches found on the folds of the third stomach were found present in only a proportion of all the cases examined, and are not consequently distinctive.
8. The condition of the membrane of the fourth stomach is invariable. It likewise manifests the morbid changes in their most advanced and destructive form. It is, therefore, the most characteristic pathological lesion. The swollen, congested, and aphthous vulva and aphthous mouth have also been found invariably present. When these morbid conditions concur with that of the bowel in the same animal, the group is complete and decisive.
9. As regards negative conditions, there is no ulceration, and very rarely any trace of inflammatory products
10. The reddened colour of the membranes is due to congestion in its extreme form, and not to ecchymosis or extravasation.
11. Emphysema of the lung is not, as has been stated, a concomitant of the disease.
12. Present information would appear to indicate that the blood, instead of being "watery and deficient," is in an opposite condition,—viz., that the water is deficient, and the fibrine increased.
13. We must not omit to mention an invariable and characteristic feature of the disease,—namely, the smell of the diseased parts, and especially of the abdominal viscera. The odour once experienced can never afterwards be mistaken. It is peculiar and distinctive.
14. As to complication, a proportion of two-thirds of all the animals examined were affected with pleuro-pneumonia.

Edinburgh, September 12, 1865. ANDREW SMART, M.D.

—The *Scotsman*, Wednesday, September 13.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

H. C.'s note has been forwarded to the author of the papers on "Modern Syphilography."

Exophthalmos.—Haynes Walton on "Surgical Diseases of the Eye."

Beta.—There is no mention of it in Parkes, Hassall, Beale, or Naubauer and Vogel. Inquire of the maker of the instrument.

A Guy's Student.—The Universities of Jena, Giessen, and Marburg.

Islington.—We have received a copy of the *Islington Gazette* containing some correspondence in reference to an inquest recently held at the Rotherfield Tavern. It is evident that the Coroner was uninformed of the circumstances in which Mr. Clifton was placed. A few moments' personal interview would have cleared up the matter. With regard to the actual facts of the inquest, how often would justice fail if the caution of a Surgeon who does not make a post-mortem examination because a body is rapidly decomposing, were to be adopted as a rule of conduct by the Profession at large?

GRIFFIN TESTIMONIAL FUND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscription has been further received on behalf of the above fund :—Erasmus Wilson, Esq., Henrietta-street, £2 2s. Amount previously announced, £125 9s. 9d. ; received at *Lancet* office, £9 9s.

I am, &c.

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate-street Without, September 20.

CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having been frequently engaged with regiments affected with cholera in India, I hope you will allow me space for a few remarks. I would propose to divide the disease into the following varieties—viz. :—Congestive cholera, with all the vital actions completely overpowered; second, spasmodic cholera, with all the vital actions in a state of extreme excitement; third, reactionary cholera fever; fourth, simple mild cholera; and fifth, bilious cholera.

In the extreme congestive cholera I would recommend the usual large doses of brandy,—say a wineglassful every hour, or even every half hour, where the patient is pulseless. To the brandy may be added as much of the tincture of opium as the system will tolerate,—say twenty drops every hour, until the pulse returns to the wrist and the heat to the surface, when the brandy and opium may be given in smaller doses, or altogether discontinued. The usual means of restoring the temperature must be employed, such as heated bricks to the extremities and a mustard cataplasm to the stomach.

In bilious cholera it appears to me that the accumulation of the bile in the stomach and intestines stimulates the cardiac sphincter and the other internal muscular tissue and organs, including the heart and arteries, to powerful contraction, thereby producing the rice-water dejections. The depressing effect produced by the presence of the bile in the stomach and intestines leads, I consider, eventually to the congestive stage.

I have in these cases found large doses of the oxide or carbonate of magnesia of the utmost benefit in neutralising the bile, giving the patient almost immediate relief, and generally attended with the rejection of large quantities of extremely acrid bilious matter. The magnesia may be conveniently suspended in the mistura mucilaginosa.

In spasmodic cholera it has occurred to my mind to try the tobacco enema or some of the other preparations of tobacco, but I have never put the treatment in practice.

Simple mild cholera may be treated in the same way as diarrhœa. In examining the bodies of patients who have died from cholera I have been very much struck with the heat of the internal organs, even when the surface had been for hours of icy coldness. This is one remarkable circumstance in the history of cholera, which I think is deserving of attention. In examining the bodies of patients who have died of cholera I have often withdrawn my hand involuntarily, thinking that I had proceeded to open the body prematurely.

I am, &c.

ALEXANDER HAMILTON HOME, M.D.

Honourable East India Company's Service.

Hullerhirst, Stevenston, Ayrshire, Sept. 13.

THE TITLE OF A DENTAL LICENTIATE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In reply to your correspondent Mr. Charles James Fox, whose letter appeared in your paper of September 2, stating that I had used initials that I was not entitled to, I desire to offer my thanks to that gentleman for his kindness in correcting me, I having erred through ignorance, and not from any desire to assume what I am not. I cannot reply to "Incisor," his communication being anonymous.

I am, &c. A. AARONSON, L.D.S.

77, Whitechapel-road, London, September 19.

THE ADMINISTRATION OF CHLOROFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In a letter of some length Dr. Kidd remarks that "we might, could, or would agree (on the administration of chloroform in Midwifery), but for something which your correspondent has inadvertently lighted upon of his own making, as to these self-same tonsils, not very much unlike a quibble on words—*toujours perdrix*—he can see nothing but tonsils," etc. Now as this implies that, in connexion with the subject of chloroform in Midwifery, I had referred directly or indirectly to the tonsils, and as such is not the case, permit me to draw the attention of Dr. Kidd to what he may perhaps style a little inaccuracy, but to which I fear some of your readers will apply a stronger term, inasmuch as this is the third time I have had to point out that Dr. Kidd has read my letters amiss.

My real fault was that of having contrasted two rather incompatible theories of Dr. Kidd to the effect,—1. "That spasm of the glottis is the cardinal cause of death in chloroform administration," and, 2ndly, That chloroform is safe in Midwifery practice because "the abdominal muscles and diaphragm are acting with vigour in concert with the uterus;" and I ventured to wonder how even a vigorous action of the abdominal muscles and diaphragm could antagonise spasm of the glottis. Dr. Kidd, after the unfair attempt to mystify by means of tonsils, replies by rebuking my "adherence to exact physiology rather than inexact or rude observation," and also remarks that "we would not think of curing typhus or strumous lupus by exact physiology. The experienced man, though Mr. Smith may sneer at such, knows the rude but specific value of wine in one and arsenic in the other, though physiology will not explain either." This mode of reasoning is by no means philosophic, for it seems to have escaped the acute mind of Dr. Kidd that there is a difference between the inability to explain facts accurately observed and a belief in inexact observations directly opposed to the known facts of physiology. Dr. Kidd has also forgotten that it is by accurate rather than inexact observation that the diagnosis of strumous lupus is arrived at, and that an inexact observer might very possibly designate by such a title sundry other morbid conditions—*e.g.*, the syphilitic; and what then of arsenic as a means of cure?

Dr. Kidd is mistaken in supposing that I could sneer at the experienced man, for, much as men may differ upon points of physiology, there can be but one opinion respecting the value of experience. It alone can settle that on which, in my last letter, I asked Dr. Kidd's opinion—viz., the best mode of administering chloroform.

Thanking you for the courtesy with which you have received my communications,

I am, &c.

Finsbury-place South, Sept. 13. WILLIAM J. SMITH.

THE INDIAN MEDICAL SERVICE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you permit me through the columns of your journal to address my Professional brethren who may be entertaining the idea of pursuing a Medical career in India? I may be, perhaps, looked upon as an unprejudiced witness—at least, as against the service—since from the time of my reaching India, many years ago, I have been one of the more fortunate of my compeers, always holding fair appointments, having entered the country with good prestige, though without personal interest.

Against this success, however, must be placed occasional mortification at seeing men with more interest but lesser claim preferred to me; three attacks of dangerous illness, which nearly brought me to the grave, besides slighter attacks; the death of children from the effects of the climate; frequent separations from my family, and the all but fatal illness of my wife on two such occasions.

As an illustration of the kind consideration of some superior officers, I may mention that, from exposure in three campaigns, I was on one occasion so reduced from dysentery that the sick men of my regiment were brought to me as I lay on my cot. On one particular evening my tent was filled with the officers of the regiment, waiting for my last breath, which was momentarily expected, and, without my knowledge, the commandant of the corps went himself to the Major-General commanding the column, and begged that I might be sent to some station, as the only hope of saving my life. This application was at once refused, although a young Assistant-Surgeon in the same force had recently died at his post.

Notwithstanding these negative considerations, I was proud of the old Company's service, and fully determined to remain in it as long as I was

fit to do so, feeling confident that what ability I might have, backed by energy and a conscientious performance of my duties, would always receive its proper recognition. Now the Horse Guards have effectually degraded the Indian Medical service, have made it an inferior branch, have stamped its members as unfit to attend European soldiers, and condemned them to native charges only.

There are civil appointments certainly; but is it not reasonable to expect that the few Europeans connected with them will, where practicable, prefer to secure the attendance of Medical officers attached to European corps rather than be content with that of men whose Indian experience has been with natives almost exclusively? They will be justified, too, for in the case of European charges there is some Professional supervision of diagnosis and treatment, since in all fatal cases a return of diagnosis, treatment, and post-mortem appearances has to be sent to the higher Professional authorities; whereas with native charges nothing of the kind occurs, and one is apt to become careless whether the disease be rightly diagnosed or otherwise, whether the patient die of pneumonia or fever. The treatment of natives, too, is most unsatisfactory, and I boldly assert that the most energetic Medical officer will lose much of his interest in their diseases after a few years' experience.

The great prizes of the Presidency cannot be held by all, and those who do hold them do so, for the most part, at the risk of their lives and at the price of separation from their wives and children for the greater portion of their service. At present, we have the same number of the higher ranks of Inspector-General and Deputy Inspector-General as formerly; but is it probable that this will continue, and that Medical officers who have had charge of natives only will be allowed to superintend officers in charge of European corps? Of course they will not, and in a few years, in spite of Mr. Henley's clause, the number of superintending officers will be reduced.

There are, I confess, men in the old Company's service who have lost most of their Professional *esprit*; but at the same time there are others of whom the Profession would be proud in any position. The former may well be allowed to take their ease with native charges; but from the latter surely all incentives to exertion should not be taken away. Ask any conscientious Deputy Inspector-General in H.M.'s forces, who has served as such in India, and he will, if he answer at all, tell you that nearly every fresh European regiment arriving in the country, during the first year, loses from death and invaliding a larger proportion of men than it would have done had the Medical officers attached been familiar with the character of Indian diseases, or the course that ordinary diseases run in this climate.

Will a few extra pounds sterling per annum tempt well-educated gentlemen to enter a degraded service in a bad climate? As it is, I hear on all sides that a very inferior class of men is now being introduced into the country, and the Profession must sink low in general estimation. I, for one, shall only be too glad to leave the country at the earliest possible opportunity, unless I find the Medical service placed in a more satisfactory position; and I should strongly recommend all my juniors who have not as yet selected the Indian Medical Service to turn their back to the temptation, and to select some other arena for their future career.

I am, &c. AN OLD SUBSCRIBER.

India, July 16.

Medical Testimony as to Capital Punishment.

Letter from Dr. Lyford.

Brighton, September 1, 1865.

Dear Sir,—In reply to your letter of the 19th ult., I beg to inform you that, having been attached to a large county prison throughout a very extended series of years, in which it was a part of my painful duties to witness on the scaffold all the executions, amounting to about forty in number, which took place during that time, affording me an almost unprecedented opportunity of making observations and reflections on this melancholy subject, I have often been desirous of reporting the result of my extended experiences to those philanthropic individuals who might feel interested in gaining every information on the effect of capital punishment, with the view of arriving at a legitimate conclusion as to the expediency of continuing or abandoning this mode of punishment.

The number of criminals whose execution I have officially witnessed may appear somewhat large; but it must be borne in mind that it is only within a comparatively few years that executions have been restricted to the crime of murder, previous to which the forger, the sheep stealer, the horse stealer, and the burglar met with a similar fate, enlarging therefore most considerably the number of victims for the scaffold.

On inquiry of the respective culprits, just immediately before their execution, as to whether they had ever been present at a public execution, with two exceptions they all replied in the affirmative, and several stated they were sorry to say that they had witnessed many. In their particular cases, then, it is quite undeniable that the spectacle at the gallows exerted no restraining power in preventing the perpetration of the self-same bloody and inhuman deeds. And I doubt not but a similar confession would be made amongst criminals generally.

Can we arrive, then, at any other conclusion but that public executions have entirely failed in accomplishing the special object for which they were instituted, and that they should therefore be at once discontinued? For under this sanguinary law doubtless murder has actually flourished.

Again, the advent of a public execution is just the precise occasion of attraction for the multitude. For, alas! the diffusion of education—nay, even the dissemination of religious principles—appear to have utterly failed to destroy this most unnatural craving for witnessing these cruel and barbarous exhibitions. On these occasions the spectators, consisting of men, women, and children, from far and wide, and whole families arriving many hours previous to the execution, pass their time in noisy laughter, foul language, coarse jokes, confusion, and disorder, together with the slighter breaches of the peace, and immoralities of every description. The spectacle having ended, too frequently the remainder of the day is spent at the public-house, and too often finished with drunkenness. Such demoralising influences, as a matter of fact, are calculated in the highest degree to ensure regular employment to the public functionary at the gallows.

Now, as to the amount of suffering which the malefactor undergoes, my experience leads me to say that life is not so quickly extinguished as is usually supposed. Having been in the habit of feeling the pulse immediately on the fall of "the drop," I have not unfrequently found it to beat for five or six minutes, more or less regularly, accompanied with convulsive drawing up of the body, being violent efforts for respiration—would that I could be certain without consciousness. On these occasions I have discovered that the strangulation has been incomplete, owing to the mal-adjustment of the rope. I am of opinion, therefore, that death at the hand of the public executioner is too often a painful and prolonged one.

But the question is yet to be solved—What should be the fate of the convicted murderer? Is he to be permitted, as in olden time, to become a wanderer and fugitive over the land? The idea is preposterous. Rather indeed should he be made to expiate his crime in perpetual banishment, away from his fellow-man, in the very bowels of the earth, in the mines or in the coal fields, where, although the natural term of his years might be considerably abridged (the life of the miner averaging only forty years), he would, doubtless, in solitude and darkness, soon be made to feel most keenly, and with deep and sincere contrition, the enormity of his crime and a pungency of remorse and genuine repentance, the conviction of having grievously offended both man and his Maker.

Should this momentous subject be brought forward for discussion, may we not hope that our Legislature may be induced to abrogate altogether the law of capital punishment, and, in the cause of public morality and genuine Christianity, consign to oblivion the monstrous anomaly, which, in this Christian country, legalises the public strangulation of one Christian by another?

H. G. LYFORD, M.D.

Mr. William Tallack.

COMMUNICATIONS have been received from—

Dr. C. J. B. ALDIS; Mr. M. STERN; Mr. GASKOIN; AN OLD SUBSCRIBER; MEDICUS; Mr. F. METCALFE; Mr. R. J. ROGERS; Mr. JOHN KITTS; Dr. TILBURY FOX; APOTHECARIES' HALL; H. C.; ALPHA; Dr. J. C. COOKWORTHY; Mr. LAZENBY; Dr. A. H. HOME; SECRETARY OF THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL; Dr. ALTHAUS; Mr. J. W. TURNER; J. G.; BETA; Dr. HUGHES; Mr. A. AARONSON; Dr. J. S. BUSHNAN; A GUY'S STUDENT.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 16, 1865.

BIRTHS.

Births of Boys, 1054; Girls, 1035; Total, 2089.
Average of 10 corresponding weeks, 1855-64, 1716·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	625	579	1204
Average of the ten years 1855-64	555·0	535·7	1090·7
Average corrected to increased population..	..	..	1200
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	2	2	2	2	5	4	11
North ..	618,210	4	4	8	4	5	17	18
Central ..	378,058	..	..	7	..	7	11	11
East ..	571,158	..	1	17	1	6	14	19
South ..	773,175	3	8	9	2	5	7	26
Total ..	2,803,989	9	15	43	9	28	53	85

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·106 in.
Mean temperature	67·8
Highest point of thermometer	85·3
Lowest point of thermometer	52·3
Mean dew-point temperature	58·8
General direction of wind	W. & S.E.
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK.

September 23. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

25. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

26. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

27. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

28. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

29. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

COURSE OF
LECTURES
ON THE URINE AND DISEASES OF THE URINARY ORGANS. (a)

By GEORGE HARLEY, M.D., F.R.C.P.,
Professor in University College, and Assistant-Physician to University College Hospital.

LECTURE X.

DIABETES MELLITUS — GLUCOSURIA — SACCHARINE URINE — ITS NATURE AND RATIONAL TREATMENT.

(Continued from vol. i. 1865, page 32.)

HAVING said that the amount of sugar in the blood fluctuates according to the stage of the digestion, it may now be added that the amount of saccharine matter present in the circulation varies in proportion to the quality and quantity of the food. The results of a series of experiments performed in 1858 before the Practical Physiology Class at University College furnishes us with the following data:—

In the arterial blood of the carotid artery of three dogs, four hours after having been exclusively fed on horse-flesh, an average of 0·08 per cent. of sugar was found, whereas eight days subsequently, after these same dogs had been freely supplied with mixed diet, consisting of bread, meat, and potatoes, the average amount of sugar in the arterial circulation four hours after feeding rose to 0·22 per cent.,—hereby affording a physiological explanation of the well-known pathological fact that purely animal diet diminishes, while vegetable or mixed diet increases, the amount of saccharine matter eliminated by the kidneys.

I must now call attention to the fact that, although the quantity of sugar present in the circulation is constantly fluctuating, the amount found in the liver remains comparatively unaltered. Thus, for example, Bernard found, about the same period after death, an average of 1½ per cent. of sugar in the livers of dogs fed exclusively on animal diet, on mixed food, and on vegetable matter,—a result which, from showing that the amount of sugar present in the liver is but slightly influenced by the kind of food, led him into the erroneous idea that diet has no influence on the amount of saccharine matter manufactured by that organ;—a mistake which has constantly brought him into difficulties while attempting to reconcile it with other entirely opposed facts,—such, for example, as the effects of different kinds of foods upon diabetic patients.

The reason why the amount of saccharine matter remains comparatively stationary in the liver while it is constantly fluctuating in the circulation arises from the circumstance of the sugar not being stored up in the hepatic cells, but poured into the vessels as quickly as it is formed; therefore the quantity which the liver at any time contains cannot be accepted as a criterion of the amount which the organ produces. Had Bernard gauged the amount of saccharine matter present in the blood, instead of in the liver, after each particular kind of diet, and drawn his conclusions from the results thereby obtained, he could not possibly have fallen into the above-mentioned error.

Having thus far traced the *rationale* of saccharine urine, we have still to advance a step further, and inquire whether animal food is directly transformed into sugar, or if there is a transition stage in the process between protein substances on the one hand, and saccharine matter on the other. In the case of amylaceous foods, we have already seen there is no connecting link, but that, during their passage along the alimentary canal, they are at once transformed into sugar by certain of the digestive juices. With protein substances, however, the case is very different; for, ere they can be changed into saccharine matter, they must first be resolved into something resembling starch.

I am constantly telling my students that Nature does nothing on a small scale; and the more we study her the more we are forced to admire the uniformity and extensive applicability of her laws. In the vegetable and animal kingdoms we not only encounter analogous substances, but we find that they are endowed with similar properties, and respectively perform similar functions. We already saw that while the sugar of the cane has its analogue in that of the milk, the sugar of the grape has its analogue in that of the liver. I have now to point out how even vegetable starch has also its analogue in the animal world.

Although the discovery of a substance in the animal body possessing the properties of starch had been long suspected, it was not until 1857 that a large enough quantity was separated in a sufficiently pure state to admit of its being subjected to elementary analysis, and thereby allow its striking affinities to vegetable starch to be demonstrated. To Bernard belongs the credit of having first obtained this substance from the liver in a free state, and shown its direct convertibility into saccharine matter, in consequence of which he appropriately gave to it the title of glucogene.

Glucogene has such a striking resemblance to vegetable starch that a short description of its appearance and properties will not be out of place. Like ordinary starch it is a neutral, white, odourless, insipid substance; soluble in water, but insoluble in alcohol and acetic acid. When boiled with diluted mineral acids, or treated with either saliva or pancreatic juice, it is transformed like other amyloid substances into sugar of the second class. That is to say, into a sugar possessing the property of reducing the oxide of copper, and of being decomposed by caustic potash into glucic and melassic acids. Moreover, it is also, like starch, transformed by fuming nitric acid into xyloidine, a combustible substance, which detonates with flame when heated to 180°.—Poggiale.(b) On the other hand, it differs from ordinary starch in giving with the tincture of iodine a reddish violet, instead of a deep blue colour. In which respect, therefore, it appears to stand between starch and dextrine.

The easiest mode of extracting glucogene from the liver is to add to a concentrated aqueous decoction of the hepatic substance an excess of glacial acetic acid, which instantly precipitates all the glucogene, and leaves the albumen in solution. The precipitate is then separated by filtration, redissolved in water, and again precipitated by absolute alcohol; the process being repeated until the substance separates in a perfectly pure state.

While giving credit to Bernard for being the first to extract glucogene from the liver, I must not omit to yield to Hensen his proper meed of praise in having foreshadowed the discovery by his researches on the saccharine function of the liver published in 1856,(c) in which he stated that he had found in the liver of rabbits a yellow substance transformable into sugar by the action of saliva, pancreatic juice, and even portal blood.

According to Pelouze, glucogene is composed in 100 parts of

Oxygen	54·1
Carbon.	39·8
Hydrogen	6·1
	100·0

Glucogene has been detected in the livers of all animals in which it has hitherto been sought for, no matter whether they were animal or vegetable feeders, and consequently the natural conclusion is that the liver possesses the power of forming it out of animal as well as vegetable food. But while, in the case of carnivora, glucogene is only met with in the liver, in that of the herbivora it has been encountered in various other situations, for example, Poiseuille et Lefort found in the blood of a bull 0·073 per cent. In the chyle 0·123 per cent., and in the lymph 0·266 per cent.(d) It is even to be met with in the muscles. Here is a beautifully pure specimen of glucogene, given to me by Professor Scherer, which he obtained from the muscles of the horse. Moreover, the quantity of glucogene in the livers of herbivora is many times greater than that met with in those of the carnivora.

Now comes the question, What are the uses of glucogene in the animal economy?

We all know that starch, as starch, cannot nourish the body, and from certain facts presently to be related it is highly probable that glucogene must, like ordinary starch, be transformed into saccharine matter before it can play its part in the intricate processes of life. We already know that at least a great part of the glucogene formed in the liver is changed into sugar before it is permitted to leave that organ. We are also

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—ED. *Med. Times and Gaz.*

(b) Brown-Séquard's *Journal*, 1858, p. 549.

(c) *Verh. Med. Phys. Gesell.*, Würtburg, vol. vii., part ii., 1856.

(d) *Comptes-Rendus*, April 5, 1858, p. 645.

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acquainted with another exceedingly interesting and important fact, namely, that, be the transforming agency what it may, it is quite independent of any so-called vital influences. The transformation of glucogene into sugar appears to follow the same unalterable law as that already noticed regarding the transformation of ordinary starch, for not only does it continue in force after the death of the animal, but even after the removal of the liver from the body. All that is required apparently being the sustaining the organ at a certain temperature.

This assertion can be easily proved by taking the liver of a healthy animal, and after it has been, as far as possible, completely freed from sugar by passing a current of water through its vessels, keeping it in a warm apartment for six or eight hours. The tissues of the organ will then be found saturated with sugar, although only a small quantity could be detected immediately after its removal from the body.

The results of the following experiment,(e) which was performed by Professor Sharpey and myself, will give a tolerable idea of the rapidity with which glucogene is transformed into sugar in a liver after its removal from the body:—

A dog which had been previously fed on animal diet received a full meal of bread and milk. Five hours afterwards the animal was pithed, and a portion of the liver rapidly sliced off and immersed in a freezing mixture. The portion of frozen liver was found to contain only 0·333 per cent. of saccharine matter; whereas another portion of the same liver, which had not been frozen, after having stood two hours was found to contain 1·55 per cent.—that is to say, nearly fivefold more of sugar, which sugar had, of course, formed at the expense of the glucogene after the death of the animal. The 0·333 per cent. represents, of course, the amount of sugar present in the liver at the moment of death—an amount which appears insignificant until it is recollected that during life the sugar formed in the liver is removed from it with every pulsation of the heart; consequently, the quantity poured into the circulation during the twenty-four hours must be very considerable, notwithstanding that during life only a fractional part of a per cent. is present in the organ at any one time.

I may here mention that it is this circumstance now alluded to, of there being but a very small quantity of sugar in the hepatic organ at the moment of death, while a large amount is to be found some hours afterwards, which has led Dr. Pavy into the error of supposing that the formation of sugar in the liver is in all cases due to a post-, instead of an ante-mortem cause. Were we to adopt such a mode of reasoning we might with equal justice say that no starch is changed into sugar in the digestive canal during life, for as its transformation likewise still continues after death, the longer we delay in making the analysis the greater is the amount of sugar there found. In fact, under certain circumstances, the duodenum of an animal, immediately after death, may contain only a trace of sugar, and yet an enormous amount be found in it in about half an hour later. The reason of this being, that so long as the animal lived the sugar was absorbed from the intestine by the veins and lacteals as rapidly as it was formed. Whereas, although when it died the absorption process became arrested, the transformation of the starch into sugar by the pancreatic juice still went on. I need not take up any more time by discussing this question here; but refer those specially interested in the subject to the published writings of Thudichum(f), Beale(g), and myself(h). I may only further remark that even supposing that *not a trace of sugar* could be detected in the liver immediately after death, it would be no more scientific evidence that the liver did not manufacture sugar during life, than the finding no urine in the kidneys after death would be that the normal function of these organs was not to eliminate urine. A few more substantial data than any hitherto brought forward is required, ere we can venture to accept of negative results in the place of positive facts.

The next point is, "What becomes of all the saccharine matter?" Bernard thought that it was burned off in the lungs, its chief office being to sustain the animal heat; but as Chauveau and I pointed out, such a doctrine is utterly untenable, seeing that when the experiments are properly performed there is almost as much sugar to be found in the blood returning from the lungs as in that going to them. Thus, for example, in a fasting animal I found that while the blood of right side of the heart contained 0.10 per cent. of saccharine matter, that of the left contained very little less—namely, 0.085 per cent.(i) In another experiment, performed upon a cat, the blood of the right side of the heart contained 0.18 per cent. of sugar, and that from the left an exactly similar amount; and in order to be certain that no mistake had been made in the determination of the sugar by the volumetric process, I carefully collected the reduced oxide of copper, dried, and weighed it. The amount of precipitate from both bloods was identical.

When one takes into consideration the nature of the lungs, he cannot be surprised at these results; for the lungs are not laboratories, like the stomach, but merely an aggregation of little sacs whose function is purely physical—at least, in so far as respiration is concerned. The only "vital" offices they perform are simply those required for their own development and preservation. The absorption of oxygen and exhalation of carbonic acid would perhaps go on just in the same way if a piece of goldbeater's skin supplied the place of the air vesicles; for the blood arriving there for the purpose of arterialisation never leaves the capillaries to become in any way incorporated with their tissue.

Does the saccharine matter disappear, then, in the capillaries of the general circulation? It would appear so, for both Chauveau and myself have proved, by carefully executed experiments, that less sugar is to be found in the veins returning from a limb than exists in the arteries going to it. Thus, in the blood from the femoral artery of a middle-sized dog in full digestion I found 0.24 per cent., while that of the corresponding vein contained only 0.16 per cent. of saccharine matter. From its thus disappearing in the capillaries, one is naturally led to believe that it plays a part in the nutritive process. We know, indeed, that while bees have the power of transforming sugar into wax, man and other animals change it into adipose tissue. The negroes are said to become fat and lazy during the sugar harvest from sucking the fresh canes, and long before the days of Bantingism all Medical men were aware that babies fatten on sugar quicker than anything else. In 1856, while investigating the uses of sugar in the animal economy, I gave cats and dogs large quantities of sugar-candy along with their other food, and I invariably found that, although they all seemed to like the mixture and become fat and sleek upon it, a period at length arrived when they notably ceased to gain weight, but also to relish the food. In fact, at length, some of them would rather starve than touch meat mixed with sugar. It must be remembered, however, that I was giving them enormous doses—from two ounces to a quarter of a pound daily. When the sugar was given in moderation no such effects were observed.

The last point connected with the physiology of the glucogenic function which it is essential for us, as Practitioners, to understand, is the origin of the nerve-force which calls it into play. Bernard has shown that by dividing the pneumogastric nerves in the neck, the secretion of sugar is at once arrested, and that the application of galvanism to the upper ends of the divided nerves not only re-establishes the secretion, but, if the current be continued sufficiently long, augments it beyond the normal amount, so that animals thus operated upon not unfrequently become diabetic. On the other hand, the application of galvanism to the lower ends of the divided nerves is not found to be followed by any such result. These experiments clearly indicate that the nerve-force which excites the liver to secrete saccharine matter does not travel from the brain, through the pneumogastric nerves to the liver, but rather that the stimulus proceeds along these nerves to the brain, and is from thence retransmitted to the hepatic organ through some other nerve-chain.

The data yielded by other experiments, which it is at present unnecessary to recapitulate, induced Bernard to believe that in the healthy animal the reflex action which incites the glucogenic function originates in the stimulus given by the respired air to the pulmonary branches of the pneumogastric nerves, and that this stimulus is reflected from the brain along the spinal cord and splanchnic nerves to the liver.

The point of departure of the normal nerve force which calls into play the glucogenic function of the liver may, at the first glance, appear a matter of little moment; but when we consider that the secretions of organs increase in proportion to the amount of stimulus applied to their nerves, and that an

(e) *Proceedings* of the Royal Society, No. 38, p. 289 *Lancet*, October 20, 1860, p. 396.
(f) *Brit. Med. Jour.*, March 17, 1860.
(g) "Urine and Calculi." Second edition, p. 236.
(h) *Proc. Roy. Soc.* No. 88, p. 289.

(i) For the manner in which the experiments were performed, see the author's paper in the *British and Foreign Quarterly Review* July, 1857, p. 201.

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excess of secretion, which not unfrequently constitutes disease, arises in many cases simply from an exaggeration of the normal stimulus, we shall at once acknowledge the importance of thoroughly understanding the physiological, before attempting to remedy the pathological condition of an organ. When an answer has been given to the query, "Where is the sugar secreted?" the question next in importance to the Physician is most assuredly, "By what means is the secretion excited?" A satisfactory answer to the latter question may not improbably furnish a guide to the successful treatment of a hitherto considered incomprehensible disease.

There is no difficulty in accounting for the liver being excited to secrete sugar when an irritation is applied to the pulmonary branches of the pneumogastric nerve; but we are not necessarily forced to believe that they are the branches which normally call into action this peculiar function of the organ referred to. Indeed, if such be in reality the case, how does it happen that while the respiration, and consequently the stimulus, continue at about the same rate during the entire day, the secretion, which is said to be the result of the stimulus, varies at different times? At one hour it is known to be exceedingly active; at another, somewhat later, almost dormant. Such a result has no parallel in any other organ of the body. A certain amount of stimulus, *cæteris paribus*, invariably calls forth a similar and definite amount of action; and upon what grounds are we warranted in considering the function of the liver an exception to the general rule? I need scarcely detain you at present with further arguments against what appears to me an untenable hypothesis, as I believe the results of the subjoined experiments clearly indicate, that *if* the pneumogastric is the nerve which carries the stimulus to the brain, to be from thence transmitted by the spinal cord and splanchnic nerves to the liver, the point of departure of the stimulus is most probably in the liver itself, and that the cause of the reflex action may originate in the stimulating effect of the portal blood upon the hepatic branches of the pneumogastric nerve. If, for example, the stimulating effect of the blood of the portal vein be imitated as much as possible by injecting into that vessel substances, such as alcohol, ether, chloroform, methylated spirit, or ammonia, the liver is excited to secrete an excess of sugar, and the animal operated upon is for a time rendered diabetic.(k)

The conclusion to which the results of the experiments led me was, that stimulants produce diabetes by exciting the hepatic branches of the pneumogastric to transmit an impression to the nervous centre, to be from these reflected to the liver, and thereby cause the increased secretion of saccharine matter; and if this explanation be the correct one, it is very probable that the normal secretion of sugar is caused by the stimulating effect of the nutritive materials in the portal blood. The following facts materially strengthen this view:—During the time of digestion the blood of the vena portæ must, of necessity, prove most stimulating, as it is then loaded with nutritive materials; and this happens to be exactly the period at which the greatest quantity of sugar is formed. On the other hand, the blood of the portal vein of a fasting animal contains very little nutritive material; consequently during this period the quantity of sugar ought to be lessened, and this, in fact, is exactly what occurs; for, in a fasting animal, the secretion of sugar has invariably been found to be at its minimum.

The important bearing of these physiological data will be more fully appreciated when we are considering the pathology of diabetes: for, as will be presently seen, they furnish us with a key to the rational treatment of some of the forms of saccharine urine.

(To be continued.)

HUNTERIAN SOCIETY.—The meetings of this Society will be resumed on Wednesday, October 4, at 8 p.m., when Mr. Solly will read a communication on "Scriveners' Palsy."

SANITARY DOINGS IN BATH.—At a numerously attended meeting of the Town Council of Bath, which was specially called to consider the propriety of appointing a Medical Officer of Health for the city, it was resolved that such an officer be appointed, there being only two dissentients. An amendment was proposed that no such appointment be made, which was rejected by twenty votes to two! The subject of salary, etc., was deferred for future consideration.

(k) For a full account of these researches, see an article by the author in the *Brit. and Foreign Quarterly Rev.*, July, 1857.

ORIGINAL COMMUNICATIONS.

SUCCESSFUL CASE OF OVARIOTOMY COMPLICATED BY CÆSAREAN SECTION.

By T. SPENCER WELLS, F.R.C.S.,
Surgeon to Her Majesty's Household, and to the Samaritan Hospital for Women.

IN the year 1862, one of the ablest of the Hospital Surgeons of London removed a multilocular cyst of the left ovary, and (in the report of the operation published in the *Lancet* of September 6, 1862) it is said that after the tumour was removed "another fluctuating tumour became immediately prominent, and, as it had the tremulousness and appearance of the other growths, it was believed to be an ovarian tumour springing from the right ovary, and really seemed to be so on examination. It was consequently tapped, and clear fluid flowed out. On attempting to lay hold of it, it was found to be a gravid uterus containing a dead fœtus. It was, therefore, not interfered with beyond closing the wound in the uterus with silver sutures." The patient aborted a few hours after the operation, and died on the third day. The case was immediately published, with the evident desire, as honourable as it is rare, to make the lesson taught by a mistake useful to the whole Profession and to mankind. Soon afterwards it was alluded to in a discussion at the Royal Medical and Chirurgical Society; and I find, by referring to the report of that meeting published in the *Medical Times and Gazette* of November 22, 1862, page 558, that I made the following remarks:—

"Nor could any one who had ever heard the placental murmur, or the sounds of the fœtal heart, repeat mistakes which had been made in the later stages of pregnancy. In the earlier periods of pregnancy, doubt would sometimes arise; and in cases where ovarian disease complicated pregnancy, an occasional error might be unavoidable; but, in the great majority of cases, the diagnosis of ovarian disease might be brought as near to a positive certainty as could reasonably be hoped for in any department of Surgery. . . The only logical conclusion which could be drawn from the mistakes due to the gross ignorance or gross carelessness of some Surgeons, or from the very rare errors which might be unavoidable to the most careful and the best instructed, was not the condemnation of a useful operation, but the endeavour so to improve our means of diagnosis as to make errors less and less excusable."

Soon after this—in February, 1863—Mr. Baker Brown operated in a case which he described a year afterwards in the *Lancet* of January 30, 1864, as a "case of fibrous tumour, associated with pregnancy and simulating encysted ovarian dropsy." This tumour was exposed by incision; the "trocar was plunged in; but nothing flowed except a little blood." The puncture was closed by a wire suture. Pyæmic symptoms came on, and on the seventeenth day the patient aborted with "a four or five months' fœtus," and died two days afterwards.

But these two cases are not the first on record in which pregnancy was not discovered until after the abdomen had been opened. At a meeting of the Royal Medical and Chirurgical Society in March, 1847, a case was read on the "Successful Removal of an Ovarian Tumour complicated with Pregnancy," by Mr. Burd, Surgeon to the Salop Infirmary. After a cyst had been emptied of three gallons of fluid and withdrawn, "it was found that the uterus was in a gravid state, pregnancy being advanced probably to the third or four month." Two days after operation, abortion took place, and was followed by alarming symptoms lasting several days; but the patient recovered, "became pregnant the year following her dismissal from the Hospital, went her full time, and gave birth to a strong male child."—*Medical Gazette*, vol. 43, 1849, page 167.

Another case is recorded by Dr. Atlee, of Philadelphia, in the *American Journal of Medical Science* for April, 1855, page 390. Ovariotomy was performed in November, 1850, and a tumour composed of two immense cysts, weighing eighty-one pounds, was removed. The patient was two months gone in pregnancy at the time of the operation. It was "followed by such great irritability of stomach, in consequence of the state of pregnancy, that she could not be nourished, and she died, thirty days after, of starvation."

Some time ago Dr. Marion Sims told me that he had per-

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formed ovariotomy six times, and in one of three patients who recovered he did not detect pregnancy until the ovarian tumour had been removed. He did not interfere with the uterus. In answer to a recent letter, he has kindly informed me that the patient was 32 or 33 years of age, the mother of five children, the youngest 4 or 5 years old. Soon after the birth of this child, ovarian disease commenced. Ovariotomy was performed in New York in April, 1862. "She was three months pregnant, but recovered without the slightest trouble, went the full term, was safely delivered of a fine girl, and about eighteen or twenty months after (say in April, May, or June, 1864) she gave birth to another vigorous child at full term. She is now in the enjoyment of good health. These are the facts briefly stated; they have not been published."

For the reference to Dr. Atlee's case I am indebted to Mr. Clay, of Birmingham; but as the other four cases had been well considered by me—as I had repeatedly been called upon to establish a doubtful diagnosis between pregnancy and ovarian disease—had in several cases recognised the co-existence of pregnancy and ovarian disease—had three times tapped women whom I knew to be pregnant—and had opened the abdomen in cases of ovarian and other abdominal tumours in more than 150 women without having once overlooked the existence of pregnancy,—I thought this oversight was one of what I was never likely to be guilty. Still less did I believe that, with the abdomen open, I should mistake the gravid uterus for an ovarian cyst. Yet in the following case of ovarian disease I did overlook co-existing pregnancy; and, after removing a large ovarian cyst by ovariotomy, I did mistake the gravid uterus for a cyst of the opposite ovary. I publish the case without delay, in order to point out to others how they may certainly avoid the deep regret which any man of proper feeling must suffer when he knows that he has made a mistake which he might have avoided, and by which he may have injured a patient who has put her trust in him. Men of large experience, who know the difference between talking and acting, generally take a lenient view even of avoidable mistakes; but the men who have carefully concealed their own blunders, and the untried men who have never done anything wrong simply because they have never had anything to do, are very apt to talk loudly of any mistakes which they may see or hear of as gross and unpardonable blunders. The worst effect of this uncharitable behaviour is that many men are deterred from making known their failures, and the lessons which are taught to a few are not learned by the whole Profession, as I trust those will be which are to be gathered from the following history:—

On the 18th of last April a married woman, who was suffering from ovarian disease, called upon me. She was 24 years of age, and had been married two years and a-half. She had never miscarried, and she had one child, which was born in September, 1863. It was nineteen months old when she came to me. She had suckled it for fourteen months. During this time there had been no appearance of the catamenia, but since November, 1864, they had been regular and rather profuse. The last period had ceased a fortnight before. She was about as large as a woman in the seventh month of pregnancy, owing to the presence of a multilocular ovarian cyst, which appeared to consist of one large cyst above and several small ones below. The vagina was normal, but the tumour could be felt distinctly depressing the anterior wall, and pushing the uterus far back. The mobility of the uterus was moderately free. There were some varicose veins in the left leg, but no œdema. The patient had never been quite well since the birth of her child, and the "hardness of the bowels" had been first noticed in August, 1864. After this time there was gradual increase in size, and she thought she was pregnant till the menstruation in November undeceived her. As the general condition was fairly good, and there was no reason for immediate interference, I advised her to wait, and come again. She called again on June 6, considerably larger than before, and I then advised her to come into Hospital. There was some delay in obtaining a bed, and she came to the out-patient room on June 28 in such great pain that she was too ill to go home, and I obtained a bed for her at once. She said that four days before, she had been suddenly attacked by violent pain in the right iliac region, which was better, but still very bad. She looked very ill, and, in the absence of any sign of lymph on the surface of the tumour, I was disposed to regard the attack as one of cyst inflammation, and to explain the sudden onset by a rotation of the cyst twisting the pedicle, and thus causing congestion, and possibly rupture, of some of the veins, and hæmorrhage into the interior of one or more of the cysts. I was strengthened in this belief by the seat of the pain, which was deep in the right iliac region. In the hope of giving temporary relief, I tapped on June 29 in the linea alba, three inches below the umbilicus, in what appeared to be the largest cyst; but only about half a pint of semi-solid matter, like calves'-feet jelly, escaped through rather a large canula. She was not at all relieved, and became extremely feverish; and as I feared that she might sink under cyst inflammation or peritonitis if the tumour were not removed, I proposed to do ovariotomy without delay. But objection was raised, and I felt too doubtful to press the matter. She was improving when I had to go abroad for a week, and on my return I found that she had left the Hospital on July 8. I did not see her again until she was readmitted on August 7, suffering much more than before from distension, and from almost constant pain all over the right side of the abdomen. There was obstinate constipation; the tongue was dry and furred; the skin hot; and the pulse about 120. There was fluid free in the peritoneal cavity indicated by protrusion at the umbilicus, and by an equable superficial wave of fluctuation from one side of the abdomen to the other; but no distinct tumour could be felt on deep pressure. Below the umbilicus, around the cicatrix of the puncture, there appeared to be adhesions. There was no crepitus anywhere, but there was great tenderness from the right false ribs down to the right iliac region. On vaginal examination the cervix uteri was felt to be moveable, but the sensation was given as if the lower portion of the tumour was closely connected with the body of the uterus. Of course I ought to have suspected pregnancy; but, my mind being occupied by the previous history of the case, it did not occur to me, and I wrote the following opinion in the Hospital case-book:—

"August 7, 1865.—In my opinion a jelly-cyst of the ovary has given way, and much thick matter is free in the peritoneal cavity, and the lower part of the cyst is closely connected to the uterus. I therefore think the case unfavourable for ovariotomy, but see no other prospect of relief for her, and the greater the delay the more probability is there that the chronic peritonitis which has already been set up will go on to an irremediable extent. Still, the Hospital is not in a good sanitary condition; there is a tendency shown in other operative cases to suppurative action; and the weather, and possibly the 'magnetic storms,' appear to be injurious to patients generally. The case is one, therefore, which requires careful consideration and consultation, and Dr. Savage is requested to give his opinion."

Upon this Dr. Savage examined the patient, and also wrote his opinion in the case-book, saying:—

"Without the operation the patient will die miserably. Supposing Mr. Wells's diagnosis altogether true, my opinion is decidedly for an immediate operation. With an operation there is a chance for her, without it certain death. Every moment's delay will diminish the chances in her favour."

Strengthened by this opinion, I only waited until I could empty the ward in which I wished the patient to remain alone after the operation; and having done this, I operated on the 14th of August. Dr. Parson administered chloroform, and I was assisted by Drs. Routh and Savage. Mr. Taunton, of Oxford, and Dr. Barratt and Dr. Ritchie were present.

After making an incision between four and five inches long midway between the umbilicus and symphisis pubis, I came upon an adherent cyst. On commencing to separate it, a quantity of fluid flowed out from the peritoneal cavity, and several pints of thicker fluid with flocculi of lymph escaped from a cyst which I opened. I then passed my hand into this cyst, and broke up a great many smaller cysts, and after pressing out their contents, which included several large masses of fibrine and clotted blood, I inverted the large cyst, and drew it out of the abdomen, separating as I did so a large piece of omentum and a patch of adhesion to the abdominal wall around the seat of the tapping. The omentum being temporarily secured by a clamp, the pedicle of the ovarian cyst, of about three fingers' breadth, and long enough to be kept outside the abdomen without traction, was then fixed in a medium-sized clamp, and the tumour was cut away. The pedicle had undergone one complete twist; the Fallopian tube passing spirally round it from above downwards, and up again. Before cutting away I had felt what I thought was another tumour, or a cyst of the right ovary, and as soon as the first tumour was removed I brought just enough, and no more, of the second into view to enable me to introduce the trochar. Some two or three pints of bloody fluid having escaped

through the canula, the tumour became much less tense; and on bringing it up to the surface I saw the Fallopian tube passing from its upper part towards the left side, and knew at once that I had punctured the uterus. On withdrawing the canula a soft, spongy, bleeding mass protruded, and on putting in my finger to push this back, and examine the uterine cavity, the anterior wall of the uterus—which was very soft and friable as if it had undergone fatty degeneration—gave way along the middle line from the puncture (which was near the fundus) for an extent of from three to four inches down the body towards the neck. With very slight pressure, a quantity of liquor amnii and a fœtus of about five months escaped. I then easily peeled off the placenta from the inner surface of the uterus. The organ did not contract, and there was free bleeding from three vessels close beneath the peritoneum at the lower angle of the rupture in the uterus. These vessels were secured by three silk ligatures. Oozing still going on from the surface where the placenta had been attached, I made a free opening into the vagina by passing my finger from above through the cervix and os, and then put a piece of ice into the uterus, and held it within by firmly grasping the organ, which then contracted. I then brought the peritoneal edges of the tear in the uterus together by an uninterrupted suture of fine silk, one long end of which I had previously passed into the uterine cavity, and out through the os into the vagina. By seven or eight points the edges were brought accurately together, and the other end of the silk was brought out through the opening in the abdominal wall, with the ends of the three ligatures on the vessels in the uterine wall close to the pedicle, and were tied to the clamp.

I then proceeded to deal with the omentum, a large piece of which had been separated from the ovarian cyst. It had been secured temporarily in a clamp slightly modified after the "adhesion-clam" of Mr. Clay, of Birmingham—being broader, and the under surface being lined with bone, as a non-conductor or guard against scorching of the parts in contact with the back of the instrument. This instrument held the omentum very securely, and I burnt off all that portion which projected between the compressing blades by slowly rubbing a hot iron backwards and forwards until a linear eschar alone remained. I then carefully loosened the screw which fixed the handles together, and separated the blades; but, although the eschar was not disturbed, very free bleeding at once took place at three spots. Here I applied three silk ligatures, cutting off the ends short, and returning the omentum. If the cautery had answered well with the omentum, I had intended to treat the pedicle in the same way; but after the cautery had failed so completely, I did not disturb the clamp. It was left lying without traction over the lower angle of the wound, with the ends of the ligatures on the uterine vessels twisted around it.

After carefully sponging out all clot and fluid from the peritoneal cavity, and passing my finger through the vagina and os uteri into the uterine cavity to satisfy myself that there was a free opening for drainage, I united the wound by one superficial and six deep silk sutures. The cyst weighed 2 lbs. 8 ozs. Three gallons and one pint of fluid had been removed, and the fœtus weighed 10½ ozs. Roughening of the peritoneal surface of the cyst by lymph, and the adhesions to the omentum and to the abdominal wall, were evidently the effects of peritonitis. The inner membrane of several of the larger cysts was also coated by flakes of lymph, and many clots of blood and lumps of altered fibrine were found in the cavities both of large and small cysts. The veins were in many places extremely turgid; these changes being, beyond all doubt, the consequence of the obstruction or strangulation of the large veins in the pedicle by the twisting which had followed rotation of the tumour.

The patient rallied very well from the chloroform and shock, and I had to consider how opium might be given to relieve pain and keep the bowels quiet without leading to uterine hæmorrhage, and I arranged with Dr. Parson that if there was more bleeding by the vagina than after a natural labour, he should give a full dose of ergot, and afterwards give opium, if required, in the small doses which accoucheurs find rather assist than lessen uterine contraction. Accordingly, two hours after operation, bleeding becoming rather free, Dr. Parson gave a drachm of the liquid extract of ergot, which very soon acted, and there was no need to repeat it. Pain becoming troublesome, twenty drops of laudanum were given in the next three hours. The pulse was 116, and of fair volume; the skin warm, the lips a good colour, and there was a free secretion of urine. The next morning the patient said she had not had such a good night for six weeks, though she had only had thirty drops of laudanum altogether since the operation. There was plenty of high-coloured urine. The pulse was 120, and the tongue white; but there was no tympanites, and she was perspiring freely. There was very little vaginal discharge. She had vomited once. I removed the slough projecting beyond the clamp. In the afternoon symptoms of peritonitis came on, the pulse rising to 132 and at night to 140. Still she had a good night. All the next day—the *second* after operation—she remained evidently under the influence of a pretty smart attack of peritonitis, the pulse ranging from 132 to 140; but there was constant perspiration, and the tongue, though white, was moist. Towards night hiccup became troublesome.

On the *third* day she was decidedly worse. Hiccup, though less painful, was more frequent, and there was vomiting of green or brown fluid in large quantities. There was the ordinary amount of lochial discharge from the vagina, and the secretion of urine was still plentiful, with abundance of lithates. In the afternoon the pulse, which had varied from 130 to 140 in the morning, rose to 160, and was sometimes almost imperceptible. There was not much tympanites, although no flatus had been passed *per anum*. The tongue was coated with aphthous patches. I now determined to try the effect of quinine in large doses, and ordered ten grains by the mouth immediately, and five grains by the rectum in beef-tea every two hours. The first dose was given at four in the afternoon, and at nine, after the second injection, she passed flatus in large quantities by the anus. She had not vomited for three hours, and the pulse was 150. Ten grains of quinine were repeated by the mouth.

Fourth Day.—She had a bad night, though she only vomited twice, and the pulse was down to 132. A third ten-grain dose of quinine had been given by the mouth, and she had had four of the five-grain injections. A great deal of flatus had passed, and there was plenty of urine. The clamp being nearly loose, I removed it and the dead portion of pedicle which had been compressed, leaving the ligatures which had been fastened to it hanging out through the wound. I also removed the lowest stitch. In the afternoon she vomited the "chopped grass" so characteristic of peritonitis, and as there was some throbbing in the head, no more quinine was given by the mouth, though the injections were continued.

Fifth Day.—She had a much better night; had not vomited since the afternoon before; the pulse was down to 128; and there was free lochial discharge. She had taken thirty grains of quinine by the mouth, and forty by the rectum since commencing it, forty hours before. I removed all the sutures, and found the wound well united, except at the lowest angle, where the stump of the pedicle remained fixed, and the ligatures from the uterus passed out. Some very fetid gas escaped in bubbles, and two or three drachms of red serum, also very fetid. A free fetid serous discharge continued during the day, and the pulse fell to 120.

On the *sixth day* she continued to improve; the discharge was free; the pulse did not rise above 120; and the bowels acted four times. The first three motions were very offensive and fluid; the fourth much more natural. The quinine injections were now reduced to three daily.

On the *seventh* day amendment went on slowly, and on the *eighth* two of the ligatures on the uterine vessels came away. The lochial discharge was free, and there was some purulent discharge in the track of the ligatures and from the lowest stitch-point. The pulse was still 120, but the tongue was cleaning and the aspect improving. She had three fœcal motions in twenty-four hours. On the *tenth* day a third ligature came away, only two remaining—one the end of the uninterrupted suture in the uterine wall; the other a superficial ligature on a vessel in a band of adhesion which had been cut away. During the next three days there was gradual improvement, and on the thirteenth day the quinine, which had been steadily continued, was omitted. The pulse had fallen to 108. On the fifteenth day the superficial ligature came away, only leaving that in the uterine wall. The pulse was 112, and she was rather restless at night; the vagina was hot, and a conical swelling was detected close behind the cervix uteri, as if fluid was collecting there. On the sixteenth day, finding that the pulse had risen again to 120, that the vagina was hotter, and, although there had been free discharge, both beside the ligature and from the vagina, that the swelling behind the uterus had considerably increased, I introduced a trochar in the middle line in the most projecting part of the swelling, and removed six ounces and a half of fetid fluid, in appearance exactly like claret. At the end a little pus flowed away. I then passed an elastic catheter

through the canula, withdrew the canula, and left the catheter to keep the opening patent and drain the cavity. Almost immediate amendment followed, the pulse falling in the afternoon to 104.

On the following day—the *seventeenth*—the catheter became clogged, and Dr. Parson removed it in the evening. Next day there was a free discharge of very fetid, red, sero-purulent fluid from the vagina, and of pus from the wound. The last ligature, that in the uterine wall, came away easily on the *nineteenth* day.

During the next week she slowly regained strength, slept well, and had a good appetite. The wound was quite healed, and the discharge from the vagina almost ceased. The swelling behind the uterus became less perceptible, and she left the Hospital for the All Saints' Convalescent Hospital at Eastbourne on September 16, thirty-three days after the operation. I heard of her a week afterwards as getting stronger and walking out, although the vaginal discharge had not ceased.

The first lesson which I learn from this case is always to be on one's guard in cases of ovarian disease, and ascertain whether a patient is pregnant or not. If pregnancy had been suspected in this patient, I do not think there would have been any difficulty in detecting it, even without the use of the uterine sound, which no one should use in a doubtful case, unless he is convinced that it is right to produce abortion.

The second lesson is even more important—"When performing ovariotomy, never mistake a gravid uterus for a second ovarian tumour;" and, fortunately, the means of avoiding the mistake are very simple. The operator must not be satisfied with feeling or seeing the tumour. *He must also feel or see the uterus.* If this be evidently separable from the tumour, or if it be enlarged and not separable, the conclusion in either case is equally positive.

Thirdly, supposing that after removing an ovarian tumour a pregnant uterus is discovered, the question will arise, "What should be done?" and the answer would doubtless be, "Let it alone." It is true that in Dr. Atlee's case, when it was let alone, the vomiting of pregnancy killed the patient in thirty days, and that in Mr. Burd's case abortion took place, and a very alarming condition preceded recovery; but in Dr. Sims's case recovery was uninterrupted. If the operator has proceeded further, and has punctured the uterus, so far as we can draw any conclusion from only three cases, it would appear to be better to empty the uterus than to close the opening in its wall by suture; for in the two cases cited at the commencement of this paper, where this latter practice was followed, both patients aborted and both died, whereas my patient recovered; and as we know that women have undergone Cæsarean section more than once, there is no reason to doubt that she may safely bear children hereafter.

Fourthly, having completed Cæsarean section, the very important practical question arises, whether the opening in the uterus should or should not be closed by sutures; and on this point it may be of some interest to remark that on the reading of a paper on a case of Cæsarean section by Dr. Swayne, of Bristol, at the Obstetrical Society, on April 1, 1863, I opened the discussion by the question (as reported in the Obstetrical *Transactions*, vol. v., page 91) "whether the opening in the uterine wall had been left to close spontaneously, or had been closed by sutures. He (Mr. Wells) was not aware whether sutures had been used in any case; but it had struck him that the escape of blood, or of the secretions from the uterine cavity into the peritoneal cavity, might be one cause of the mortality after Cæsarean section; and, if so, that sutures might be useful. It was evident that the ordinary interrupted sutures could not be used, because they would have to be left in the spots where they were applied; but it would be easy to use the uninterrupted suture so that it might be withdrawn through the uterine cavity and vagina. It would only be necessary to leave both ends long enough, and not tie any knot. There could be no difficulty in doing this, if it were thought desirable; and it might prove to be a means of lessening the mortality after the Cæsarean section." This suggestion was noticed in the discussion by Dr. Greenhalgh, Dr. Barnes, and Dr. Swayne. Dr. Greenhalgh gave no reason, but said he did not approve of the "suggestion of bringing the cut edges together by sutures." Dr. Barnes also "did not approve. He thought Accoucheurs would prefer to rely upon the contractile property of the uterus, to which they were accustomed to trust in the more ordinary emergencies of labour. The blood and other matters did not escape through the wound, but found a ready outlet through the cervix and vagina." Dr. Swayne said that in his case no sutures were used "to bring the edges of the uterine incision together, and that entire dependence was placed on the contractility of the organ for effecting that purpose. It was generally considered that sutures were not to be used on account of the danger of uterine inflammation." *loc. cit.*

Bearing all this in mind, I consulted with Drs. Routh and Savage before applying the suture, and was strongly urged by them both to adopt it, though I believe they were rather in favour of the interrupted suture. I am not disposed to say much either for or against this practice from the successful result of this one case, as many cases of Cæsarean section have proved successful where no sutures were used. It must also be remembered that in this case the sutures remained nineteen days; and although they may have been a safeguard against discharge into the peritoneal cavity, they may have protracted recovery. If I applied them again, I should certainly use the uninterrupted suture; but, in order to make removal more easy, I would either use two, bringing one end out at the abdominal opening and one through the vagina, instead of the single long one; or I would only leave the lower end through the vagina for the removal, cutting off the upper end close.

I had intended to make some remarks upon the quinine treatment of peritonitis, and upon the evacuation of collections of serum, pus, or blood in the pelvis, but I am prevented by the great length to which this paper has already extended.

3, Upper Grosvenor-street.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

TWO CASES OF EXTRAVASATION OF BLOOD FROM INJURY.

(Under the care of Mr. FERGUSSON.)

The following two cases are interesting in a pathological point of view as contrasting the different local and constitutional effects of extravasation of blood in two individuals. In the first instance the effused blood was entirely absorbed under treatment without any untoward symptoms; in the second, an unhealthy subject, suppuration occurred, abscesses formed, which burst, leaving the patient in a very low state, and with great difficulty in inducing healthy action.

Case 1.—Wm. K., aged 61, healthy, admitted October 22, 1864; having fallen down and struck his right leg, he was able to walk home, but about half-an-hour after it occurred he noticed that the outside of the leg was swollen; this rapidly increased, until it attained a great size. The skin was very tense and livid, and there was severe throbbing pain in it. The tumour containing the extravasated blood extended down on the outside of the leg from the knee to about three inches above the ankle, and was so large that on admission the calf and lower part of the leg seemed nearly double their natural bulk. The anterior and posterior tibial arterics were felt pulsating. An evaporating lotion of ammon. mur. ʒj., aq. ʒviii., was applied to the part on lint.

November 10.—Swelling smaller towards the circumference, but across its centre it measures about the same. It is softer and of a more natural colour.

17th.—Limb bandaged from the foot to the knee. The swelling has much decreased since the bandaging.

December 12.—Discharged cured. Swelling quite gone down, though the skin continues rather dark-coloured. This case was unattended with any constitutional symptom.

Case 2.—R. S., aged 22, an unhealthy-looking man, admitted January 18, 1865. In the latter end of last September a chair broke under him as he was sitting, and he fell on the fragments on his left hip, bruising it severely, but not breaking the skin. It caused great pain, which lasted for three or four days. When the pain ceased, he resumed his usual duties, and in a day or two he noticed two large swellings in the seat of injury. They continued to increase for a few days. It was unaccompanied by pain, or heat, or redness, and there was no constitutional disturbance.

On admission, there were two large swellings on the outside of the left hip—the lower one situated over the trochanter

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major, and measuring 17 inches in circumference, rising abruptly to the height of 2¼ inches; the upper one nearer the spine, just above the buttock, measuring 14 inches in circumference and 1½ in height. They communicated by a raised bridge. They were both tense, but very yielding. There were no hardened edges and no ecchymosis over the swellings. Under the treatment of iodine paint and a roller bandage, the swellings decreased in size; but being tired of the Hospital, he left February 28.

On March 17, he came in again with the tumours red, larger, and very soft.

18th.—The lower tumour burst last night in two places, letting out a quantity of dirty-looking pus, but no blood clots. To apply a poultice.

19th.—To-day he has had some shivering, and feels sick; the upper tumour opened, and a drainage-tube passed from the one to the other.

21st.—Pulse 126; skin hot and dry; tongue coated with a white fur; has had more shivering; a diffused redness on the chest and back.

22nd.—Tongue cleaning; some slight shivering; the skin round the lower opening has sloughed; abscesses syringed out with lotio myrrhæ.

23rd.—Pulse 118; tongue red and raw looking; feels better; throat somewhat sore.

He continued in a very weak and low state for some time. The skin around the abscesses sloughed, and it was some time before healthy action was re-established; the granulations were very sluggish, and there was a thin, unhealthy discharge from the raw surfaces. The sores were strapped and dressed with lotio rubra and nitric acid lotion. As he was in a miserably emaciated state, it was thought that a change would be beneficial; he left the Hospital on June 14 for sea air.

ST. BARTHOLOMEW'S HOSPITAL.

CASES OF ERYSIPELATOUS INFLAMMATION OF THE SCROTUM AND PENIS, SIMULATING EXTRAVASATION OF URINE, WITH REMARKS.

(Communicated by F. HOWARD MARSH, late House-Surgeon to the Hospital.)

THE following cases bring to light no fact which has not been already observed and recorded. They are, notwithstanding, a valuable group, exemplifying as they do the main features of a rare and dangerous malady, which is rendered the more important by the liability which exists that those who have to deal with it may fail at first to recognise its true nature, and mistake it for extravasation of urine, to which it presents in many of its symptoms so close a likeness. The affection, which consists of erysipelatous inflammation of the tissues of the scrotum, generally involving those also of the penis, and spreading more or less widely to the parts around, may arise either as a primary disease, met with as such chiefly in persons above middle age, whose health is reduced in many instances by advanced kidney disease, or from some local condition, as in Case 2, in which the original mischief was deep-seated abscess in the perineum. It is described under the name of "inflammatory œdema" by Mr. Liston,(a) who says of it that "it often follows on sores, or eruptions situated in the groin, genitals, or inside of the thighs, or on fistulæ about the perineum and anus." The mischief spreads rapidly "from the infiltration, apparently, of a very acrid and fetid sanies." This writer adds that he had in the Edinburgh Hospital "no less than six cases under treatment at one time, in a very unhealthy season, and in different stages of their progress." Mr. Holmes (b) has reported some well-marked examples of the disease, and, in some remarks which he has appended to them, he dwells on the important point that the retention of urine which is liable to occur, as was the case with the patient under Mr. Paget's care, and also with the boy in the Children's Hospital, and which is so likely to divert attention from the true nature of the case, is the result, and not the cause, of the mischief in the scrotum.

Although the first step in the treatment of this affection is the same that is proper in the management of extravasation of urine—namely, to relieve the tissues of the acrid fluid by which they are infiltrated by making sufficient incisions for its escape, there is one consideration which, besides the love of a right diagnosis for its own sake, makes it highly important to recognise this affection in its early stage. In extravasation of urine many Surgeons deem it proper that a catheter should be kept in the bladder for a certain period. There is, of course, no necessity for this measure in the disease under notice, and to avoid it is of the first moment, when the patient is a debilitated person who, as experience shows, may be supposed to be the subject of disease of the kidneys. Two circumstances, in the majority of instances, will lead to a correct conclusion as to the nature of the disease. There will, in the first place, be no history of previous obstruction, or of retention of urine; and, secondly, a large catheter will pass into the bladder without encountering any obstruction. The absence or presence of fulness in the perineum is not a safe guide; mere erysipelatous inflammation may have its origin there, as in Mr. Paget's second case, and so resemble in one of its chief features ordinary extravasation of urine; or, on the contrary, extravasation may occur from ulceration of the urethral wall behind a stricture situated in the anterior portion of the urethra, in which case the perineum will be at first in a natural condition, and will only become involved as the extravasation spreads from the penis to the parts around.

Case 1.—*Erysipelatous Inflammation of the Scrotum and Penis, Simulating Extravasation of Urine.*

(Under the care of Mr. PAGET.)

J. B., 49, a labourer, poorly off, and in the habit of drinking freely, came to the Surgery on September 20. He was in a state of such great prostration that he had scarcely been able to reach the Hospital, and on his arrival was at once sent into one of Mr. Paget's wards. Upon examination, the scrotum and penis were found greatly swollen, the scrotum being about as big as the head of a child four years old; the skin of it and of the penis was for the most part of a dull, ash-grey colour, but here and there were greenish-black patches, where gangrene was already complete. Some slight brown discolouration of the integuments was seen creeping up over Poupart's ligament. The perineum looked in a natural condition. The patient's general state was that of great exhaustion; he looked pale and depressed; respiration was rapid, and the pulse quick, small, and very feeble. He was very confused in the account he gave of himself; but it was gathered that he had never had any difficulty in micturition till the early part of the previous day (September 19). The condition of the scrotum and penis had commenced as a painful swelling, which had spread from the lower part of the scrotum, and which he first noticed about two days before his admission (about the morning of September 18); but of this he was not clear.

Before proceeding to any treatment, Mr. Paget remarked that, at first sight, the case presented the ordinary features of extravasation of urine; yet he believed it would prove that the patient was not suffering from this condition, but from erysipelatous inflammation of the scrotum and penis, depending either on defective general health, or on some other cause not connected with the escape of urine into the cellular tissue. He was led to this conclusion by the fact that the patient had experienced no difficulty in passing his water till there was sufficient swelling of the parts around the urethra to account for it, and by the condition of the perineum, which was quite normal. Besides, he had on more than one occasion met with cases which resembled extravasation of urine as closely as this did, but which proved to be instances of erysipelatous inflammation occurring independently of that accident.

Mr. Paget then proceeded to make such incisions as were necessary to relieve the tension of the parts, and to introduce a catheter into the bladder. A No. 10 passed very readily without meeting with any obstruction; and a few ounces of turbid urine were removed. The after course of the case was that the man fell rapidly into a condition of extreme asthenia, and, although he took a large amount of stimulants, died at 4 a.m. on September 21.

At the after-death examination, the urethra was laid open in its whole length, and found to be perfectly sound. No sign of extravasation of urine could be discovered; and the tissues immediately surrounding the canal seemed less infiltrated than those nearer the surface. The heart was fatty, though only to a small extent; the lungs were healthy; the liver large and fatty; the kidneys rather large, pale, and indistinctly granular.

For the following case I am indebted to the kindness of Mr. Paget, who has allowed me to copy it from his note-book:

Case 2.—*Perineal Abscess, with Stricture—Imitating Effusion of Urine.*

(Under the care of Mr. PAGET.)

A man, 45 years old, intemperate, poor, and dull-witted,

(a) "Practical Surgery," 1846, p. 450.
(b) *British Medical Journal*, 1856-1856.

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was admitted into Kenton's Ward in September, 1860. He had had stricture of the urethra for many years, for which many instruments had been passed. His water-strain, he said, had not of late been worse than usual. He had a large and painful swelling, of several days' formation, in the middle of his perineum. His scrotum was swollen to five or six inches in diameter, tense, pallid, glossy; similar swelling extended from it along both groins, and the tissues felt tense, brawny, and œdematous nearly to the umbilicus. The pubes was also swollen, and in a less degree the integuments of the penis. It was not doubted that this was a case of effusion of urine; it had every feature of a very bad case of the kind. An incision was immediately made into the perineum, and this let out two ounces (about) of very stinking purulent fluid. It came from an irregular cavity in the perineum, which extended thence as far as the finger would reach in the deep subcutaneous tissue of both groins. As it seemed, therefore, that the one incision would relieve both the perineum and the groins, no cuts were made into them, but several small punctures were made into the scrotum. The man had immediate relief from his pain and distress; but two or three days later separate centres of suppuration appeared in the right groin, and though these were opened extensive sloughing of the integuments and subcutaneous tissue ensued, exposing, after the separation of the sloughs, the abdominal muscles. Similar sloughing afterwards ensued in the scrotum on both sides. With these things he became very feeble. He had daily sickness, frequent diarrhœa, and five weeks after his admission he died, very emaciated and as if exhausted with his local disease and with uræmia. His urine-strain, however, he always said, never troubled him, and no urine passed through the perineum at any time, though the perineal incision remained open.

Mr. Paget here remarks—"Except in this absence of the usual escape of urine by the perineum, the whole course of the disease had seemed to indicate the consequences of effusion of urine in which there had been unwise neglect of the practice of cutting freely into all the parts into which the urine had penetrated; but on examining, twenty-four hours after death, there appeared no trace or any indication of any communication between the urethra and any part of the suppurating or sloughing cavities in the perineum, scrotum, or groins. These cavities had the appearance of ordinary irregular abscesses, and at their nearest their wall was about a quarter of an inch off the most anterior part of the urethral stricture. In the urethra, just behind the triangular ligament, was an irregularly barred stricture, about two-thirds of an inch long, which would admit a No. 6 catheter; but its walls were entire and firm, without trace of ulceration or any recent inflammatory change, both in front of it and behind it."

The bladder was very thick walled, and its mucous membrane mammillated and blotched with vascularity. Both kidneys were small, lobed, and seamed, tough, pale, very granular, with closely adherent capsules, several small yellow cysts, and wasted cortical substance—marked examples of the last stage of granular degeneration.

The next case affords a good illustration of the favourable course which a disease, which is very formidable when occurring in middle-aged or old persons with unsound viscera, may take when the subject of it is a child otherwise in good health.

HOSPITAL FOR SICK CHILDREN.

ERYSIPELATOUS INFLAMMATION OF THE SCROTUM AND PERINEUM—RETENTION OF URINE—FOLLOWING AN INJURY.

(Under the care of Mr. HOLMES.)

E. D., a boy 8 years old, was admitted into the Hospital for Sick Children under the care of Mr. Holmes, on November 26, 1863. His history was that two days previously (November 24), while playing, he had fallen down, though, as it appeared, not in such a position as to strike the perineum or scrotum: the swelling had commenced on November 25, and was said to be rapidly increasing. Micturition had been difficult and painful for twenty-four hours, and no urine had been passed for eight hours before his admission. The skin was hot, and the tongue furred; the boy looked pale and ill, and complained of not being able to empty the bladder. He had had repeated rigors. It was found that there was a soft puffy fulness in the perineum, extending forwards into the scrotum, which was swollen to about the size of an orange, pitting on pressure, and of a rather transparent appearance. There was no swelling of the penis; the œdema extended along the sides of the scrotum into the hypogastric region, and to a slight, though marked degree, to the thighs; the skin here was discoloured, of a slight dusky brown tint. About an hour after his admission he passed four ounces of healthy urine. Mr. Holmes introduced a catheter into the bladder without difficulty. The boy was ordered an aperient powder at night, and some tincture of the sesquichloride of iron. He quickly improved; the swelling subsided; no further difficulty of micturition occurred; and he left the Hospital in two days.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 30.

SHEEP INFECTED BY THE CATTLE PEST.

THE new fact in the history of the cattle plague made known to the public on the authority of the Professor of the Royal Veterinary College is of sufficiently serious import. It is that sheep as well as oxen may become victims to the disease, and that the latter may become infected by being brought into near neighbourhood with the former. The statement is not in the least incredible when we recollect the near zoological relationship existing between the ovine and bovine genera. It has been long ago observed that animals far removed from man in the zoological scale may be affected by morbid poisons to which he succumbs. The testimony of Boccacio, that during the prevalence of the black death at Florence he saw hogs which had been playing on the rags of a person who had died of the disease stagger about for a short time and then fall dead, has been frequently quoted. There is good evidence that swine may take variola from the human subject, and the same is probably true of quadrumana. The transmission by inoculation of hydrophobia, glanders, farcy, pestilential carbuncle, vaccinia, although they are not examples of contagion in its ordinary sense, affords every-day proof that different and even widely separated species of mammalia may be capable of receiving and developing the germs of the same morbid poison. Yet the law is not of universal application. Even closely connected varieties of the same species do not always exhibit the same degree of proclivity to special diseases. Syphilis, Dr. Livingstone tells us, does not spread amongst the natives of Southern Africa, and it is well known that negroes resist the poison of yellow fever better than white men. The Continental accounts which we have seen of the Rinderpest say nothing of its transmission to the sheep. It had been observed on several occasions that the disease seemed to be carried through the instrumentality of sheep, but it has also been noticed that the sheep themselves appeared unaffected. The facts now brought to light must therefore either indicate a new phase in the natural history of the disease, or they are a proof that observations on it have hitherto been conducted very imperfectly.

The following is an abridgment of Professor Simonds' account:—A flock of 120 lambs were purchased at Thetford

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Fair on August 16. They were immediately sent by rail to Fakenham, from which place they were driven to Blakeney, a distance of about ten miles. On their arrival, several of them were observed to be unwell, and within a few days several more had sickened. On the 24th, two of the worst cases were removed from the field and placed in a shed for treatment. The same shed was also occupied by a cow. The disease continued to spread amongst the flock, and on the 27th they were all brought into the yard in which the shed was situated. Here they were in near proximity to the cows of the farm. The lambs remained in the yard till the morning of the 28th, when they were returned to the fold, and never again came near the cows. Of the lambs, forty-six have died, and Professor Simonds' post-mortem examinations have convinced him that they were the subjects of the cattle plague. His opinion has been confirmed by that of Mr. Varnell, of the Royal Veterinary College, "who at once recognised," in the diseased viscera, "the special changes of structure which are caused by the cattle plague." On September 7, ten days after the last exposure to the lambs, the cow that had occupied the same shed with them showed symptoms of the disease. Another was attacked on the 11th, and by the 16th all the cows of the farm, six in number, with a heifer and a calf, were dead. Professor Simonds also states that he has found the same disease prevailing in a flock of 2000 lambs, belonging to Mr. R. J. H. Harvey, M.P., at Crown Point, near Norwich. He states that the post-mortem appearances observed at Crown Point were identical with those seen at Blakeney. Since the appearance of Professor Simonds' report, Dr. Letheby has been employed in investigating the outbreak at Crown Point. He confirms Professor Simonds' account of the post-mortem appearances, as far as the congestion and inflammation of the alimentary canal and the peritoneum are concerned, but states that he noticed that the lungs and right side of the heart were congested, whilst the left side was empty, showing that circulation had failed in the pulmonary capillaries, and that in this respect the post-mortem appearances in the sheep examined by him differed from those observed in cows dying of rinderpest. He suggests, therefore, that we should suspend our opinion as to the identity of the diseases until Professor Simonds has concluded the experimental inquiry he has undertaken as to the communicability of the disease from the cow to the sheep, and *vice versâ*, by inoculation. In the meanwhile it may be asked—What steps are the Government taking to avert the twofold evil which threatens us? It appears that a want of co-operation on the part of the Government will prove fatal to the sanatorium scheme of the City Committee. Has the promised Royal Commission yet commenced its labours? The *Times* of Thursday has the very practical suggestion that the Government should employ some junior Surgeons and Physicians in the investigation and treatment of the disease. This we should be heartily glad to see done. All the resources of science should be at once put in action to avert a calamity which, in our population, must prove a certain cause of epidemic disease.

It is unnecessary to remark how immeasurably the chances of contagion are increased by the facts above related, or to comment further on the gloomy prospect which is opening on us. Cholera hovering over our shores, typhus domiciled amongst us, and the chance of a scarcity of mutton, beef, and milk, are a conjunction of evils such as for many years has not threatened the people of this country.

SETTING OUR HOUSE IN ORDER.—WATER ANALYSIS—ITS RESULTS.

In a former article we endeavoured to give some idea of the methods of examining water which are now practised. We have now to notice the results of the analyses of the metropolitan water supplies. Dr. Letheby, since November last, has presented monthly to the Association of Medical Officers of Health the results of his examination of these supplies. From these, and those of the analyses of the late Dr. Thomson and Professors Hofmann and Frankland, which are published monthly by the Registrar-General, besides those of Dr. Whitmore and others, we take our information.

It was found, from a comparison of the quantities of organic impurity in the water supplied by the Lambeth Company in 1851, according to the Government Commission, with those in the water supplied by the same Company in 1854, according to Dr. Thomson, that in the latter year this water was much less impure than it had been. This was attributable to the fact that in 1852 the Lambeth Company removed its works from Thames Ditton to some distance above Teddington Lock, and, therefore, beyond the reach of the tidal wave. In 1851 the average quantity of organic impurity in this Company's supply was 2·59 grains per gallon, while in 1854 it amounted to only 1·39 grains. Now in the years 1855 and 1856 the other four Thames water companies removed their several works, under the requirements of the Metropolitan Water Act, from between Waterloo-bridge and Battersea, to parts of the river above Teddington Lock, and this removal has been attended with an improvement in the quality of the water, similar to that which had been found in that of the Lambeth Company; for the average quantity of organic matter in the water supplied by the five Thames companies since 1856 has been about 1·44 grains per gallon, while that of the water in 1854 (excluding that of the improved supply of the Lambeth Company) was 3·26 grains. This year the average quantity of organic impurity has as yet been somewhat higher, according to Dr. Letheby, but lower than usual according to the Returns of the Registrar-General.

During the past six months the quantity of total impurity seems also to have been rather higher than usual, being 19·66 grains per gallon, while the average in previous years has been only about 18·81 grains.

The quantity of impurities in the water, and much more especially the quantity of the organic impurities, varies with the rainfall; so that after heavy rains the waters are more highly charged with impurities than in dry weather. This is a very interesting fact, and one, we think, that could hardly have been anticipated. A river is formed of the rain which has fallen on the land drained by it, and its water differs from rain-water in containing matters which it has dissolved out of the soil. It would seem, therefore, that when rain falls heavily, the quantity of matters taken up by each gallon of it during its percolation of the soil should be less than when the rain falls lightly, since the less the quantity of water washing the same soil, the more highly charged it should become with soluble matters, although the total loss by the soil may be less. Hence after these rains we might expect a purer river water instead of one more impure, as it is found to be. It seems to us that the greater impurity of river-water after heavy rains may be attributed to two or three causes. One—and that the principal—is that winter is the season of heavy and protracted rains, for that then there is contained in the soil in a soluble state much organic and inorganic matter which was in a fixed state during the previous summer in vegetable growths. So that it is not the effect of the heavy rains that the river-water is more impure, but of the extinction of vegetable life with which these rains are more or less coincident. The impurity of the Thames is found to be usually greater during the four months, November, December, January, and February than in other months. But although this explanation may be quite correct, it is not a sufficient one by itself, for it is found that after rains in summer the impurity of the Thames water is augmented.

Another cause may be that in dry weather the river derives its water from the lower ground, while in wet weather it gets it from both the upper and lower; for in consequence of the lower ground being constantly percolated by water, it can

yield at any time but little soluble matters, whereas the upper ground, by accumulating soluble matters during dry weather, furnishes them in large quantity when rain sets in.

And lastly, we may adduce another cause why the water of a river should be more impure after rain, which is, that by the swelling of the streams and of the river itself more insoluble matters than usual become mechanically suspended in the water; for much of these will then become soluble by agitation with the oxygen dissolved in the water. In this way heavy falls of rain impurify the Thames, by stirring up the beds of the sewers and the foul banks of the river itself. Since the tendency in the organic matter of water to undergo oxidation is closely connected with its noxious influence on our organisms, its determination is most desirable. It is, we believe, only for about the last twelve months that the degree of oxidisability of London water, or the quantity of oxidisable matter in it, has been regularly recorded; notice, however, was occasionally taken by Dr. Thomson in his reports of the oxidisability of the organic matter. Thus we find from them, concerning the water supplied by the Kent Company, that although organic matters are usually present in it in relatively large quantity, they are nearly all in an oxidised condition, which is its redeeming character.

But Dr. Letheby has furnished at his own expense a monthly record, since last November, of the quantity of oxidisable organic matters in the metropolitan water supplies, which cannot be regarded otherwise than as of the greatest value, especially if continued, as we trust they will be. The Registrar-General's returns have also contained a monthly statement of the quantity of oxygen required to oxidise these waters since last February, on the authority of Professors Hofmann and Frankland. There can be little doubt that a knowledge of the relative oxidisability of the matters in water is really of much more practical importance than that of their mere quantity. No very sure generalisation can yet be made from the results of these records until they have been continued for a longer period; but each number has its practical significance in representing to us, to a considerable extent, the noxious quality of the water with which London is supplied. We shall here, therefore, insert, in a tabular form, the results of Dr. Letheby's analyses:—

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July
Thames Companies:									
Grand Junction ..	..	..	..	·80 / 2·12 / 21·20	..	..	..	..	·64 / 1·75 / 17·60
West Middlesex ..	·32 / 1·10 / 17·70	·56 / 1·62 / 20·30	·56 / 1·15 / 19·20	·56 / 2·42 / 22·00	·96 / 2·25 / 20·50	·80 / 1·66 / 18·00	·64 / 2·34 / 19·50	..	..
Chelsea	·28 / 1·30 / 18·60	·80 / 1·90 / 20·20	·96 / 1·84 / 23·00	·56 / 2·72 / 23·70	1·40 / 2·03 / 20·30	·80 / 1·44 / 18·00	·80 / 1·95 / 19·50	·80 / 1·62 / 20·20	·64 / 1·85 / 18·50
Southwark	·56 / 1·80 / 18·60	·80 / 2·31 / 22·80	·56 / 1·60 / 20·00	·64 / 2·25 / 22·50	·80 / 2·08 / 20·80	·56 / 1·83 / 18·30	·64 / 2·16 / 18·00	·80 / 1·36 / 19·50	·48 / 1·37 / 17·20
Lambeth	1·20 / 2·40 / 17·30	1·12 / 2·14 / 20·70	·80 / 1·09 / 18·20	·96 / 2·49 / 20·80	·80 / 2·46 / 20.50	·56 / 2·16 / 18·00	·80 / 2·14 / 17·80	..	·64 / 1·41 / 17·70
Other Companies:									
Kent	·20 / 1·50 / 24·20	·32 / 1·74 / 25·70	·24 / 1·48 / 24·70	·40 / 1·35 / 22·50	·40 / 2·06 / 25·70	·48 / 1·72 / 26·60	·24 / 1·58 / 23·00	·16 / 1·55 / 25·80	·32 / 2·14 / 26·70
East London	·30 / 1·20 / 20·90	·48 / 1·14 / 22·70	·48 / 2·18 / 21·80	·64 / 1·42 / 17·70	·80 / 2·18 / 21·80	·56 / 1·57 / 19·70	·56 / 1·30 / 16·80	·64 / 1·56 / 18·80	·32 / 1·23 / 17·50
New River	·20 / ·90 / 17·50	·40 / 1·51 / 18·80	·40 / 1·40 / 17·50	·56 / 1·12 / 18·70	·48 / 1·57 / 19·70	·56 / 1·06 / 17·72	·40 / 1·27 / 15·80	·64 / 1·30 / 16·20	·16 / ·98 / 16·30

The numbers represent grains of matter in every gallon of water. Of the three numbers opposite each company's supply, and under each month, the uppermost represents the quantity of oxidisable organic matter, the middle one the whole quantity of organic matter, and the lowermost the whole quantity of matter, both organic and inorganic, in the water. We have arranged them thus because, regarding the upper number of any two of the three as a numerator, and the lower as a denominator, the fraction thus formed gives at a glance the ratio of the matters compared. For instance, we can see at once, concerning the water supplied by the Grand Junction Company in February, that $\frac{80}{2112}$, or about $\frac{1}{26}$, of the organic matter was unoxidised, and that $\frac{213}{2120}$, or $\frac{1}{10}$, of the total impurities was organic. Dr. Letheby estimates the oxidisable matter in a water as about eight times the weight of the quantity of oxygen required to oxidise it.

From this table we find that the average quantities of oxidisable organic matter in the water each month supplied by the Thames and other companies are the following:—

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
Thames Co.s' .	·59	·82	·72	·70	·99	·68	·72	·80	·69
Other Co.s' .	·23	·40	·37	·53	·39	·53	·40	·48	·27

By dividing the average quantities of total organic impurities in the water each month by these, we get what part of the whole organic matters each month are oxidisable:—

	Thames Companies' Supplies.	Other Companies' Supplies.
November .	$\frac{59}{170} = ·347$	$\frac{23}{120} = ·192$
December .	$\frac{82}{199} = ·412$	$\frac{40}{146} = ·274$
January .	$\frac{72}{142} = ·507$	$\frac{37}{169} = ·219$
February .	$\frac{70}{240} = ·292$	$\frac{53}{130} = ·408$
March .	$\frac{99}{221} = ·448$	$\frac{39}{194} = ·201$
April . .	$\frac{85}{117} = ·384$	$\frac{53}{145} = ·366$
May . .	$\frac{72}{215} = ·335$	$\frac{40}{138} = ·290$
June . .	$\frac{80}{149} = ·537$	$\frac{48}{147} = ·327$
July . .	$\frac{69}{100} = ·375$	$\frac{27}{145} = ·186$

From the above tables it will be seen that the Thames waters contain not only much more oxidisable matters than do the waters of the Kent, East Middlesex, and New River Companies, but much more in proportion to the oxidised organic matters than these do.

In another article we shall offer a few simple suggestions as to the best way of getting water from our present supplies in a state as free from harmful impurity as is practicable.

JENNER.

"Homo vanus et levis, cerebro vacuus et temerarius, mente et judico carens." Such is the description of Edward Jenner, the discoverer of vaccination, given in a Leipzig publication of this year; and such was the tenor of many attacks upon Jenner while he was laboriously and painfully struggling to eliminate particles of error from the mass of truth which had been revealed to him.

It is difficult for us in the present day to realise the fearful nature of small-pox. We forget that before vaccination was practised, one-fourteenth of the human race fell victims to small-pox, and that of those who were attacked one-fifth died. We have this on the testimony of Dr. Jurin, secretary to the Royal Society at a time when small-pox was at its height. But he is not unsupported. Bernouilli calculated that 600,000 lives were annually sacrificed to small-pox. In Europe alone, according to Dr. Lettsom, 210,000 persons died of it every year. It was rarely that one met with an adult who had not been attacked. Those whose lives were spared were too often seamed and marked to such an extent that they were loathsome to themselves and to their friends; they were blinded, wry-mouthed, worm-eaten. The disease respected neither rich nor poor, high nor low. It flourished among the icy mountains of Greenland and on the burning sands of the tropics. It ravaged the centres of civilisation, and it exterminated whole tribes of savages. When it made its appearance the utmost panic prevailed; order and good government were overthrown. In Russia two millions sometimes died in one year. In Thibet the capital was deserted during the occurrence of an epidemic, and remained empty for three entire years.

The disease was but little amenable to treatment. Inoculation had been shown to be useless. It is true that the mortality from inoculation was only one in fifty, so that had the practice been universal the deaths would have been reduced

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from 7 per cent. to 2 per cent. But the practice was not universal, and the artificial small-pox propagated the virulent disease by contagion to such an extent that in 1763—forty-one years after its introduction—inoculation was prohibited in France by Royal decree.

All this has passed away. Instead of being one of the most fatal diseases, small-pox now stands low in bills of mortality. Jenner made the wonderful discovery that small-pox, like phosphorus or sulphur, exists in an allotropic condition, in which it is mild and non-contagious, and by this discovery he has, to use his own expression, closed one of the great gates of death.

Let us see what has actually been accomplished by vaccination.

According to Jurin's computation, out of the 436,566 deaths registered in England and Wales during the year 1862, 31,183 ought to have been due to small-pox. Instead of that, Dr. Farr tells us that in the year 1862 there died from small-pox only 1628 persons. We are forced to the conclusion that in one year Jenner saved 29,555 out of a population of twenty and a quarter millions. But England, although the birthplace of vaccination, is not the country which has profited most by it. In 1803 the Governments of Sweden and Denmark so effectually enforced vaccination that small-pox was soon extirpated. For twenty years not a case of it occurred. At the end of that period it was introduced from abroad, and made much havoc among those whom long immunity had lulled into neglect.

In Prussia, the deaths from small-pox before vaccination were 40,000 annually. In 1817 they were reduced to 3000, although the population had much increased and new territory had been annexed. In Berlin alone the average annual mortality fell from 472 to 176, and after the foundation of the vaccine establishment to 50.

We could go on multiplying instances, but it is useless. There is little doubt that Jenner's discovery saves annually upwards of half a million of lives.

Surely no honour or no combination of honours could be too great to be heaped upon the man who prevents a population equal to that of Liverpool or of Glasgow from being annually blotted out? It might be expected, at all events, that his own native country should be proud of him, that she should make much of his merits, and should reward him according to his deserts, because, try as she might, she could not reward him above them.

She did not do so; and yet it so often happens that wealth and honour are heaped upon undeserving men, and denied to those who have merited them, that, as we said last week, Jenner is by no means the most striking instance of public ingratitude which might be cited.

What are the facts? Jenner was obliged to petition Parliament for a grant of money, because he had nearly ruined himself with his experiments. A committee was appointed to inquire into the subject. It came out in evidence that if Jenner had chosen to conceal his discovery he might have made a princely fortune in private practice, and might afterwards have named his own price to the nation for his secret. The Chancellor of the Exchequer, juggling with his thousands and tens of thousands of pounds, his annual surplus or his annual deficit, was unable to comprehend even the commercial value of an annual surplus of thirty thousand lives. He thought that Jenner ought to have something, but begged the nation to remember that the present debate would puff him into practice. £10,000 were voted, and after much delay £9000 were paid, the rest being absorbed in fees.

Dr. Jenner came to London, but Mr. Addington's sagacity was at fault. Instead of gaining a fortune, Jenner sank annually £1000. Disgusted with town life, he returned to Berkeley. In 1807 £10,000 additional were voted and paid. In 1823 Jenner died. No proposal was made to defray the expenses of a public funeral; and he, who had saved more lives than the greatest general had been able to destroy, was buried away in a country church, with scarce a stone to mark the spot where he lay. He died; and some of his personal friends raised a beautiful monument to him, and placed it in Gloucester Cathedral.

But the nation could not be always apathetic. They were roused into activity by seeing the honour in which their countryman was held by foreign nations. Jenner, by a single word, could open the doors of a French prison during the midst of a bloody war; he could grant certificates of immunity to travellers; he corresponded with, and received gifts from, Empresses; he was made an honorary member of all the most illustrious and most select of scientific societies; medals were struck in his honour; a temple was even dedicated to him, as if he had been a god. The English people therefore, observing all this, and being further stimulated by a few scientific men, who felt that neglect of Jenner was a disgrace to England, at length set about erecting a national monument.

Among the scientific promoters of the scheme there was one who, Royal by birth, was Royal also by nature, who subscribed time as well as money to the undertaking, and who, when the statue was at length uncovered in Trafalgar-square, closed an able address to a meeting held in the Royal College of Physicians in the following words:—"I trust that the results of this meeting may be to awaken and arouse attention to the merits of the great discoverer of vaccination." So spoke Albert the Good in the year 1858. Five years had not elapsed when the same statue inaugurated in Trafalgar-square with the countenance of Royalty was removed to stand guard over a sewer in Kensington-gardens. Is this to remain so? Are we still to be told that a prophet hath no honour in his own country? Within the last few days the people of France have given one more proof of their liberal admiration of genius. There now stands on the Norman coast a lately-erected statue of Jenner, at which we cannot look without thinking it a reproach to England.

But there seems at present to be some prospect of removing this reproach, at least as far as regards our own Profession. A committee has been formed for the purpose of erecting some monument to Jenner in the church where his remains lie buried. As might have been expected, among the names on that committee are some of the best known and most illustrious in our Profession. It has wisely been decided to limit the subscription to one guinea, so that, although a considerable sum has already been subscribed, every one may still have an opportunity of contributing his mite.

Let us remember that Jenner, great as he is, is only a type of a class. In doing honour to him we are not only doing an act of justice, but we are stimulating numbers of young men to new exertion. The majority of these will fail in making any striking addition to our knowledge. There are voiceless poets, and there are men of genius whose labours, though genuine and indispensable, will not be generally appreciated. But they deserve none the less honour at our hands, and therefore we say, let us unite, and let us use our endeavour to mark our approval of the course which they are pursuing.

THE WEEK.

YELLOW FEVER AT SWANSEA.

Amongst the Medical, or, rather, the plague rumours, of the week, is one to the effect that yellow fever has broken out at Swansea. That there is some good cause for this rumour is proved by the circumstance that the Privy Council has sent Dr. Buchanan to Swansea on a mission of scientific inquiry upon the whole subject. Hitherto yellow fever, although it has been imported into this country—as into Glasgow about twenty-three years ago—has never spread, but has died out at the point of importation. It may, therefore, be the fact that at

Swansea nothing more has occurred than the importation of a case, or of cases, of the malady. The general experience in regard to yellow fever, indeed, is, that it can only exist in those zones of the planet where there is a maximum mean temperature, 82° Fahr., with the greatest aqueous deposition—that is to say, on our side the equator, from the equatorial line to lat. 42°, and on the south side to lat. 23°. Beyond these points yellow fever ceases, and the typhous class of fevers begin to appear. Whether the late prolonged heat of weather can so have changed the ordinary atmospherical state of this country that yellow fever can spread on our southern border by reproduction of the specific poison of the fever, or whether the heat can give to our ordinary autumnal bilious remittent fever the special characteristics of yellow fever—these are questions which experience alone must decide; they are questions of the profoundest interest in relation to the influence of external physical agencies and diseases of the communicable type. Swansea is situated in N. lat. 51·38. Ten degrees below that point yellow fever, according to our previous knowledge, ought not to spread; but then there has been introduced a new element—a prolonged season of tropical heat. We will not speculate, but wait, promising our readers for next week later and more authentic information.

FEES.

We have received the following note from "A London Surgeon." It was intended for our columns of "Notes, Queries, and Replies;" but the subject is so interesting that we prefer inserting it here, with a request that other correspondents will discuss the questions which are so important to us all. There is no doubt that the time has come for the complete revision of the present system—or no-system—of charging for Professional services, or of the *honoraria* which are received as a return for the exercise of our knowledge and skill. We insert the note which has called for these remarks without further comment at present:—

"Sir,—In your report of the case Irvine *v.* Wilson the following sentences are given as part of the evidence of Dr. R. Robertson:—'I assisted Mr. Spence for six months. The lowest charge I have known him make for passing a catheter is two guineas. I have received five guineas on his behalf for passing a catheter. . . I have not often seen Mr. Spence take less than five guineas in such a case; that amount I have often.' Mr. J. Johnson said: 'Spence would charge up to twenty guineas for passing a catheter, and Mr. Irvine, the plaintiff, said that 'Mr. Fergusson, of London, might charge ten or twenty guineas' for passing a catheter in a case of stricture. On the other side, Dr. Whittle said—'The usual fee for passing a catheter is 2s. 6d. Mr. Bickersteth met me at night in Marsh-lane, and only charged two guineas.' Mr. Wigglesworth said—'Two shillings and sixpence would have been my fee for the catheter; 3s. 6d. would be ample remuneration.' Now, sir, I don't wish to enter into the question of the different scale of charges of general Practitioners and Consulting Surgeons; but I do think we ought to hear from Dr. Robertson and Mr. Spence if the report of the evidence of the former and the charges of the latter are correctly stated. And for my own guidance I should like to know whether Consulting Surgeons charge anything beyond their usual fee for any such simple proceeding as passing a catheter. I can only say that I never thought of making such a charge, any more than I should for using the stethoscope, or the speculum, or the ophthalmoscope, or for syringing the ears, or for applying caustic to the fauces, or to the eye, or to a chancre, or a piece of plaster to a cut, or a bandage to an ulcer. Such minor Surgery constantly occurs in Surgical practice, and I never knew an additional fee to be expected. I do not say it *ought not* to be, but I do say that it *is not* in London; and if Mr. Spence has *often* received five guineas within six months for passing a catheter, he is either a very lucky man or the fees in Edinburgh are much better than they are in London. I hear of a growing practice among consulting men of expecting a double fee for the first consultation; and considering the extra time required when examining a stranger, this appears to be a reasonable measure, and one which might generally be adopted now that provisions, house rent, and all other expenses are so much greater than they were when one guinea was fixed as the usual fee for a Consulting Physician or Surgeon. The barristers have revised their scale of payment; why should not we do the same?"

THE CHOLERA.

The Council of the Epidemiological Society have presented the following memorial to the Privy Council on the subject of cholera. The alleged fact of two deaths from Asiatic cholera having occurred at Southampton affords the best confirmation of the cogency of the advice it offers. Whatever may be thought of the efficacy of quarantine, there can be no doubt, in the face of the evil which threatens us, of the propriety—nay, the urgent necessity, of a sanitary inspection of our seaport towns:—

"The Epidemiological Society, ever since its foundation immediately upon the cessation of the epidemic of cholera in 1849, has had its attention in a special degree directed to the investigation of the disease as it has appeared both in this country and abroad. Many of the original members had been engaged in carrying out the inquiries instituted by the General Board of Health during that visitation, and were again employed on like duties in the epidemic of 1853-4. Other members have had extensive experience of the pestilence in the East Indies and other tropical countries; and, in almost every Session, communications illustrative of its characters have been read and discussed at the meetings of the Society.

"From the earliest intelligence of the present epidemic, when it appeared last June in Egypt, its history has been sedulously watched by a Committee, for the purpose of comparing its course with that of the former European epidemics which, after ravaging various countries on the Continent, at length reached our own shores; and, with the view of forming such practical conclusions as might guide the mind of the Profession, and of the public generally, in regard of the precautionary measures best calculated to protect the country against an invasion, and, if that should fail, to mitigate to the utmost its destructive effects among the people.

"With respect to any endeavour to exclude epidemic cholera by the system of quarantine such as was formerly practised in this country, and as it is still adopted and being carried out at the present time in all the Mediterranean seaports, the experience of the visitations in 1832, 1848, and 1853 appears to show conclusively that no reliance whatever can safely be placed upon it to keep off or avert the pestilence. Moreover, while the adoption of quarantine serves to give delusive hopes to the public mind, it generally leads to the unwise postponement of those internal measures of local improvement which afford the surest defence against the dangers of the assault. Sanitary precautions within a place are far more important than sanitary cordons without.

"While discountenancing the practice of an enfored detention and segregation, for a specified number of days, of all arrivals from an infected country—irrespective of the condition of the vessels themselves and of the persons on board, whether the former be thoroughly clean and airy, or foul, close, and crowded, and whether the passengers and crew be sick or quite healthy—the Council of the Epidemiological Society are, at the same time, strongly of opinion that the interests of the public health require that an efficient sanitary supervision should be exercised in all our chief sea- and river-port towns, and that the most beneficial results, not only to these places themselves but to the country generally, may be expected, on the threatened advent of an epidemic, from the timely adoption of such a precaution.

"It is to be observed that, in the successive visitations of the cholera in this country, the disease always manifested itself first on or near the sea-coast, and in some large busy port.

"In 1831 the earliest cases occurred in Sunderland during September, and Newcastle was attacked about three weeks later.

"In 1848 the disease seems to have appeared about the end of September in several places on the east coast—viz.: Hull, Sunderland, Edinburgh, and the metropolis—at nearly the same time.

"The visitation of 1853 may be said to have commenced with the outbreak at Newcastle in the month of September, which proved so destructive to life and so hurtful to the commercial interests of the town.

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"Besides the marked tendency in epidemic cholera to appear first on, or near to, the coast, it is also to be observed that many of our seaport towns have suffered with unusual severity in more than one of the visitations—witness Newcastle, Sunderland, and Hull, Glasgow, Liverpool, and Bristol, Plymouth, Portsmouth, and Southampton, Sheerness and London. The damp low sites of the worst parts of these towns, always in the vicinity of their harbours and docks (which are in themselves often prolific of malarious effluvia), together with the filthy and crowded dwellings to which seamen generally resort, and their reckless intemperate habits, cannot fail to aggravate other sanitary evils, and greatly to increase the predisposition of a maritime population to epidemic influences. The unfavourable state of the health, too, among the crews of many merchant ships upon their arrival, in consequence of the neglect of hygienic precautions during the voyage, renders them peculiarly susceptible of a poisonous atmosphere in the port; and there is good reason to believe that on several occasions where the earliest cases of an epidemic disease have occurred among persons recently arrived, this has been due rather to the cause just mentioned than to those persons having imported the disease from abroad. In the case of river-ports becoming infected, the disease, from its tendency to follow the line of water communication, has often been observed to make its way thence upward into the interior of a country.

"In view of these considerations, the Council of the Society beg respectfully to state that in their opinion it is highly desirable, for the welfare of the kingdom generally, that a sanitary inspection be made of the principal seaport towns to ascertain their actual condition, more especially of their harbours, docks, shipping, dwellings for seamen, etc., and with the view of discovering what provisions or arrangements exist for the reception and treatment of cases of sickness in ships upon their arrival from abroad, in the event of the cholera making its appearance in the port.

"With regard to the health condition of the general population, the Council take leave, with great respect, to express their entire concurrence in the fitness of the timely precautionary instructions which have been already promulgated by the Privy Council; and, while they are well aware of the insufficiency in many respects of the existing laws for the prompt and effectual correction of numerous sanitary evils which seriously endanger the health of the humbler classes at all times, and especially in an epidemic season, they leave with confidence to the wisdom of the Government to determine the time when it may be necessary, by the issuing of a special order, to confer upon local authorities larger and more summary powers for the prevention of disease and the protection of the public health."

The memorial was presented to the President of the Council on the 25th inst., by a deputation composed of the President of the Society, Dr. Milroy; Drs. Babington, W. Lewis, and Camps, Mr. F. J. Burgé, and Mr. J. N. Radcliffe, hon. sec.

NEW PERIODICALS.

Whilst great works denote the silent labours of individuals, and stand out like the great public edifices of a city, it is rather the swarm of pamphlets and periodicals which we may compare to the habitations of ordinary mankind, and which testify to general activity and progress. Hence we are always glad to receive new periodicals. There is a new *Giornale Medico di Roma*, with a list of six Physicians, six Surgeons, two chemists, and a botanist amongst its *collaborateri*. Dr. Guido Bunelli contributes a paper on acute or yellow atrophy of the liver; Dr. Mazzoni a case of bloodless extraction of a loose cartilage from the knee-joint by a proceeding which we are accustomed to connect with the name of Professor Syme, which name, however, we find that Dr. Mazzoni does not mention, though he does Brunet and Goyraud. Dr. Tassi gives a paper on acute so-called peri-uterine hæmatocele; and Professor Lingi Galussi on a new kind of fever. The *New York Medical Journal* is a new candidate for favour; well got up, and filled with interesting matter, especially relating to Military Surgery. *L'Art Medical, Interêts Sociaux Scientifiques et Professionels*, is published at Brussels on the first and third Sunday of every month, at the rate of four francs per annum. It represents the sanitary and "social science" interests. *La Charité sur les champs de Bataille* is a cheap monthly sheet intended to advocate the neutrality of the wounded and the exemption of the Medical service from the *duresse* of warfare.

SANITARY DOINGS AT BRIGHTON.

The Sanitary Committee of the Brighton Town Council have been holding a conference with the four parochial Medical officers, to ascertain whether these gentlemen can undertake between them to execute the duties of a Medical Officer of Health, each for his own district. The plan is economical, as Medical men so employed become acquainted with the sanitary state of the town in the ordinary course of their work. But the Committee have offered these gentlemen salaries of £20 a-year each, which have been very properly declined. Willing, however, to serve the town, the parochial Surgeons have consented to go as low as £50 a-year each, thus affording to the ratepayers of Brighton an opportunity which, most assuredly, will not occur again—of having these very important and multifarious duties performed for £200 a-year. The Committee have refused to give so much, and thus the question stands for the present at a sort of dead-lock. It is only fair to add that the majority of the Town Council are tradesmen; and that the few educated men among them, who really understood the matter they were dealing with, opposed the paltry offer, but were out-voted.

THE MEDICAL TIMES & GAZETTE SPECIAL REPORT ON THE EPIDEMIC OF CHOLERA: WITH A PRACTICAL HISTORY OF THE DISEASE

Chapter V.

A Further Account of the Present Epidemic.

Since our last report, the present epidemic of cholera in the East has been steadily on the decline; but there is no evidence to show that the disease has been trampled out. In the beginning of this month there was an increase in the number of cases in Italy. At Foggia, in Naples, the disease broke out suddenly, and as suddenly disappeared. At Manduria, another Neapolitan town, built nearly on the site of the ancient Manduria that was destroyed in the second Punic war, there was also a sudden outbreak. The first cases occurred about August 23, and on the 27th they had increased to 80, 32 being fatal. After this the disease quickly declined. On August 30 the malady was still lingering about Ancona, but the mortality was largely reduced. In San Severo, on the 28th of the same month, there had been 125 cases, and 67 deaths.

While the disease was thus declining in Italy, it was equally decreasing in Constantinople. A report published on September 1 indicates that the epidemic had so far abated that its total disappearance was hoped for in a few days. On August 10 the returns of cholera cases had been 197; on the 17th, the same; on the 18th, 188; on the 19th, 176; on the 20th, 141; on the 21st, 143; and on the 26th, 110. It was, however, reported that in the provinces, viz., at Trebizond, Salonica, Sulina, and Bagdad, the disease was progressing with great rapidity, and also that it had travelled inwards from Bushire towards Shiraz and Ispahan. In all these places it has since notably declined; and on September 5 the Medical Commission of Constantinople reported that, in that city, the cases had fallen to 9 daily, and the virulence of the malady was over. On the 7th there were 37 cases, a few being in the Harem of the Sultan.

Almost simultaneously with these events, the epidemic, which had shown itself in Malta, began also to decline there. We have before us a report from the *Malta Observer*, bearing date August 21, which states that the malady was exhausting

itself; that in Valetta only one case occurred on the 30th and two on the 31st; and that in all the villages, excepting those of Rabato and Curmi, the disease was on the decrease. In Rabato, however, twelve attacks and five deaths occurred on the 30th, and eight attacks and three deaths on the 31st; while at Curmi, where the rate of attacks and mortality was always high since the outbreak of the cholera, owing, it was believed, to the poverty and misery of the inhabitants, five attacks and two deaths were reported on the 30th, and five attacks and one death on the 31st. The mortality from the disorder in Malta, according to the number of persons attacked, was very great, not less than twenty-four dying out of twenty-seven in one period of four days only.

On September 4 the malady was reported, in like manner, to have ceased at Jaffa, Tripoli, Latakia, Messina, Rhodes, and Smyrna.

We see in the above records a fact which is worthy of notice —viz., that at various places far distant from each other, and existing under what would seem to be differing conditions, the great epidemic exhibited an almost simultaneous decline. Unfortunately, we are obliged to accept this fact on evidence too general to admit of analysis, inasmuch as no correct data whatever are at hand either in relation to the number of attacks in all these places, the precise mode of introduction of the disease, the manner in which it spread, or the circumstances that rendered it severe or mild in its course. Indeed, in some districts, the gross cowardice of the authorities was such that they asked no questions at all, but fled for their lives. At Manduria, the Mayor, the Junta, and the Municipal Council ran away *en masse;* the landed proprietors sought safety elsewhere; the tradesmen closed their houses of business; and even the Doctors, we are informed, though we can hardly credit it, gave up their vocation and quitted the sick to seek a cowardly idleness in less dangerous quarters. There may be some exaggeration about these reports; but certain it is that, from the mayors of the small Italian towns up to the great Pasha of Egypt himself, the officials, in the places attacked, have shown the most disgraceful fear, and have taken no measures to ensure, for the good of the world, a reliable history of the epidemic that has visited the districts placed under their special protection.

While the epidemic was declining in the towns named above, it was developing and extending in Gibraltar, Spain, France, and Majorca. The first cases in Gibraltar occurred, we believe, on August 28, but in a very mild form. The disease continued to increase during the first days of September, and on the 18th upwards of 100 fatal cases had taken place, but what proportion these bore to the number of persons attacked we do not know. In Spain it attacked Valencia, Seville, Carthagena, and Barcelona. In the latter place (Barcelona), on September 13 there were 63 deaths; and on the 12th, 13th, and 14th inclusive, 146 deaths. On September 25 the epidemic had ceased at Valencia, had almost ceased at Seville and Carthagena, and had been reduced to 14 cases at Barcelona.

At Marseilles the malady appeared on the 11th, and from that period to the 17th 108 deaths had occurred, from which time the disease has continued with varying intensity, although in every quarter of the city two Physicians and one apothecary were appointed by the authorities to give immediate assistance to all who applied to them free of expense, and although the old method of disinfecting the air by means of huge bonfires had been vigorously carried out. One or two isolated cases were also reported from Toulon on the 6th; on the 7th the deaths from the disease were 3 in number, on the 11th they had risen to 9, on the 12th to 26, and at the moment we write the epidemic is still present.

In the Island of Majorca the cholera appeared at Palma on or about the 3rd of the present month. On the 9th, 43 deaths were reported; and on the 10th, 48. Amongst those fatally attacked no less than 21 out of 29 of the members of the municipality fell as victims. In this little town it was believed that the virulence of the disease was intensified by the extreme measures resorted to by the authorities to prevent the entrance of the malady. The town was completely cut off from communication with the rest of the island, and as it was largely dependent for food on supplies from a distance, the plague, when it did appear, found a population deficient in many actual necessaries of life; the malady was thus the more severely difficult to treat.

One other line of march of the great plague is somewhat novel. The disease has reached Damascus, where, amongst its first victims, it selected Mrs. Rogers, the wife of the English Consul. The inhabitants, straightway alarmed, enacted the same part as the people of Manduria; they shut up their houses and shops, and fled for their lives, making to the Mount or town of Lebanon, whither the disease followed them. It is urged that this is the first time the borders of this sacred mountain and town have been attacked.

In the above summary we have brought forward in brief outline the course of the epidemic up to the present date. We have avoided figures as far as possible, not because we think them useless, but for the simple reason that no reliable statistics have as yet reached this country. In some instances there has been an obvious desire on the part of the authorities, in places attacked, to suppress the worst information; in other instances, under the effects of the panic, mild visitations have been exaggerated to the utmost. In time many of the errors thus wildly propagated will possibly be rectified; meanwhile, the reader must be content to learn the simple facts that are known in reference to the course of the disease in its terrible march.

Cholera in England.

The *Times* newspaper of September 27 gives the following account of a case of cholera at Southampton:—

"We are informed on most unquestionable authority that a decided and undoubted case of Asiatic cholera, with a fatal result, has occurred in Southampton. The victim was a man named Rose, about 30 years of age, residing in Brewhouse-court, Brewhouse-lane, who died on Sunday, about thirty-six hours from his first attack, the symptoms at every stage being those of the most virulent form of this dreadful disease. The unfortunate man himself dated his illness from having been engaged a few days previously in cleaning out a very offensive cesspool. Another case, that of a woman living in a different part of the town, is also reported as presenting similar symptoms. Although these cases, should they both prove to be Asiatic cholera, may not presage an immediate prevalence of the cholera, they are sufficiently alarming to call for vigilant and energetic measures, without an hour's delay, on the part of the local authorities, and, if necessary, the Government itself. With a full consideration of the fact that the town of Southampton is in direct communication, by means of the mail steamers, with the Mediterranean, and only four days from Gibraltar, where the cholera now prevails, and at which port these steamers call, every possible sanitary precaution should at once be taken to guard the health, not only of the inhabitants of Southampton, but of the country at large."

Sir Charles Eastlake, the President of the Royal Academy, is now lying ill at Milan, but is,—as we learn from the *Perseveranza*, of Milan—we are glad to say, on the road to recovery from an attack of pneumonia and dysentery.

Miss E. Garrett.—This young lady, whose name has been frequently before the Profession as an aspirant for Professional qualification, successfully passed the Examination at Apothecaries' Hall on Thursday night. Whilst congratulating her on having thus attained the object of her wishes, and hoping that her Medical career may terminate in her happiness and success, we would also express our hope that she may long continue to enjoy her pre-eminence as the sole female representative of English Medicine.

MEDICAL REPORT OF THE THIRTY-FIFTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

HELD AT BIRMINGHAM FROM SEPTEMBER 6—13.

[*From our Special Correspondent.*]

(Continued from page 347.)

ABSTRACTS OF PAPERS, CONTINUED.

SECOND REPORT ON THE PHYSIOLOGICAL ACTION OF CERTAIN OF THE AMYL COMPOUNDS.

By Dr. Richardson, M.A., M.D.

This report was the second presented by the author. In his previous report he had studied the action of the nitrite of amyl; in the present he considered amylic alcohol, hyduret of amyl, acetate of amyl, and iodide of amyl. The hyduret is an anæsthetic, and produces symptoms akin to somnambulism. Amylic alcohol (hydrated oxide of amyl) produces, after long administration, insensibility to pain and peculiar rigors, which may be sustained many hours. Acetate of amyl exercises a similar influence; whilst iodide of amyl produces, in addition to the same symptoms, profuse secretion. Each one of the series destroys the voluntary power of the muscles, but not the vis insita; their action seems to be purely on the nervous system, and specially on the centres of motion.

The practical conclusions to which the author had arrived were three in number, but we are able only to notice them in the briefest manner, omitting the reasons on which they were based. First, he thought that none of these bodies were safe as anæsthetics; they would not replace ether and chloroform, but they, especially the iodide, might be employed in tetanus with promise of good. Secondly, the investigation taught a useful lesson in regard to the alliance of the symptoms produced with the symptoms of various diseases. It was possible that in some diseases analogous compounds were formed in the body from amylaceous matter under the influence of perverted chemical action. Thirdly, the experiments were of great moment, as indicating how the substitution of one element for another in an organic compound modifies the action of such organic substance on the body.

A short debate followed the reading of the report, and it was resolved that the author be requested to continue his inquiries, and report to a future meeting.

CERTAIN POINTS IN THE ANATOMY OF LUMBRICUS TERRESTRIS.

By Professor Rolleston, M.D., F.R.S.

Professor Rolleston gave a description of certain points in the anatomy of *Lumbricus terrestris*, or common earthworm. He entered very fully into detail regarding the muscular system and salivary glands of the animal, explaining his remarks by diagrams. They would find that animals of aquatic habits were generally devoid of salivary glands. He considered that the earthworm should be considered as an animal to the existence of which water or moisture was necessary, though its dwelling was in the earth. He had come to the conclusion that the number of rings in the worm was very variable.

Dr. Chrisp thought Professor Rolleston was in error when stating that the earthworm was exclusively an earth-feeder.

Professor Rolleston said no doubt the worm swallowed a good deal of matter, but the greater proportion of what was found within it was pure earth.

CERTAIN POINTS IN THE ANATOMY OF TWO ANIMALS FROM THE MAMMOTH CAVE, KENTUCKY.

By Professor Rolleston, M.D., F.R.S.

One of these creatures was a fish, very small indeed, and the other a crustacea. The point which Professor Rolleston wished to urge with reference to this fish was, that it had no abdominal fins, as had been previously described. The absence of these fins, though a small matter in itself, showed the variability of rudimentary structures, and was an indication of genealogical descent. The crustacea very nearly resembled our own cray fish or prawn, only that it is more minute. It had been described as blind, but on examining his own specimens, Professor Rolleston found that the creature had eyes, but its eyes contained no black pigment, and had no facets at the corners. Eyes would be of little or no use in the Mammoth Cave, where the darkness was intense, and so the creature was furnished with unusually long antennæ for feeling its way, and with very sharp horns, which served as weapons of defence against any other creature it might run against. Another peculiarity was, that it was entirely pellucid—that its brain could be clearly seen. Dr. Rolleston observed that if the same peculiarity were to be found in man it might save the trouble of competitive examinations.

ON THE EARLY DEVELOPMENT OF ORGANS IN EMBRYONIC LIFE.

By Samuel H. Parkes.

Mr. Parkes exhibited several microscopic preparations of sections of the fœtus of various animals, showing that at a very early period of gestation the different organs might be traced. The paper showed considerable research, and deserved more attention than it could obtain in a mixed audience, including ladies.

It was suggested that the microscopes and preparations should be exhibited at the soirée, which Mr. Parkes assented to.

A FEW REMARKS ON THE CAUSES OF THE CATTLE MURRAIN.

By Dr. Shettle, M.D.

Dr. Shettle said, that at the present time, when the cattle disease was making such havoc, any remarks throwing light on the nature of the disease must be acceptable. He proceeded to quote from Dr. Greenhow's work, giving the general appearance the disease presented in cattle. The lungs are often found adherent to the sides of the chest, in consequence of the effusion of plastic lymph into the pleural cavities, by which the minor surfaces of the pleura, which ought to glide freely over each other, were glued together. A quantity of liquid is often present, in which lumps of the same plastic lymph are found floating. The increased size of the lung, together with the liquid effusion, distends the diseased side of the chest, so as to considerably increase the circumference. The weight of the diseased lung is frequently increased to 20, 30, and, it is said, to 60lb., and in cutting across the diseased portion it presents a solid, flesh-like appearance. Pulmonary and steppe murrain are undoubtedly blood diseases, and partake largely of the character of typhus; whilst the two other milder forms of the complaint, carbuncular and vesicular murrain, have their origin in a fungus growth in the parts affected. The author stated that he had been for five years engaged in experiments to discover the real use of the iron in the blood. The results show that it at least fulfils one important office. To show this it is necessary to go a little into the act of respiration. During this process a large amount of chemical action takes place, but this cannot occur without a corresponding development of electricity, and the blood, through the iron it contains, has one of the best attractive agents for electricity known. It is proved by experiment that the abstraction of electricity from the blood causes it to assume a dark, pitchy character, and readily to decompose, whilst its presence prevents decomposition, and promotes organisation. This is capable of further proof, and there is no doubt that electricity is the principle, or force employed to maintain the life of plants or animals, by the process of organisation forming tissue. The physiology of muscular action is another example of the same force. Coming to those morbid growths which are seen to exist in this disease, and which are believed to be the results of perverted natural action, it is quite evident that electricity is developed in the process of respiration, and it is clear that the best agent for attracting this electricity, and carrying it off, is the iron in the blood. It therefore follows that if iron does not exist in the blood globules they will not exert a due amount of attraction for the electricity or vital force developed, consequently it must be attracted by the next best conductor, the nerves. These always supply an attractive force, and by the exertion of this

force all the vital functions are performed, and new tissue deposited; but in health this is only done to a certain extent, any excess causing disease, resulting in pain from the undue abstraction of electricity, and the deposition of matter producing morbid growth. The water deposited in such quantities in the pleural cavities is simply the serum of the blood. The skin is a great medium for supplying the system with vital power. If vitality depends upon electricity in motion, the absence of electricity, the excessive motion of electricity in one part of the body, or deficiency of motion in another, must constitute disease, and all disease may be regarded as dependent upon one of these three states,—a deficiency of electricity in the body, from a deficiency of mineral matter, or excessive or defective action. Dr. Shettle proceeded to say that, in his opinion, the cause for the generation and virulence of the disease might be found in the various and severe electrical changes which have taken place lately in this part of the world. The electric and magnetic storms and the excessive heat of the weather have the power of abstracting electricity from matter, and removing mineral matter from animal bodies.

Dr. Crisp thought that electricity had nothing whatever to do with the disease, as, if a healthy and unhealthy animal were placed together, the one would infect the other, without any reference to the electrical condition of the atmosphere. He also asked why, if electricity affected oxen, it did not affect sheep. He considered the disease to be due to a special poison, like cholera.

Dr. Richardson agreed with Dr. Crisp.

ON VARIABILITY, AS MANIFESTED IN THE CONSTRUCTION OF THE HUMAN BODY.

By William Turner, M.B., F.R.S.E.

On this subject Mr. Turner read a very able and interesting paper. He commenced by stating that as there was a considerable amount of variability of the human frame, it was no matter of surprise that differences and variations should exist in parts of the body not outwardly visible. The internal structural variations were so numerous that he would be compelled to confine himself almost entirely to some variations he had observed in the hands and feet. There were many variations not outwardly visible, and which required careful study and observation. He proceeded to notice the variations of the bands of the thumb and fingers. These, in the observations he had made, were very variable, and by aid of numerous diagrams he pointed out the many differences in the construction of the muscles of the hand. The various diversities in the sub-divisions of the muscles of the hand were ably and clearly explained and illustrated, and Mr. Turner then proceeded to notice the variations in the flexor muscles of the toes. He gave his experience of fifty examinations, and remarked upon the various changes that had come under his observation. Mr. Turner made some remarks upon the different opinions and statements that had been offered respecting the anatomy of the toes and hands, and proceeded to observe that these opinions were right as far as they went, but having had opportunities of studying the subject of the paper extensively, and making many and frequent observations, he was enabled to go further into the subject, to add something, he hoped, to what had already been written and said on the subject. He concluded by noticing that the variations he had alluded to were as numerous as they were peculiar; in fact, that neither form nor structure were stereotyped; but how far these variations affected the general condition, and whether they were transmitted from parents to children, were subjects he could not enter into. In the development of each individual, a morphological specialisation occurs, both in internal structure and external form, by which distinctive characters are conferred, so that each man's structural individuality is an expression of the sum of the individual variations of all the constituent parts of his frame. The illustrations advanced in support of the author's opinions were taken from the flexor muscles of the fingers and toes, from the modifications in the form and size of a foramen, called supracondyloid, which is occasionally met with in man, and of the objects passing through it. It was also shown that variability in construction was not manifested merely in different individuals, but that in the same individual the corresponding structures on opposite sides of the body were by no means symmetrically disposed.

Mr. Furneaux Jordan spoke of Mr. Turner's observation as confirming Buckle's theory that the deviations are so numerous that there are no irregularities—in fact, that as science extends, all irregularities would be classed under regular laws. Mr. Jordan also spoke of the tendons in the back of the hand, and particularly of the ring finger, the peculiar construction of which was supposed to give rise to a good deal of the difficulty experienced in learning certain musical instruments, though Mr. Jordan attributed it to another muscle.

Professor Bennett remarked that only this week, at Hamburgh, a foreigner could be seen copying some of the pictures of the old masters, holding his palette with his toes, and using his brush with his toes. He asked whether Mr. Turner had connected these remarkable movements with any peculiarities of structure, having any peculiar physiological relations to the functions of the body.

Mr. Wallace apprehended that few persons not intimately acquainted with anatomy were aware that the internal structure of our bodies was so exceedingly varied. He himself should have expected that the arrangement of the muscles of our hands and feet was tolerably constant; but Mr. Turner had shown them that not only did they vary sometimes, but that variation was the rule rather than the exception. He thought it would be interesting to determine if this variation was not dependent on, or the result of, civilisation. He believed that in the savage man these variations would not be found to be so numerous and so extensive.

Dr. Camps spoke of the paper as one of the most philosophical the Section had been favoured with, because it involved a very broad subject, while Mr. Turner had confined himself to a part only of the body. Other parts of the body were liable to these variations, and seeing that we do not look for uniformity throughout creation, it was to be expected that by repeated anatomical investigation more and more diversity would be discovered in the human body. If time and opportunity were afforded, similar and corresponding variation would be found in the brain and spinal cord and nerves throughout the body, and he could not help thinking that a great deal of the diversity of character, and of aptitude for the ordinary avocations of life, were involved in the principle intended to be illustrated and exemplified in the interesting subject now brought under their notice. They knew there were no two human beings exactly alike in character, and he could not help thinking that if their observations were accurate enough, they might find these differences in character illustrated by distinct features in the anatomical construction of their frames. The speaker even went further than this, and stated his belief that the question of sympathy, and of ordinary likes and dislikes, might be interpreted by the minute internal organisation.

The President congratulated the meeting on the philosophical temper with which it had received Mr. Turner's observations, and tendered the thanks of the meeting to that gentleman for his very able paper.

Mr. Turner briefly replied to the remarks which had been made, and stated his belief that variations of structure were more noticeable among civilised than among savage races.

THE CLOSE OF THE PHYSIOLOGICAL SESSION.

The session of the Physiological Section was brought to a close on Wednesday at noon.

THANKS TO THE SECRETARIES.

The President said that as some of the members were leaving, and as the General Committee met in that room in a short time, he wished to offer the thanks of himself and of the Vice-Presidents and Committee to Mr. Turner. In a great measure the pressure of the work of the Section had devolved upon Mr. Turner, and those who had only seen the results of his labours could scarcely know the amount of trouble he had to bestow. He begged to convey the thanks of the Section to the Secretaries, and especially to the senior Secretary, Mr. Turner.

The vote was carried with loud applause, and indeed the exertions of Mr. Turner on behalf of the Section are such that no expression of thanks can in any sense be adequate to the credit fairly won.

VOTE OF THANKS TO THE PRESIDENT.

Dr. Edward Smith proposed a vote of thanks to the President, and congratulated him on having conducted the meeting in a manner agreeable to the whole of the Association.

Dr. Fleming seconded the vote of thanks to Professor Acland.

The President gave them his hearty thanks for their approval of his conduct. Dr. Smith had occupied that chair before him, and knew it was a place of distinction—one, indeed,

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which he should have shrunk from holding, but for the feeling that he ought to do what he could. He had experienced a kind of gratification during the last week from the nature of the papers read; and although in many of them he did not see any extraordinary merit, yet some of them did possess very high merit, and were well worthy the attention of any body of scientific men. There had been altogether a harmony in the discussions which was beyond all praise, and that he should have been allowed to share in the pleasure of such a meeting was certainly one of the most agreeable things that had happened in the course of his life. The President then declared the Section to be adjourned.

The papers read in the Physiological Section are naturally those of most interest to Medical men. There were, however, others in various Sections of equal importance, and which are now to be noticed. This report, which professes only to the "*Medical*," will then be complete.

SECTION OF ZOOLOGY AND BOTANY.

ON THE RELATIVE WEIGHT OF THE BRAIN IN RELATION TO THE INTELLIGENCE IN THE VERTEBRATA.

By Dr. Crisp.

Dr. Crisp illustrated his paper with a large number—126—of plaster of Paris casts, and drawings, and commenced by dividing the subject into three principal heads, which were afterwards sub-divided into many more. He said that in the brains of mammalia there was great uniformity, but in fishes the brain was very irregular. He thought much error prevailed with respect to intelligence being regulated by the number of convolutions in the brain, for it was found that animals with few convolutions were very sagacious, while in other classes there were a great many very stupid. The brain always remained of the same weight, though the body might decrease or be augmented in bulk, and the brain of the smaller animals was relatively greater than that of the larger. The brain of a man weighed about thirty-eight ounces, and that of a woman four or five ounces less, forming a proportion of 1-35th to 1-40th to the weight of the body. After entering into comparisons of weight of brain, illustrated by drawings and models, he said his researches had led him to the following conclusions:—The external appearance of the brain in most animals was, to a great extent, an indication of the comparative amount of the intelligence of the animal; but to this rule there were many exceptions, as, for example, in the elephant, dog, seal, and many birds. The same inference might be drawn from the covered and uncovered state of the cerebellum, as instanced in the animals last named. The number of convolutions was to some extent a tolerable indication of the amount of intelligence in mammals; but to that there were many exceptions. Looking to the weight of brain in 226 animals which he had selected, he found that the relative weight of brain in proportion to the body was an indication of intelligence, for he had ascertained that there was no example of any animal with a relatively small brain that possessed a great amount of intelligence.

Mr. F. Buckland thought Dr. Crisp had underrated the intelligence of fishes and of rats—in the latter case because he had not taken his observations from the most cunning description of rat, the black rat.

ON THE IDENTITY OF ORIGIN OF STARCH AND CHLOROPHYLL.

By Dr. W. Hinds, M.D.

Dr. Hinds was of opinion that the starch and chlorophyll granules of plants were fundamentally the same. Starch, whether chlorised or unchlorised, was so universal that nearly all the green vegetation represented so much starch distributed through the exposed tissues of plants. The almost universal green of nature was mostly amylaceous, and could supply fuel at least in the matter of animal food. Even when dry and shrivelled, and partly or wholly discolourised to the ordinary observer, as in the case of dry grass or hay, the same nutritive principle was presented. Amylaceous matters were known to be intensely nutritive, and those parts of plants in which the principle was concentrated were nutritive in absolute proportion to the amount of that concentration. The conclusion he arrived at from his examination of starch and chlorophyll was, that their origin was fundamentally similar; the exposure to light made the principal difference in their appearance.

ON PHOSPHORESCENCE IN CONNECTION WITH STORMS AND DISEASE.

By Dr. T. Moffat, M.D.

Dr. Moffat said the subject had been under his consideration for some time, and that his opinions had been deduced from observations extending over a period of four years. He exhibited tables to show that the atmospheric conditions under which the luminosity of phosphorus took place were those of the south or equatorial current of air, namely, a minimum of atmospheric pressure, and maximum of temperature and humidity; and that those under which non-luminosity takes place are the conditions of the north or Polar current, namely, maximum of pressure and minimum of temperature and humidity. The atmospheric conditions of ozone and no-ozone periods are the same as those of the luminosity and non-luminosity of phosphorus. Phosphorus becomes luminous, and ozone periods commence on the approach of storms; and if a storm sets in during a luminous or ozone period, the luminosity increases in brilliancy and the ozone in quantity. Dr. Moffat then referred to tables he had prepared from observations on the luminosity of phosphorus, ozone, and the prevalence of diseases in connection with the system of meteorological telegraphy instituted by the late Admiral Fitzroy. From these it appeared that all the periods of luminosity commenced with the setting in of the atmospheric conditions, of the approach of which cautionary telegrams gave warning. Of diseases, 80 per cent. of apoplexy, epilepsy, and sudden death occurred on the days on which phosphorus became luminous. The atmospheric conditions which lead to those storms, of which the telegram gave them warning, are invariably accompanied by diseases of the nervous, vascular, and muscular systems. During the two years in which those telegrams were sent, 143 cases of those diseases came under his notice, of which 54·5 per cent. took place on telegram days, and 45·5 per cent. occurred on days similar in a meteorological sense to those on which the telegrams were issued, differing only in degree, as the tables showed. Although storms are accompanied by diseases of some kinds, they are, nevertheless, of great benefit in a sanitary sense. They carry with them a supply of Nature's deodorising and disinfecting agent—ozone. As far as he had had opportunities of observing, he had come to the conclusion that cholera disappears with the setting in of the equatorial or ozoniferous current, as was the case at Newcastle in 1853, and in the London epidemic. During a cholera epidemic, the barometer readings are high, a calm prevails, and there is no ozone. In conclusion, Dr. Moffat asked whether, seeing the intimate connection there is between periods of the luminosity of phosphorus and ozone periods, and of non-luminosity and non-ozone periods, and knowing that ozone is formed by the action of phosphorus on moist air, we might not reasonably look to phosphorescence for the chief source of atmospheric ozone? It was also a question whether we might not find phosphorus a useful disinfectant by using it as a producer of artificial ozone? He had himself used phosphorus as a disinfectant for four years.

The Rev. A. M. Norman said the paper of Dr. Moffat would be of much value, and he, for one, was glad that it had not been taken to the Chemical Section, to which it properly belonged, as he would then have been deprived of the pleasure of hearing it. He thought it threw great light on the subject. He was inclined to think that animals were phosphorescent only under certain conditions of the atmosphere; and he believed that if it were so, an explanation would be given of the cause of certain animals being considered phosphorescent by some persons, and not so by others. From his own experience, he could say that dying animals became phosphorescent.

Dr. Moffat said the question had now entered on a new phase, and was not yet sufficiently matured; but his belief was that phosphorescence was really the source of atmospheric ozone.

PHRENOLOGY, OR THE PHYSIOLOGY OF THE BRAIN, THE MOST IMPORTANT DEPARTMENT OF ETHNOLOGY.

By Mr. Prideaux.

Mr. Prideaux commenced by congratulating the Association upon the progress the scientific mind of the country had made. Nineteen years ago, when he attempted to introduce phrenology at a meeting of the British Association, he was told by the President that it was a prohibited subject. They had now no prohibited subjects, and did not recognise dangerous truths. Even the bugbear cries of materialism and fatalism were exploded. Phrenology being emphatically a science founded

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on observation, and the means of making these observations lying everywhere abundantly around, why should the science continue to occupy a debatable position in the estimation of the public, as if the means or opportunity of verifying or negativing its conclusions were wanting or unattainable? To endeavour to explain the cause of this anomaly was his chief object in preparing a paper for the Association. Man had looked on man for tens of thousands of years before the advent of Dr. Gall without ever having framed an approximatively rational system of psychology, much less connected twenty-seven unquestionably primitive instincts or capacities with the development of many different localities of the surface of the head. No body of doctrines were ever established on a series of observations and inductions more repeatedly, cautiously, and patiently scrutinised and verified than those of phrenology by Dr. Gall, who devoted his entire life and all his pecuniary resources to this object, sustained by that prophetic vision of the future which placed him above contemporary jealousies, and caused him to exclaim, in calm self-reliance, "This is truth, though opposed to the philosophy of ages." Comte, in his "Positive Philosophy," had well shown the necessary existence of a hierarchy amongst the sciences, and that the progress of human knowledge inevitably followed certain laws, the simpler studies preceding the more complex, those founded on perceptions common to the great mass of mankind being more widely cultivated and farther advanced than those requiring the exercise of the higher and rarer faculty of abstraction. Many had not adequate power of abstraction to separate the subjective from the objective in their ideas; as a consequence, they took no interest in the study of psychology, and could not be expected to pursue it, still less phrenology, which, in addition to requiring a basis of psychological knowledge, superadds to this the doctrine of the dependence of the mental faculties on certain external relationships of form and size, successfully to appreciate which demands an amount of preliminary study hardly likely to be expended on the subject by those uninterested in it. We had plenty of naturalists and cultivators of the physical sciences, and no deficiency in the supply of metaphysicians, who deal with the world of ideas instead of the world of things. But the dealers in things and the dealers in abstractions dwelt apart, and too often regarded each other's pursuits with ill-disguised contempt. The phrenologist required to unite to a considerable extent the capacities and tastes of both parties. To combine the power of abstraction and mental analysis of the psychologist and metaphysician with the instinct of observation of the naturalist; and in the fact that individuals who combined the two sets of endowments must be less numerous than those distinguished by one of the qualifications singly, we saw a clear explanation of the reason why scientific cultivators of phrenology were fewer in number than either the physicists or metaphysicians. Mr. Prideaux concluded by urging his auditors not to take their opinions on phrenology at second hand, but to read for themselves the work of the great master, Gall. They would find an ample reward, for in this way only could they obtain an adequate idea of the majesty of intellect and character of a philosopher who belonged to the small band of immortals whose figures were destined to loom grandly through the vista of ages, marking epochs in the history of man.

The reading the paper elicited a spirited discussion.

Professor Bennett said it was well known before the time of Gall that the brain was the organ of the mind. What became of the faculties of memory, judgment, and imagination, according to the phrenologists? Burke, the murderer, and Pépé, a notorious pirate and murderer, had the smallest organs of destructiveness ever seen. Then the frontal sinus prevented the development of a portion of the brain being ascertained during life.

Professor Macdonald said it was notoriously and generally admitted before the time of Gall that the brain was the organ of the mind. In regard to memories, they varied greatly, one person having no verbal memory, but an astonishing memory for localities, another a great memory for figures, but none for tunes, whilst a third, who could whistle the airs in an opera from once hearing, would have a very poor memory for places, figures, or words: the phrenological division of the faculties was evidently more in accordance with nature than that of the metaphysicians.

Dr. Humphry held up a rough sketch, and stated that the surface of the convolutions of the under side of the brain with those on the median line in the fissure between the two hemispheres equalled half the whole surface of the brain, and could not be judged of during life.

Mr. Prideaux observed, in reply, that he denied *in toto* the assertion of Dr. Bennett as to the heads of Burke and Pépé. Such statements usually amounted to nothing, except as a proof that the parties making them had not qualified themselves as observers. Let twelve heads of notorious criminals be mixed with twelve heads of men of exemplary moral character—the question was, how could phrenologists separate them correctly unless their science was true? Yet this could be easily done. He would not dispute but that Dr. Humphry might not know how to judge of the development of the inner side of the brain during life; but when he stated the thing could could not be done he was in error, for the first organ discovered by Gall, that of language, was seated in the posterior convolution of the under surface of the anterior lobe. What had the existence of a frontal sinus to do with the truth of phrenology? No more than the fact that the walls of the chest varied in thickness had to do with the truth of auscultation and percussion. Professor Bennett and Dr. Humphry were confounding two perfectly distinct things—the truth or certainty of a science with the degree of precision of our knowledge or power of practically applying it.

SECTION OF CHEMISTRY.

OBSERVATIONS ON THE UTILISATION OF SEWAGE AS CONDUCTED AT STROUD, AND ON THE GROWTH OF THE SEWAGE PLANT.

By Mr. H. Bird.

Mr. Bird said:—Since reading a paper upon the subject of treatment of sewage matters, at the city of Bath, an opportunity has been offered me, through the assistance of some friends, to carry out and prove the correctness of the principles contained in that communication. The population of Stroud, using the newly-constructed sewers, amounts to about four thousand; and the sewage is conveyed into the tanks, with about six hundred thousand gallons of water a-day, and during rainy weather, the washings of the streets. The sewage, although so greatly diluted with water, does not lose its property as manure; for the collected matters, after being prepared for manure and applied to grass land, greatly increased the crop and aftermath, making it a deep green colour, and increasing the quantity of clover. Animals showed a preference for feeding upon such spots. The quantity experimented with has been from 5 cwt. to half a ton per acre. The quantity of water, of course, diminishes the value of the manurial property of the tail water of the tanks, which is now allowed to flow into the river Frome, after passing through a long culvert filled with mud, without affording the slightest nuisance or injury. But it ought in all cases to be used for irrigating land, upon the plan of open carriers, where the system can be adopted. Sandy and loamy lands resting upon gravel, well drained, or even double drained lands, are best adapted for such irrigation. Irrigation appears to increase the productive power of most lands in all the instances that have come under my own observation. The floating substances are daily removed from the surface of the tanks, and the subsided sewage or sludge is removed often—at least once a week. It is injured by remaining in the tanks, and these should be constructed so as to favour the removal of the sludge by dredging or otherwise. The sludge is placed in heaps to dry. These heaps, when sprinkled with prepared clay, give off no stink, and this is prevented in dredging by the same means. Sewage, when placed in a heap for a short time, and mixed with prepared clay, as before stated, is not injured by rain; it flows off its surface without passing through it. The whole process is performed in the open air, but for many reasons it should be conducted under covered sheds, freely admitting sun, air, and light. When carefully conducted in the open air there is no unpleasant smell beyond a few yards. When the heaps are sufficiently drained of water they are broken up roughly to dry, and placed in sheds. Fermentation proceeds until the sewage becomes dry, which increases its quality as manure. The solid matters are crushed and screened, and prepared with sulphuric acid, for the market, and sent out in a state fit for drilling or spreading upon land. The sewage matters of towns thus treated will pay the expenses of collecting and preparing it, and give a large margin for profit; but it should be conducted by companies and other parties, a commercial undertaking being out of the province of Boards of Health and Corporations of towns and cities. It is clear, from careful calculation, that the sewage, bones, and gas products of large towns, collected and prepared for manure, would restore and keep up the fertility of the soil so as to supply the inhabitants with food, instead of being wasted and used for other purposes, as is now common. The sewage waters, after being treated with prepared clay, are found to

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contain in one hundred parts, ammonia half a grain, organic matters about five grains in 1000, and fixed salts two grains. When mixed with double the quantity of spring or river water, purified fluid sewage will support the life of plants, mollusca, fish, and insects, without giving off smell. It is superior to common sewage for irrigation; for although sewage irrigation is found to increase the produce, it often renders this produce coarse, and in certain states of the atmosphere it is accompanied, mornings and evenings, by offensive exhalations, and often throughout the whole day. Impregnating the soil with so large a quantity of decomposing solid and fluid matters may be detrimental to the health of man and animals. In certain states of the weather, when it is hot and the air dry, or in winter frosts, little smell is perceived. Sewage waters, after being worked with prepared clay, are not subject to such disadvantages; and if purified to their highest point they are made fit for watering streets. When not pure, if it be confined or bottled up in reservoirs, decomposition will take place, and sulphuretted hydrogen gas be evolved, which, with the ammonia, will destroy fish, plants, and produce unpleasant smells. In streams, fish are often destroyed in large numbers from this cause. The heavy sewage in dry weather being deposited in the deeper parts, there in the same way decomposes, so as to form poisonous gases, ready to be set free, and mixed with the waters of the stream in the first flood, and thus to poison all animal life. Small floods, from having a greater quantity of poisonous gases in their water, are more destructive to fish than floods during wet weather and heavy rains, when the putrid sewage is greatly diluted. In a short time a more complete examination of the tail water will be obtained. The sewage waters, even when the men are engaged in dredging in the first division of the tank, flow clear and free from smell and taste into the culvert. The advantages of the above plan of treating sewage would be, that the towns would obtain a fair remuneration for their solid sewage, and have the sewage waters deodorised, and be relieved of all the sewage evils. The proposition of the Royal Commission would thus be carried out, "that the refuse matters of towns should be returned to the land;" for the solid parts of the sewage would be used for manuring high and arable lands, and the clear sewage water for irrigating low land. In experimenting with deodorants upon sewage and putrid matter in the year 1859, my attention was called to the appearance of flocculent and globular forms of fungi appearing in water containing sulphuric acid, or alum or sulphate of iron and alum. Some of these specimens were given to my friend Dr. Wilson, who examined them with the microscope, and favoured me with a photographic drawing of the plant. The same growths are observed in water containing organic matter and sewage, or something of the same appearance. During the colder months of the year, from September to the end of March, these growths are attached to stones, sticks, old water in streams in places where sewers or drains enter. The sides of sewers, tanks, and drains are coated with them, and they are attached to most floating and suspended bodies in sewage tanks. The size of the fungus varies considerably in length and circumference, from that of a small seed to several inches; and its colour passes from a light drab to a complete black. Attached to a piece of adipose or other organic matter, it grows in long filiform flocculent lengths. Sometimes the larger pieces present the appearance of an old wig. It varies greatly in size and form. When touched and broken up, it emits an offensive smell. It disappears in the summer months, when water contains its minimum quantity of sulphuretted hydrogen and other offensive gases; but it increases and flourishes most during the cold months of the year, when the sewage is most loaded with putrid gas, and does not smell offensively. This is the plant that fills up filters and screens, and creates the chief difficulty in filtering sewage. It seems to have the property of purifying sewage waters, by absorbing the offensive gases. It is only present in water containing animal organic matters, but it is absent from pure spring and distilled water.

ON THE SANITARY AND ECONOMICAL ASPECTS OF THE SEWAGE QUESTION.

By Dr. A. Hill.

Dr. Hill (Borough Analyst) stated that his attention had been drawn to this subject by examinations he had made of the well and river water of Birmingham and the immediate neighbourhood. After many examinations, he considered that the water in question was generally contaminated with foreign matter, frequently organic matter, and resulted, as he believed, from the present system of sewage removal. The subject was not strictly a chemical one, and he scarcely knew if he did right in making this communication to the Chemical Section. Samples of water of the town yielded various quantities of solid matter, varying, in fact, from 12 grains per gallon, to 30, 40, or even in one instance 260 grains per gallon. The principal constituents of the solid matter were salts of lime, magnesia, and soda, together with organic matter. He had not used the permanganate test for organic matter, but adopted the usual process of incineration, and found that his results showed in some instances the presence of 63 grains of organic matter and volatile salts per gallon. In the course of the process large quantities of nitrous fumes were evolved. With respect to rivers, he had examined the waters of two rivers near where they united. Sewage matter entered one of them near their junction; and he was enabled to ascertain the effect of sewage matter upon the water. Before the entrance of the sewage he found 1·3 grains per gallon of organic matter, and after admixture he found 12 grains of organic matter. It appeared to him a strange thing that we should pollute our streams and wells in this manner with sewage matter. In the ordinary water-closet system solid excrementitious matter was first mixed with pure water, and this was afterwards carried to rivers, polluting the contents of those rivers, and much attention had been given to means of again removing the excreta so as to get back the pure water. This seemed to him a mistake, and he argued that the present water-closet system was entirely wrong, and that we ought to resort to the old method of cesspools, and then have the solid matters removed direct to and laid upon the land.

ON DETERMINING CARBONIC ACID IN AIR.

By Dr. Angus Smith.

Dr. Angus Smith described a new apparatus for determining the quantity of carbonic acid in the air. The apparatus consisted of a bottle, in which one tube passes nearly to the bottom of the bottle, and through which the air to be tested is passed, while the other serves merely as an exit tube; the bottle being filled with a given quantity of baryta water, air is forced through the baryta water until a certain density of precipitate is produced. The quantity of carbonic acid will evidently be measured by the quantity of air forced through, in order to produce a precipitate of the same density. The quantity of air forced through the baryta water is measured by a very simple contrivance. A ball of india-rubber, similar to a child's ball, is connected with the tube dipping into the baryta water. If the ball be squeezed in the hand the whole of the air it contains will be forced through the water. By repeating the process a second ball full of air may be sent through the water. With practice the quantity of air sent in one operation is constant, and by noticing the number of "ball-fulls" of air required to produce the standard precipitate, the quantity of carbonic acid is determined. An arrangement of valves enables the operation of forcing the air through the water to be readily and continuously performed. This method was extremely convenient for determining the state of air in rooms, coal mines, etc., and enabled one readily to judge of the efficiency of ventilation.

Dr. Miller said that the process of Dr. Angus Smith did not at first sight appear to possess that accuracy which was desirable in chemical operations, but he was assured that with practice a great degree of accuracy could be attained.

Dr. Russell inquired how the absolute amount of carbonic acid was determined, to which Dr. Smith replied that it could be done by determining the amount of carbonate of soda required to produce a precipitate of a certain degree of density in a solution of chloride of barium.

(To be continued.)

ARMY SURGEONS.—The following return, lately furnished to the House of Commons, tells its own tale. The Assistant-Surgeon now entering her Majesty's service has, at the present rate of promotion, no chance of reaching the grade of Surgeon. The length of service allowed is twenty-five years, whilst, if promotions go on as at present, a man must serve forty years before his turn can come:—Return showing number of Assistant-Surgeons at present in her Majesty's service, exclusive of the Indian army: 738. Return showing number of Assistant-Surgeons promoted to the rank of Surgeon during the last three years: Year ending March 31, 1863, 16; year ending March 31, 1864, 19; year ending March 31, 1865, 20.

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REVIEWS.

The Principal Baths of Switzerland and Savoy; with Notes of some Swiss Mountain Resorts. By Edwin Lee, M.D., etc., etc. London: John Churchill and Sons. 1865. 8vo. Pp. 138.

The Swiss baths differ from those of Germany in being generally in a more elevated situation and a purer atmosphere. They differ also in being less fashionable, less sophisticated, more dependent on their own natural attraction, and less upon artificial aids. Further, they are more economical, and this monetary element has often a good deal to say when the momentous question of choosing a spa comes upon the *tapis*.

Aix les Bains is tolerably well known in England as a hot sulphur spring, not unlike its namesake—Aix la Chapelle. Like it, it is useful in old rheumatic cases, with swelling of the joints, thickening of the synovial membranes, etc., in secondary and tertiary syphilis, in skin diseases requiring stimulation, and in a number of allied affections. There is nothing peculiar about the water of Aix les Bains.

Challes, which is not far from Aix, produces water which is still more sulphurous, and which has got a certain reputation in cases of chronic catarrh, laryngitis, and laryngeal phthisis.

St. Gervais will one day become more fashionable than it is at present. Picturesquely situated, enjoying an atmosphere peculiarly healthy and dry, and producing mineral waters certainly more than averagely useful, St. Gervais may reasonably expect one day to enjoy the favour and the attendant fortune which has as yet only been given to her German sisters. At present, however, living at St. Gervais is somewhat primitive, and fastidious people had better read Dr. Lee's account of its inconveniences before they leave their comfortable and reserved fatherland. The waters of St. Gervais are drunk and they are bathed in. Their peculiarity, according to Dr. Billaut, is that, although they are sulphurous, they contain a much greater abundance of muriates, sulphates, and bicarbonates than they do of sulphuret of lime and free hydrosulphuric acid.

Dr. Hardy, of St. Louis Hospital, in Paris, has long praised the action of the St. Gervais waters in curing "eczema in patients who present no sign of scrofula." Again, the waters are useful in that complex state known as abdominal plethora and in throat relaxation, but in scrofula they have little power, as their sulphur impregnation is so slight.

Saxon is a bathing establishment situated in the open part of the Rhone Valley. Mr. Henry, the distinguished French chemist, in speaking of it, said:—"This bath will one day take rank with the first mineral waters in the world." The water of Saxon is richer in iodine and bromine than any other natural mineral water. In this respect it far exceeds Kreuznach. "A bath of 300 litres of Saxon water presents the large quantity of thirty-three grammes of pure iodine and nine grammes of bromine." As we should expect from its composition, the water of Saxon is found eminently useful in scrofulous and in old syphilitic diseases, and in those chronic hypertrophies and enlargements which are the despair of the accoucheur and the torment of the patient. In scrofula, particularly, Saxon has done good. Dr. Lee tells us:—"I think that in general Saxon would be best suited to those patients who are affected with the erethetic or less torpid form of the disease, while in those cases which present an opposite character, a more powerful stimulus by means of strong saline waters is more particularly indicated."—(P. 40.)

The waters of Leuk, or Löëcke are saline, and are found useful in many forms of skin diseases, in neuralgic rheumatism, and in cases where a powerful derivative action to the surface is indicated. The water is hot, and is chiefly used for bathing, which generally is a public operation. "Some patients go into the bath (each clad in a flannel bathing-gown) as late as five o'clock. In the water are small floating tables to hold handkerchiefs, books, glasses, etc. . . . Imagine thirty people, of different age and sex,—children, young ladies, old men, laymen, military men, ecclesiastics, etc.,—all immersed in the same bath, having only their heads out of the water, some gravely seated with their eyes turned heavenward, appear to be in a profound reverie, others forming groups in animated conversation." Leuk is situated 4000 feet above the level of the sea, and even in summer is often very cold, both in the morning and in the evening.

In the midst of the most majestic Alpine scenery, in the highest permanently inhabited locality in Europe, in a district possessing the finest flora in Switzerland, in the beautiful valley of the Engadine, arise the springs of St. Moritz and Jarasp.

At such an elevation the season for drinking and bathing in mineral waters is necessarily a very short one, being restricted to the warmest months of the year. The St. Moritz waters have an analogous action to the more powerful chalybeates. "They generally produce an increase of appetite, promote digestion, and impart a feeling of vigour to the system." When taken internally, they increase the renal secretion and facilitate the action of the bowels when the inactivity is due to want of tone.

The waters are more stimulating and exciting than others of the some class situated in the lowlands. Probably much of their effect is due to the dryness and stimulating nature of the healthy mountain air.

At Moritz there is capital accommodation, a good hotel with a reasonable tariff, a curhaus, and telegraphic communication with the lowlands. The chlorotic and those who, without having brought on serious organic disease, have, nevertheless, whether by mental or bodily excess, reduced themselves to a state of miserable hypochondriasis and anæmic dyspepsia, will probably find in St. Moritz the health which they have lost or squandered away.

Jarasp-Schuls, five hours' drive from St. Moritz, lies in the lower part of the Engadine valley. It produces three different kinds of water—the saline, the chalybeate, and the sulphurous.

The waters enjoy a great repute in Germany. Lebert, of Breslau, tells us that the saline waters are especially suited to the various forms of chronic gastric catarrh, indigestion with distension and heartburn. These are most beneficial "in the case of rather strong persons of a lymphatic temperament accustomed to an abundant and succulent nourishment," in whom frequent errors in diet have deranged the stomach and secondarily the whole process of assimilation. They are useful in intestinal atony, but cannot be given where the stomach is very irritable. Patients suffering from frequent affections of the biliary passages, or from enlargement of the spleen subsequent to intermittent fever, will get benefit, as will also many chronic vesical complaints.

We have made these few remarks to induce our brother Practitioners to read Dr. Lee's book for themselves.

During the next fifty years probably more advance will be made in the knowledge of the therapeutical value of mineral springs than has been made for the last 300 years, or than will be made for 150 years subsequently. Everywhere information is pouring in. Pamphlets and octavo volumes are being published, but, far better, Medical men are combining pleasure with profit by inspecting the spas for themselves. The tendency of the age is more and more to "throw physic to the dogs," if by physic be meant foully-smelling, horribly-tasting, greenish-yellow compositions of loathsome drugs. Railroads have brought Switzerland, France, and Germany within the reach of hundreds of thousands who a century ago would never have thought of leaving England for a day. On the Continent, perhaps, more than at home the great value of naturally mineralised water has been recognised. Patients know that others suffering from like symptoms to themselves have been cured by resorting to this or to that spring. If we do not anticipate them, we shall soon be left behind; if we do not lead them, we shall soon find that in one branch of therapeutics we are their inferiors.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

TURKEY.

Constantinople, September 8.

To all appearance we have arrived at the end of our cholera epidemic, for during the last week or so there have been only sporadic cases—viz., from thirty to forty per diem. We have thus at length got over two miserable months, and I may well say that at no previous time within men's memory have we ever had any epidemic of such exceeding violence. The number of deaths amounts to about 40,000, most victims belonging, as usual, to the lower classes. In the commencement of August the daily mortality was about 1500, and this ratio continued for eight or ten days. There are at present no

trustworthy official statements about the number of deaths, for the daily bulletins which were published in the political journals were more intended to soothe the troubled mind of the people than to give reliable information, and, therefore, do not deserve any consideration whatever; but even if people in official quarters wished to tell the whole truth, this would be impossible, since a large number—I may almost say about one-half—of the cases have never been reported.

The violence of the present epidemic cannot be explained at all by local causes, since previous visitations of the disease have, on the contrary, been very mild; thus, for instance, that of 1854 was scarcely worth mentioning when compared with the present calamity. This time the whole aspect of the case was different; a panic seized the whole population; everybody who could took to flight, some went to the country, others abroad, and, as is usual under such circumstances, the cholera followed and overtook those who had in vain endeavoured to escape from it. The city seemed to be depopulated; no business was done, all public institutions were closed, and even in the Government offices scarcely any work was performed. Funeral processions and transports of the sick were to be seen everywhere, and served to discourage even the boldest. I am thankful to say that all this is a thing of the past, and I will now endeavour to give you a short history of the epidemic according to the few reliable sources which have come to my knowledge.

There is not the slightest doubt that the epidemic was imported from Alexandria. The man-of-war *Makbiri-Surur*, a steamer which arrived here from Alexandria, put on shore twenty-one persons suffering from cholera on June 28 and 30. These were brought to the arsenal. Up to that time not a single case of cholera had occurred in Constantinople, and the general sanitary condition of the town had been excellent. On July 3 the first case of cholera was reported to have occurred amongst the marine soldiers, and since that time the number of cases in the arsenal, and in the men-of-war stationed before the same, increased from day to day. On July 10, numerous cases were recorded as having occurred in the quarter bordering on the arsenal, and which is called Kassimparha. This quarter now became the starting-point from where the gradual infection of the whole town took place. These facts have been placed beyond doubt by the investigations of the chief Physician to the Marine Hospital, Dr. Mühlig, who has taken the greatest care to ascertain the course and progress of the disease. From Kassimparha, in the Golden Horn, the cholera made a great leap to Jenikoy, in the Bosphorus; it then appeared in Haskay and Jenishehir, both of which quarters border on Kassimparha. It was then brought by fugitives to Kurkunshuk, on the Asiatic side of the Bosphorus; and the whole of Stamboul, Therapia, and Scutari were fearfully visited. In fact, no quarter was spared, even the Princes' Islands and the Asiatic coast opposite to them were invaded. In almost all these cases the infection could be traced directly to fugitives who had come from some of the focuses previously mentioned. As a rule, there were only very few cases in every such quarter for the first few days, after which, in a single night, countless victims fell as by one stroke of the Avenging Angel; then everybody took to flight, the dead were left unburied, and the sick were deserted by their relatives. For some days subsequently a few more cases occurred, and gradually such local epidemics seemed to burn themselves out. The same course which the scourge thus pursued in whole quarters of the city was also observed in single streets and houses. At first the disease is imported, there is a case or two, suddenly there is immense mortality, and then it gradually diminishes. A single case in one house was quite the exception; there were generally several, and in some instances the whole population of a house has literally been swept away.

The character of the epidemic was very severe throughout, since a large number of patients died within the first twelve or twenty-four hours. Premonitory diarrhœa only preceded the real attack by a few hours, and if the patients did not succumb in the algid stage typhoid generally supervened and carried them off.

From the very commencement of the epidemic the Turkish Government took, entirely of its own accord, very praiseworthy measures to stem its progress and to mitigate the misery of the lower classes of the population. The Grand Vizier, Fuad Pascha, called a general council of the members of the Quarantine Committee and the Profcssors of the Medical School, in which he presided, and which resolved that an extraordinary commission of public hygiene and salubrity should immediately be formed. This commission went to work at once; overcrowded dwellings were emptied, and part of the inmates ordered into tents and wooden barracks; the inhabitants were instructed by public placards how to protect themselves as far as possible from an attack; provisional cholera Hospitals were erected, and the speedy removal of poor persons who were attacked in the streets was looked to. All this, of course, without any regard to religion or nationality. For carrying out these measures Physicians were specially nominated for every quarter of the city; a number of assistants and a very liberal salary (6000 piastres per month) were given them. Medicines were distributed gratuitously amongst poor patients, and food was given to the most needy of the inhabitants. The Turkish Government did, in fact, more in this emergency than any government ever did under similar circumstances, and that at a time when the public treasury is much straitened. A shocking contrast to the efforts of Fuad Pascha and of the Commission, which was presided over by the indefatigable Dr. Sawas, was the part played by the Primate of the Orthodox Church; for the Greek Patriarch "skedaddled" at the first outbreak of the epidemic to the Prince's Islands, surrounded himself with a strict cordon, and remained deaf to the general cry for help and comfort which arose from his suffering faithful flock.

In this epidemic the Medical staff of the metropolis has suffered considerably, for no less than twenty-seven Physicians and Medical Assistants died in the midst of their work. The best known amongst these were Drs. Scandalides, Demetropoulos, Th. Zographos, and Caretto. *Sit illis terra levis.*

The quarantine regulations as they are at present carried out, not only in Turkey, but also in the rest of Europe, have proved utterly powerless to check the progress of the epidemic; and yet strict measures of this kind ought to be able to protect us from it; for it is an established fact that where there are no cholera patients nor anything which has come in contact with them, there will be no cholera. Thus, for instance, Greece, where the strictest measures against its importation have been taken, still continues free from the disease, in spite of the considerable immigration into that country of fugitives from Turkey. In the South of Italy the authorities refuse admission to any persons coming from places infected by cholera. In Messina the steamer coming from the East is greeted with cannon-shot if it approaches too close to the shore. Such proceedings appear to be entirely justifiable. It would, indeed, seem to be high time that the European governments should come to a concert as to decisive measures to be taken against the export and import of the epidemic. All the last visitations of the disease have proceeded from Mecca, from whence they were carried onwards by the returning pilgrims. Cholera places should therefore be surrounded with a strict cordon, and passports for abroad should be refused as long as cases still occur in such localities. The existing quarantine laws certainly require a sweeping alteration. To mention only one point, I may say that the rule which is now generally followed—viz., to subject ships coming from cholera places to a five days' observation—is arrant nonsense. I believe that on account of the advanced season of the year England will at present be spared the visit of this disagreeable stranger; but it would be culpable neglect if you did not do all in your power to prevent its rise amongst you next year.

LIVERPOOL.

SEPTEMBER 22, 1865.

IN spite of the heat, which has been of such intensity as to make one sympathise with the individual who expressed a desire "to slip off his flesh and sit in his bones," the health of the town has of late improved, and instead of the high mortality of the first half of the year, the death-rate has now come down to below the average of the past ten years. The cattle disease has excited lately far more attention than any human ailments, and measures have been taken by the appointment of inspectors, etc., to prevent its introduction among us. A general inspection of all the "shippons" in which cows are kept here has resulted in a report to the Health Committee, stating that, though some are well accommodated as regards cleanliness and ventilation, the majority are very badly provided for. It is to be hoped that our present difficulties may result in some improvement in the board and lodging of that large number of cows who are condemned to a town residence, and from whom so large a proportion of town milk is supplied. The authorities, happily,

seem disposed to deal promptly with cases of the attempted sale of unhealthy meat. I hope they may be successful in suppressing a practice of which an instance occurred last week —viz., that of sending the carcase of a diseased animal to a slaughter-house, "to be made the best of," *i.e.*, to be sold for meat if the Inspector does not pounce upon it. In the case I refer to, a carcase had been sent "to be made the best of," which, when brought under the notice of the Officer of Health, was pronounced to have died from the cattle disease. The owner strenuously denied that there had been any symptoms of the disease; but the magistrates directed that a summons should be taken out against him. I am told that dogs and cats are beginning to become victims to the prevailing epidemic; but I do not know that a considerable mortality, especially among the latter, would be considered an unmixed evil. To turn again to our own species, I am glad to say that, so far as I know, the Medical condition of the town is most uninteresting. There is, of course, a certain amount of diarrhœa; but I have neither seen nor heard of more than is always expected at this time of year. In several cases of this sort that have come under my notice the attack was ascribed to the patients' having eaten veal pie. I do not know that I should have thought much of this had it not been that several cases occurred in one family, and really seemed fairly ascribable to the assigned cause, since some who were absent from dinner escaped, while all who partook of the pie suffered more or less from vomiting and purging. In this case the pie had been made at home, the meat and all the other materials were known to be good, and in the others the same appeared to be the case. I remember a case here some years since in which as many as sixteen people who had eaten some of a game pie were affected, in varying degrees of severity, with vomiting and purging, and one little boy, whom I attended, was so bad that for a time his life was despaired of. Every inquiry was made to ascertain whether any of the so-called "Canadian partridges," which have been known to prove poisonous, had been used in it; but it seemed that such was not the case, that the game was thoroughly good, and the pie made at the best place in Liverpool. There certainly is something for us to find out as to the development of deleterious principles in flesh, apart from what may be due to putrefaction. A curious cause for lead colic was mentioned to me by a Medical friend the other day. A gentleman who had been eating a good deal of game was attacked with that form of colic. A smart purgative was administered, a considerable number of small shot came away when the medicine acted, and the colic ceased at once.

Our late autumn assizes furnished one Medico-legal case worth notice in reference to the responsibility of those who commit crime under the influence of delusions induced by drunkenness. A man, named Harriman Burns, who had been in the habit of indulging in prolonged "sprees," usually terminating in attacks of delirium, got, at the end of his last one, a delusion that his wife was robbing him. He threatened her, as he had often done before, and she unfortunately thought that as his violence had ended in words before, so it would again. In a paroxysm of fury he seized a knife, and before assistance came his wife lay mortally wounded by his hand. His counsel pleaded that he was utterly unconscious of the crime that he was perpetrating; that since his committal he had grown grey with remorse and horror at the thought of it. The judge ruled that, though a drunken man who commits a crime, not knowing what he does, is legally responsible for it, yet that a man who has by drink induced a fixed delusion under the impulse of which he commits a crime must be dealt with as a criminal lunatic. The prisoner was therefore sentenced to be confined during Her Majesty's pleasure. I must say that the difference between the condition of a man who has been drinking for a night, and is raging like a wild beast, and that of another who is in a more savagely wild-beastly condition after a week's debauch, is one of degree, and not of kind. The first is mad drunk; the second is drunkenly mad. It is probable that if the present free trade in licences is persisted in by our magistrates, we shall have only too many examples such as that I have just referred to. The convictions for drunkenness had been diminishing for some years up to 1861, when it was resolved to grant a licence to every respectable person who asked for one. The consequence was, that in 1862 the convictions ran up from 9800 in the year to 12,780, and for the last four years the average has been 13,498. A public meeting was held to consider the matter, and the result is that a petition is in course of signature, praying for some authoritative exposition of the present licensing law and for some fresh legislation on the subject if it be found necessary.

About four years ago I mentioned in one of my letters the opening of a "Turkish bath" here. For some time I do not think that it was much used, at any rate for Medical purposes; but gradually it has come more into vogue. In several cases of phthisis it appears to have been of great service. The most striking instance of this which I know was in the case of a Medical man who had spent the winter of 1863-64 in the south of France, and returned in an advanced stage of phthisis. While in a state of great weakness he commenced the use of the bath, and continued it almost daily for three months. He generally, after having become accustomed to the bath, used to pass at once into the hottest room, and after remaining there, to go straight to the cold douche. At the commencement of this treatment he could not walk a quarter of a mile; after it he was able to walk several miles and to resume his Professional work. I can speak personally as to its good effect on a very obstinate sore throat. It is curious, however, to notice how differently it affects different persons; some, as in my own case, feeling refreshed and comfortable after the bath, even from the time of first using it, others feeling generally exhausted and sleepy after it. I have not heard of any worse effect than this, and I think that the hot-air bath will yet gain a more important place than it now occupies among our means of cure, especially where its advocates abstain from vaunting it as a panacea.

It is not often now that we meet with objectors to vaccination, but in the *Liverpool Mercury* a few days since there appeared a letter from a gentleman whom the Kendal Board of Guardians had threatened to fine for not having his child vaccinated, in which he asserts that he will rather be fined than have his son vaccinated with any virus the whole history of which he does not know during the period that it has been transmitted from one human being to another. He would not, however, object to matter straight from the cow were it not for the present epidemic; and, in reference to cow-pock, he states that, of late years, the disease has become extremely rare among cows. He deduces from this the conclusion that, after all, vaccination may not have done much towards the diminution of small-pox, but that the reduction in the amount of the disease may be spontaneous. The conclusion is sufficiently absurd; but it would be interesting to know whether there be any foundation in fact for the assertion that cow-pock, properly so called, is disappearing.

GENERAL CORRESPONDENCE.

THE PROGRESS OF SURGERY IN EDINBURGH.

LETTER FROM PROFESSOR SPENCE.

To the Editor of the Medical Times and Gazette.]

SIR,—Having been absent from Edinburgh for a short time, I have not until recently read the "Address on the Progress of Surgery" delivered by Professor Syme at the meeting of the British Medical Association at Leamington. That address will very naturally be considered by many as representing specially the progress of Surgery in Edinburgh, where Mr. Syme has so long been a distinguished teacher; but there are certain statements and omissions of my colleague which are so liable to lead to misconception in regard to the progress and present state of Surgery in Edinburgh, that, as Professor of Surgery in its University and one of the Surgeons of its Royal Infirmary, I must claim to be heard on a few points.

First, then, I trust the Profession in England will believe us to be more conversant with the views of Percival Pott respecting senile gangrene than that we should suppose him to have pointed out the impropriety of stimulants in the form of local applications only, as the statement of Mr. Syme might imply. We know that Mr. Pott also pointed out the impropriety of exhibiting Peruvian bark, and advocated a soothing plan of constitutional treatment by the use of opium, etc., in senile gangrene, and when he laid down these general principles, "whatever heats, irritates, stimulates, or gives uneasiness appears to me alwaysto increase the disorder and to add to the rapidity of its progress; and, on the contrary, I have always found that whatever tended merely to calm, to appease, and to relax, at least retarded the mischief, if it did no more;" he left but little, if anything, to be added in the way of improved treatment.

Passing to the subject of amputation, Professor Syme men-

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tions that after trying different methods at the lower part of the thigh, he had employed the modified circular plan till a comparatively recent period, when he felt great pleasure "in adopting the important principle which had been established by Mr. Teale, of Leeds, and Mr. Carden, of Worcester, that a long anterior flap is not liable to retraction, so that it may be safely trusted to cover the end of the bone." But although Mr. Syme has only recently resorted to this principle, amputation by a long anterior flap at the lower part of the thigh had been practised for some years by all the other Surgeons of the Edinburgh Royal Infirmary. For what are the facts? Within a few weeks after Mr. Teale's work appeared, I performed amputation of the thigh by his method in several cases, following his directions most scrupulously. I then saw that I could, as I believe, obtain all the advantages of Mr. Teale's plan by simply cutting a large rounded flap composed of skin and muscle from the anterior aspect of the limb, dividing the soft parts on the posterior aspect with a circular sweep of the knife, a little below the level of the base of the anterior flap, and clearing the bone somewhat higher up before sawing it through. The results of cases of amputation by Mr. Teale and my own method were published in my Clinical Reports for 1858-9 and subsequent Clinical Reports, and a communication read before the Medico-Chirurgical Society of Edinburgh, together with the discussion which ensued, will be found at page 955 of the *Edinburgh Medical Journal* for 1862-3. Professor Lister, of Glasgow, who had opportunities of seeing the results of my amputations when he was one of the Assistant-Surgeons of the Royal Infirmary, adverts to it in his article on amputation in Holme's "Surgery." I had shown Mr. Syme the results of some of the cases in the wards; and, as I have said, it was practised as the general method by all the other Surgeons. Yet, it is only very recently that Mr. Syme has adopted the long anterior flap method; and, so far as I have seen or can learn, neither by the rectangular flaps of Mr. Teale nor the long skin flap of Mr. Carden, but by a flap identical with that which I introduced and had long practised.

Again, when speaking of the excisions of joints, a department of Surgery for which Professor Syme has done so much, we should naturally expect some notice of any improvements in the methods of operating. Up to the year 1859 the method of excising the elbow-joint by means of the H incision, recommended by Mr. Syme, was that uniformly adopted in the Edinburgh Royal Infirmary, until, having seen the results of the operation, as performed by Professor Langenbeck, of Berlin, by a single longitudinal incision on the posterior aspect of the joint, I tried it in several cases, and its advantages were so evident that it is now almost constantly practised here by Mr. Syme, as well as the other Surgeons of the Hospital, yet he takes no notice of the change. I am glad to see, however, that Mr. Syme has now adopted the internal or anterior-longitudinal incision for removing the head of the humerus, the mode of operation recommended by Langenbeck and also by the late M. Baudens, whose great success in military practice did so much to establish the operation and the mode of operating.

In regard to tracheotomy, whilst Mr. Syme alludes generally to the better results now obtained, he is silent as to a very important advance in Surgery within the last fifteen or twenty years: I mean the performance of tracheotomy in cases of ordinary and of diphtheritic croup. In this country, where croup is so prevalent, although the operation has been occasionally resorted to, it had proved so unsuccessful that the nature of the disease was supposed to contra-indicate its performance, and it had been altogether abandoned until the labours and success of MM. Trosseau and Guersant, of the Children's Hospital of Paris, re-established it as a regular operation of Surgery. In very few places has it been more frequently performed of late years than in Edinburgh, and the success which has attended its performance both here and in Glasgow ought to have given "this life-saving operation" a more prominent place in an address on the Progress of Surgery by the Professor of a Scottish University.

Reviewing the different methods of treating stricture of the urethra, Mr. Syme speaks of Mr. Holt's plan of treatment in such a way as to convince me that he has not given that method a very extensive trial, nor does he seem to be aware that in the practice of the other Surgeons of the Edinburgh Hospital it has almost entirely superseded the perineal section and other modes of treatment. I confess that I was prejudiced against the method, and having practised the perineal section very frequently, and found it a comparatively safe and efficacious plan, I was not inclined to change it hastily for any other. Having now, however, had considerable experience of both methods, I have no hesitation in giving the preference to Holt's over any other method of treatment. I had used it of late in very bad old strictures, complicated with perineal fistula, with perfect success, and in some of which perineal section had been previously performed, and I now only resort to perineal section in cases of stricture where abscess is forming in the perineum, or where infiltration of urine has supervened. I state this as my own experience, and, I believe, that of my colleagues, Drs. Gillespie and Watson, is similar. Professor Syme complains with justice of the opposition which his plan of perineal section for stricture met with in many quarters. Should not his own experience have made him more chary of bringing mere conjectural objections against the method proposed by Mr. Holt, until he had given it a fair trial? when, I think, he would scarcely have spoken of it in the way he does.

I have confined my remarks specially to those subjects in practical Surgery in regard to the present state of which, in Edinburgh, it seems to me that Professor Syme's Address might mislead. Had the Professor promised that he only intended to give an account of his own progress and practice, I should not have considered it necessary to have taken any notice of his address; but an address on the progress of Surgery is something more, and involves very specially the interests and character of the school with which the giver of the address is connected. I am, &c.

JAMES SPENCE,
Professor of Surgery, University of Edinburgh.
21A, Ainslie-place, Edinburgh, August 30.

IRVINE *v.* WILSON AND ANOTHER.

LETTER FROM MR. A. B. STEELE.

[To the Editor of the Medical Times and Gazette.]

SIR,—I hope you will allow me to correct a mis-statement affecting me personally which appeared in a legal report headed "Irvine *v.* Wilson and another," in your issue of the 23rd inst.

I am there represented to have said that I "would only charge 2s. 6d. for passing a catheter"—a statement which I certainly never made, and which I desire to affirm is quite at variance with my opinions and practice. I have always considered 10s. 6d. a reasonable and proper charge, and have never, I believe, received less—indeed, I should be disposed to make no charge at all rather than accept a lower fee, unless under very exceptional circumstance. My name having been, without my knowledge or consent, imported into this case, I wish to observe that, assuming the report to be correct, statements were made by the witnesses on either side in which I could by no means have concurred.

I am, &c., A. B. STEELE.
Liverpool, September 25, 1865.

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, September 21, 1865:—

Robert Wood, Uttoxeter, Staffordshire; James Wm. Horsfield, Sunderland; Richard Saml. Purnell Griffiths, Cheltenham; John Edward Tilton, Stonehouse, Glo'ster; Thos. Edwd. Gaggs Bywater, Knottingley, Yorkshire.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ASPINALL, Mr. G. J., has been appointed Dispenser to the Bridge-street Workhouse, Manchester.

BAYLEY, JOSEPH, M R C.S. Eng., has been appointed Resident Medical Superintendent to the Northampton General Lunatic Asylum.

BRAIDWOOD, P. M., M.D., has been appointed House-Surgeon to the Cumberland Infirmary, Carlisle.

CRAVEN, ROBERT M., M.R.C.S. Eng., has been appointed one of the Lecturers on Anatomy and Anatomical Demonstrations at the Hull and East Riding School of Medicine.

KING, KELBURNE, M.D. Edin., has been appointed Lecturer on the Principles and Practice of Surgery at the Hull and East Riding School of Medicine.

MACPHERSON, SAMUEL HYDE, Surgeon, has been appointed Resident Medical Superintendent of the Borough Lunatic Asylum, St. Augustine's, Norwich.

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RAYNER, HENRY, M.R.C.S. Eng., has been appointed Resident Medical Officer to the Islington Dispensary.

WOOD, Mr. F., has been appointed Dispenser at the Cheltenham Workhouse.

DEATHS.

BROWN, ALEXANDER, M.R.C.S. Eng., at Heathfield, Streatham, on September 21.

FISHER, HENRY, M.D., at Hillhead, Dunkeld, N.B., on September 21, aged 75, late of the 7th Royal Fusileers and 63rd Regiments.

FITZPATRICK, FRANCIS, L.S.A., at 27, Upper Lisson-street, Paddington, on September 25, aged 65.

HEWITT, JOSEPH, M.D., at Heath Lodge, Iver, Bucks, on September 25.

HOLLAND, THOMAS B., M.R.C.S. Eng., at King-street, Salford, Manchester, on September 13, aged 39.

ROBERTS, J. THOMAS, M.R.C.S. Eng., at New Romney, Kent, on September 16.

WINBOLT, SAMUEL, Mr., late of the Bengal Medical Establishment, at 18, Pelham-crescent, Brompton, on September 25, aged 63.

WRIGHT, HENRY, M.R.C.S. Eng., at March, Cambridgeshire, on September 19, aged 50.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bridlington Union.—Mr. Bagley has resigned the Third District; area, 20,995; population, 3135; salary, £25 per annum.

Cardigan Union.—Mr. Mathias has resigned the Workhouse; salary, £10 per annum.

Leeds Township.—The Third District is vacant; area, 541; population, 26,582; salary, £80 per annum.

North Witchford Union.—The Second District is vacant; area, 10,628; population, 2712; salary, £40 per annum.

Taunton Union.—Mr. Whitgreave has resigned the Second District; area, 8261; population, 8863; salary £80 per annum.

Wrexham Union.—The Fourth District is vacant; area, 15,941; population, 3299; salary, £25 per annum.

APPOINTMENTS.

Boston Union.—William C. Hine, M.R.C.S.E., L.S.A., to the Swineshead District.

Ecclesall Bierlow Union.—Frederick A. Willington, M.R.C.S.E., L.S.A., to the Workhouse.

Epsom Union.—Arthur Stedman, M.R.C.S.E., L.S.A., L.M., to the Great Bookham District.

Stourbridge Union.—Robert L. Bayley, M.R.C.S.E., L.S.A., to the Second Oldswinford District.

West Ward Union.—John M. Fothergill, M.D. Edin., L.R.C.P. Edin., M.R.C.S. Edin., to the Morland District.

Worksop Union.—Frederick J. Wells, M.R.C.S.E., to the Blyth District.

Yeovil Union.—Joseph D. Adams, M.R.C.S.E., L.S.A., M.D. St. And., to the Fourth District.

ROYAL COLLEGE OF SURGEONS.—One of our contemporaries having inserted notices respecting the registration of students at the forthcoming Session, calculated seriously to affect their position, and having repeated the erroneous information last week, the Secretary of the College has issued a notice from which we extract the following:—"A report having been circulated through the medium of one or more of the Medical journals that, in consequence of the registration of students about to be commenced by the Branch Registrars of the General Council of Medical Education and Registration, students would not in future be required to register at the several Licensing Bodies included in Schedule A of the Medical Act, I have to acquaint you that, as far as this College is concerned, there is no foundation whatever for this report; but that candidates for the Diploma of Member of this College, studying in the Medical Schools and Hospitals in London, will have to attend personally and register at this College both at the beginning and end of the ensuing Winter Session, 1865-66. The first registration will commence on Monday, the 2nd of October, and will terminate on Monday, the 16th of that month; and the second registration will commence on Thursday, the 22nd of March, and terminate on Saturday, the 31st of March."

THE Library and Museum of the College of Surgeons will be re-opened on Monday next.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

W. A.—We are not aware that any permanent injury has been done to the hair.

Mr. Alfred Whittle's letter shall appear next week.

Erratum.—In page 353, "In Memoriam," by Dr. Bashnan, 11th line of 6th stanza, *for* "rest," *read* "set."

PARALYSIS AGITANS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can any of your readers favour me with what is known of the pathology of Paralysis Agitans? I am, &c. INQUIRER.

GRIFFIN TESTIMONIAL FUND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscriptions have been further received on behalf of the above fund, which will be closed on October 31 proximo:—Dr. Cuolahan, Bermondsey, 10s. 6d.; Dr. W. Sanders, Gravesend, £1 1s. Amount previously announced, £127 11s. 9d. Received at *Lancet* Office, £9 9s.

I am, &c.,

ROBERT FOWLER, M.D., Treasurer and Hon Sec.

145, Bishopsgate-street Without, September 28, 1865.

PAU AS A WINTER RESIDENCE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having read a work published in England on the "Climate of Pau," in which it is stated that the Pau season commences on September 1, and wishing to make myself acquainted with its reputed sanative properties as a winter residence for invalids, I was induced to put myself *en route*, and arrived at the "El Dorado" on or about the last day of August. Now, first, as to the journey. I believe the heat so early in the year will be found very exhausting to an invalid of any sort. After remaining here a fortnight, I was surprised to find the English population—stated in the above work at several hundred families—to be reduced to an imperceptible minimum, the English church itself, about which so much is said in the above work, being shut up. Every English person, man, woman, and child, that could crawl out of the place had done so several months ago; nor am I surprised at this, for the heat here is something fearful, the prevailing characteristic, as stated in the above valuable work, being a total absence of all air or wind, and the sun's rays, being uninterrupted by a cloudless sky, are scarcely bearable. Now, I am fond of warm weather, and, having spent several summers at Gibraltar and Corfu, tolerably able to bear heat; but I never felt anything like the same here this the first month of the "quasi" season; the insects, such as fleas, cockroaches, and gnats, that swarm everywhere, would be a serious injury to a delicate and susceptible invalid. From a conversation I have had with a most intelligent French family here, I am assured that the cool weather (the so-called season) does not commence before the middle or end of October; and I should strongly advise any invalid meditating a "winter" here to give Pau a wide berth until then. The dust and the noise in the streets are "désagrémens" too common and too trifling to be mentioned. "Hospitalité meublée" is terribly dear, and provisions at hotels about double the price in England.

When the winter comes and is over, if I am spared, I will give you my "experiences," by which time I suppose I shall have seen some of the several hundred English families who are now distributed amongst the "Eaux Bonnes," "Eaux Chaudes," and Biarritz.

I am, &c.

CHARLES R. MAXWELL, Licentiate of the Colleges of Physicians of London and Edinburgh.

No. 12, Rue du Lycée, Pau, Bas Pyrénées, France, Sept. 19.

RUPTURED PERINEUM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your last week's number I observed a case of ruptured perineum. Now, if you will kindly grant me a very little corner of your paper, I will make a few observations on that subject.

Prevention is better than cure. The accoucheur ought to strive by every means in his power to prevent such a serious accident; and for this purpose he has at his disposal not only supporting of the perineum, which is regularly done, but he has also perineal incision. In the French and Belgian schools in which I have studied, this was always had recourse to whenever the perineum was too narrow to give passage to the head of the fœtus, and, distending, threatened to rupture. Amidst contending procedures, that of Paul Dubois was preferred, and the vulva *debrided* by two oblique lateral incisions on the perineum, the length of these incisions being in relation with the volume of the head and the narrowness of the vulva. Tearing of the centre of the perineum is to be avoided at any price. These incisions offer no danger; any slight hæmorrhage stays rapidly and spontaneously. We can continue these incisions as the labour demands, if we have not made them long enough at first. In general, these incisions, which seem large when the parts are swollen, are greatly reduced when the labour is over, and it is only exceptionally we need to unite them by suture. The reunion is immediate.

As to the little operation itself, there is no manner of difficulty. We slide a grooved conductor betwixt the head and the perineum, and we incise therein with a bistoury, or we simply use the scissors.

I have not seen this practice mentioned in any English obstetrical work which I have read, and having spoken about it recently to some excellent Practitioners hereabouts, they were inclined to condemn it; but I have seen it put into execution frequently with the best results; it is commended by the highest Continental authorities; and certainly the first time I have a case of labour with narrow vulva and resisting perineum, which distends and threatens to give way during the disengagement of the head, I shall not hesitate to employ the two oblique lateral incisions, and thus prevent a most grave accident, always difficult to cure, and sometimes incurable. I am, &c.

W. PRATT, M.D., Docteur en Accouchements of the University of Liege.

Bervie, N.B., September 25.

THE MEANS OF CHECKING CONTAGIOUS DISEASES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The "Rinderpest" is among our cattle, and we are expecting the advent of the "Asiatic cholera." Now I cannot help thinking that much precious time is being lost in thinking, writing, and talking about the causes of these diseases. The causes of all diseases are obscure; those of epidemics absolutely unknown. If asked what causes measles, scarlatina, or whooping-cough, the Physician answers a "specific contagion;" but of the nature of this poison, or how originally produced, he knows nothing. The cause even of the "potato disease" is still a mystery. No chemistry and no microscopy has yet discovered the nature of the "specific contagions," and perhaps never will. To look for this unknown quantity is very like seeking for the philosopher's stone or the elixir vitæ. Nor, indeed, is there any great necessity for making this discovery. Astronomy and geology are not useless sciences because the astronomer is ignorant

of the composition of the heavenly bodies, and the geologist cannot tell how matter was created. Neither is Medicine a helpless art because it knows not how specific poisons are generated. The Homœopathist, it is true, professes to be acquainted with the causes of all diseases, and to be able to produce them at will, his favourite aphorism being "*similia similibus curantur*;" but this is only one of a number of similar professions having no foundation in fact. If quinine has a curative effect upon ague or intermittent fever, it is not owing to a knowledge of the nature of the poison that produces this fever, which is said to be a miasm that arises in certain damp localities; of the nature of this miasm we are profoundly ignorant. Let us, then, cease to pursue this "*ignis fatuus*," quit the speculative for the practical, and turn our attention to the cure of these diseases and the prevention of contagion. The method of cure varies, of course, with every case, and can only be conducted on general principles, there being no specifics. Upon this subject I shall not here enter, but at once proceed to make some observations upon contagion.

All conditions and circumstances that conduce to health are, it is self evident, desirable; but in the present state of society there is small chance of the poor being able to command all that is necessary to their well-being. Diet, cleanliness, pure water, and proper drainage should by no means be neglected; but, in my opinion, in the presence of an epidemic, the essentials are separation of the sick from the healthy and dilution of the poison, whatever that may be. Disinfectants are of very secondary importance, for the nature of contagious miasmata being unknown, it is impossible to know certainly what will neutralise them. Destroying an unpleasant smell is no proof that the poison is destroyed. Too often the only result is the substitution of one unpleasant smell for another equally bad or worse. Although we have but a very imperfect knowledge of the mode in which these diseases are generated, we are sure that, when generated, they are capable of being communicated with great facility by personal contact with the sick or by means of an effluvium arising from the body of the sick, and the poison may enter the blood either by inoculation or through the lungs, the skin, or the alimentary canal. We are also sure that the intensity of the poison will be directly as the number of the patients and inversely as the size of the room occupied. Dirt and bad smells, it must be admitted, are anything but agreeable; but there is a disposition prevailing to attribute too much importance to the part they play in the production of contagious diseases. A very pernicious error has been disseminated, with the authority of Miss Nightingale's name, to the effect that there is more danger of catching small-pox or scarlatina from an imperfect drain in a house than from riding in an omnibus with an individual actually labouring under one of these diseases. Such an idea is quite theoretical, there being no proof that the gases arising from the decomposition of animal and vegetable matter generate these complaints, but every day's experience teaches us how easily they are transmitted from person to person. If twenty sick with the small-pox were huddled together in a room, whose dimensions were, say, only ten feet, and this room were perfectly clean and the drainage good, they would be in a much more unfavourable condition for themselves and more dangerous to others than the same number similarly affected in a dirty room with imperfect drainage, but whose dimensions were forty feet. It is notorious that in many parts of this great metropolis the streets, alleys, and courts are crowded to excess, and that it is by no means uncommon for two or three families to occupy one small room. How, then, can the sick be separated from the healthy, and how can ventilation be practised—that is, how can air be made to pass through these filthy dens for the purpose of expelling impure air and noxious effluvia? The formation of new railways and other improvements are continually increasing these evils of over-crowding, so that in too many instances the poor have no choice, and are compelled to occupy abodes such as no gentleman would think good enough for his pigs, not to mention horses and cows.

In this country, where we boast that the Government is not paternal, nothing is to be expected in that quarter, and the evils described above are too gigantic for individuals to grapple with. What, then, ought to be done if unfortunately the cholera should appear among us? My reply is, let tents be erected on open spaces or commons, and there let the sick be encamped. Where this is impracticable, temporary Hospitals should be provided, spacious, with a good supply of water, well drained, and capable of perfect ventilation. I am, &c. J. Jones, M.R.C.P.

Codrington-villas, Notting-hill, September 25.

Fees for Catheterism.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In reading the case of Irvine *v.* Wilson and another recorded in last week's *Gazette*, one could not fail to be amused by the evidence of the Surgeons brought forward for the defence. As this is not the first appearance of Messrs. Whittle and Wiglesworth before the public in a similarly questionable capacity, these gentlemen would seem to have constituted themselves the Medical Don Quixote and Sancho Panza of the region round about Liverpool, to whom contumacious executors may appeal for help against the unjust charges of an overreaching and unconscionable Profession.

The general evidence bears out that Mr. Irvine was engaged in a particularly nasty case. The ulcerated scrotum, the chancred penis, the intractable stricture, and the fetid condition of the patient generally, must have been an awfully disagreeable combination of evils, and would fully warrant Mr. Johnson in saying that "he would not soil his hands with such a case at any price; and that payment in full for the attendance could not be measured in guineas." Surely, then, half a-guinea was not too much for encountering the horrors enumerated? Filthy cases like these come more in the way of Dispensary practice, which may possibly account for the cheap rate at which their remuneration is valued by the two refractory Surgeons.

Mr. Whittle, after enunciating that 2s. 6d. is an ample fee for contending with a difficult stricture, subtended by a noisome scrotum, would seem to have been troubled with some pricking of conscience at his extraordinary appreciation of Professional labour, and he therefore endeavours to bolster up his tottering argument by blurting forth that a young Practitioner ought to be content with small fees. However clever, however deserving, however well fitted for his work, if the Practitioner be lucky, or unlucky, enough to have youth on his side, he must perforce content himself with shabby fees till his beard gets grizzled, his eye dim, his hand tremulous, and advancing years have wrought their ravages on his exhausted frame. With refreshing modesty, Mr. Whittle sets down his own services at a guinea; so that by an easy rule of arithmetic we discover that this estimable gentleman is equal in value to eight young Practitioners and a fraction of a ninth. In his cross-examination, an oblivious Professional world is reminded that passing a catheter is easy when there is no stricture; and is further favoured with the information that such a condition is the only occasion in which that operation must be had recourse to. In a few lines further on we find Mr. Whittle admitting honestly enough that a Surgeon might try for twenty minutes to pass a catheter, "because it requires great practice." Now, this statement stands in marked contrast with the evidence of his *confrère*, Mr. Wiglesworth. This latter gentleman, with the proud consciousness of superior talent and heaven-bestowed Surgical genius, unhesitatingly asserts that passing a catheter is the easiest thing in the world, where the stricture is not impermeable. Hence, we are given to understand that Mr. Arthur Wiglesworth passes a catheter with consummate ease in any given case, provided only the most dewy dribbling of urine is present to show that the passage is not wholly obliterated. We are lost in admiration and awe of Mr. Wiglesworth's unapproachable genius, and deeply regret this infallible plan is not known to the Profession; for this little operation, so lightly valued by the Dispensary Surgeons, and performed in all cases with ease and grace by Mr. Wiglesworth, is commonly regarded by such dubious authorities as Ferguson, Druitt, Syme, Hewitt, etc., as one of the most difficult operations in Surgery, and it is no unusual thing to see the most distinguished Surgeons repeatedly baffled in their endeavours to overcome an obstinate permeable stricture. On such trying occasions imagine the ecstatic joy of the anxious patient if he were to see the "admirable" Mr. Wiglesworth step proudly into the ward, and, with an elegant flourish of his hand, lodge the easy catheter in his urine-burdened bladder. And yet this prince of Surgeons has no name in the Professional world! "How many a flower," etc.

Mr. Wiglesworth has heard of Professor Pirrie's "Surgery," but has not read it; and yet by some wonderful instinctive faculty of knowing what he never learned, and judging what he never saw, he puts his *imprimatur* on the work as being obsolete. The last edition—fully written up to the literature of the day—was published about three years ago; consequently, according to the very advanced ideas of Mr. Wiglesworth, it must be very much out of date. Still, in spite of Mr. Wiglesworth withholding his lofty patronage, the book is highly prized by all who have read it; and its author is well known to be one of the most enthusiastic and well-informed Surgeons of the day, as well as one of the most successful teachers in the country; and we humbly record our conviction—and may it carry itself to Mr. Wiglesworth — that that gentleman would be much more profitably (mentally) employed in reading this and other standard works on Surgery than in allowing himself to be dragged forward to dispute the just pecuniary claims advanced by his Professional brethren.

I am, &c.

Portsmouth, September 25. Suum Cuique.

Irvine v. Wilson.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I was very much astonished, when my attention was called to the current number of the *Medical Times and Gazette*, to see some very satirical—and, I may add, impertinent—remarks that you have thought proper to make concerning certain evidence said to have been given in the case of Irvine *v.* Wilson by Dr. A. Whittle and myself. Had you published the evidence, and then waited for a week, and, receiving no contradiction thereto, then made your strictures, there would have been reasonable excuse; but to censure any gentleman upon the evidence of a one-sided report furnished to you by one of the plaintiff's partisans (no newspaper account having ever appeared), was unworthy of any editor conducting his journal upon the principle of justice and fair play. I must, therefore, in self-defence, request of you to insert this letter in your next issue, which I will endeavour to make as brief as the circumstances of the whole case will permit And, at the commencement, I regret to state that the report as published by you is grossly untrue in two ways:—1st, in directly misinterpreting and mis-stating the evidence given on both sides; and, 2nd, in completely suppressing a large mass of evidence which was given by the defendant's witnesses, and summed up in less than two lines.

I must inform your readers at the beginning that the late Mr. Lace was by no means "a gentleman of considerable property," he being a purveyor of fowls and vegetables to American shipping, his income amounting to about £550 per annum, and that he died worth but £4000 to £5000. This statement I have not only upon the authority of one of his executors, but upon that of an entirely disinterested person who knew him from his youth. And now, sir, for the information of yourself and readers, I will give you an extract from Mr. Irvine's bill of particulars, as I am on my trial for stating the account was not just and reasonable:—July 24, ten visits, three in night, medicines, £2 14s.; 25th, eight visits, one in night, £2; 26th, five visits, one in night, medicines, £1 7s. 6d.; 27th, five visits, one in night, £1 5s.; 28th, five visits, £1 5s.; 29th, seven visits, two in night, introducing catheter, £1 15s.; 30th, ten visits, three in night, £2 10s. Fifty visits made in *one* week, and the total amount being £12 16s. 6d. !!!! Again, July 31.—Visits seven, introduces catheter twice, and mixture, £2 18s. 6d. !!! August 7.—Visits six, introduces catheter twice, draught, £2 12s. 0d. !! August 17.—Visits six, applies iodine to testicles, introduces catheter twice, draught, £2 12s. 0d. !! But mark, Sir; there are eleven night visits made in the above week's extract; but four witnesses distinctly swore that Mr. Irvine never made those visits, and that throughout the unfortunate deceased's illness he was not there in the night more than four times, the man-servant swearing four times was the outside number he was ever called up to fetch Mr. Irvine, and he always went. Further, it was distinctly sworn by three persons that from three weeks to a month Mr. Irvine was never in the house at all, Miss Miller remarking to Mr. Lace that her uncle must be much better, as the Doctor never came; and yet in the bill of particulars there is charged either one or two visits every day, with two exceptions. And here I must call your attention to the circumstance reported that until the bill of particulars was called for, Mr. Irvine had never entered one item in his ledger. Such a circumstance in the annals of Medical bookkeeping, I should think, was never heard of before; and I also regret to observe that Mr. Irvine's brief directed his counsel to cast imputations upon Miss Miller, to the effect that she had lived in criminal intercourse with her uncle!!!! Whether this is "Professional" or not, I leave to your readers to decide. And now, Sir, as to the evidence that I am reported to have given. When I was asked as to the bill being a just and reasonable one, bearing in mind the above evidence, I stated that I regretted to say that I did not think it was; and when asked as to the reasonableness of the charges, I stated that I considered that 5s. a visit was fair and reasonable; but that in consequence of having to pass the catheter at each visit (and this Mr. Irvine stated was what his visits were chiefly for), I thought 2s. 6d. or 3s. 6d. added on to the visit would be, in such a lengthened case, ample remuneration, and that in my estimate I had allowed that amount; but that I did not consider that a Practitioner, when he had to make his visits for passing the

catheter, should charge 5s. a visit, and 10s. 6d. in addition for passing the catheter each time; that I had spoken to several men of undoubted standing, gentlemen making from £2000 to £3000 per annum, and that they coincided with me in my opinion; and upon being asked rather summarily who, I began by mentioning Dr. Arnold and Mr. Steele, when I was as summarily stopped. But in justice to these gentlemen I should state that I was not authorised to use their names, but that they coincided with me in my view that 8s. 6d. was a reasonable charge for a visit which included catheterism in a lengthened case. I, moreover, made a marked distinction between the case in point and a casual one, stating that in the latter case 10s. 6d., 21s., or 31s. 6d., as the case might be, would be fair and reasonable. And as regards my stating that passing a catheter was not difficult, I am sorry to state that it is a direct subversion of the truth. The passing of the catheter was throughout made out by the plaintiff and his friends to be in a marked manner a most difficult and dangerous operation, and when asked my opinion I stated that it could not be a very difficult operation when No. 5 catheter was used. The number of the catheter I had obtained through counsel in cross-examination. Again, it is stated that I gave a conjoined opinion about paying £80 9s. 6d. into court with Dr. Whittle. I was never even asked about it, and never even saw defendant's lawyer until I met him in the court-room, or ever made any statement in writing. What I did say was, that I had deducted from the account the sum of £95 12s. 6d.; but had I been asked I should have suggested paying the whole of the money into court, subject to that deduction, and this would have been for excess of visits and excess of charges, leaving plaintiff for his attendance £155 3s. 6d. The arbitrator, however, only deducted £60, charging the plaintiff with his own costs in the matter of the arbitration. And now I should like to put to you and the Profession a few questions, and shall feel glad if any gentleman in general practice, and disinterested in the above, will answer them.

1. In a case where visits are required every day for the purpose of passing a catheter, is it usual for a person to charge for visit and catheterism separately?

2. Is 8s. 6d. a visit a fair remuneration in a case like the above, where the catheter has been passed 194 times? Is 15s. 6d. unreasonable?

3. Is it usual to charge extra for the simple opening of an abscess?

4. Is it usual, or is it necessary, to make ten visits a day in pneumonia? Would an honest Practitioner make and charge for that number?

And, in addition, I would like to ask Mr. Irvine a few questions, which he will perhaps condescend to answer to the Profession at large.

1. The nature of the "convulsions" which required him to visit the deceased seven times in the day and three times in the night, on July 24, and the treatment adopted, bearing in mind at the same time that three witnesses swore that Mr. Lace had only "shivering fits," and that he only went to bed for four hours, coming down in the evening for his tea, and was sufficiently recovered to make his will in the evening between 6 and 8.

2. Why "opening abscess of the testicle" was stated in the bill of particulars, *vide* August 28 and September 6, and all the Medical witnesses on the plaintiff's side deponing to the danger of the operation, when it turns out in the report issued it was only the scrotum, although the word scrotum was never used in the court-room. Surely the gentlemen on either side were sufficiently learned to understand the difference between the two.

3. How was it that, after using Holt's dilator on February 11, 1864, he never advanced beyond No. 5, in spite of the number of introductions?

4. The nature of the case of pneumonia that required ten visits a-day?

5. The nature of the chancre that required the application of nitrate of silver thirty-one times?

6. And, finally, the condition of Mr. Lace from March 1 till the day of his death, the 23rd, during which time no catheter was used, it being unusual that a sudden cessation of catheterism under such circumstances should take place.

And now, Mr. Editor, I think I have commented as much upon the case as the circumstances require me to do, but I could considerably enlarge upon other and vital inaccuracies, but as they do not directly concern me I abstain; but if, after your readers have considered my version of the affair, and should come to the conclusion that I have "depreciated the value of Professional services," and tendered to lower the (honest!) gains of my Professional brethren," I shall then bow to their verdict, to which I confidently appeal. And with regard to yourself, should you ever visit Liverpool, and will kindly accompany me in my Professional rounds, I think you will be willing to eradicate the harsh judgment you have passed.

I am, &c. ARTHUR WIGLESWORTH.

1, Brougham-terrace, West Derby-road, Liverpool, Sept. 27.

***In this dull season we really are very much obliged to Mr. Arthur Wiglesworth for his letter. Although very angry, he is very amusing—the more so because he is so angry. The head and front of our offending is that Mr. Wiglesworth criticised the charges of a brother Practitioner, and we, following his own example, criticised Mr. Wiglesworth. For this we are very "impertinent." With regard to his charge of our having published a garbled report of the case of Irvine *v.* Wilson and Another, we can only say that we received it from a most trustworthy source, and that Mr. Wiglesworth himself confirms the report in every essential particular. We still retain our opinion of Mr. Wiglesworth's evidence in the case. We do not think that one Medical Practitioner has any right whatever to set himself up as a judge of the charges of another in a case in which he was not concerned. With regard to this particular instance, we think that Mr. Irvine's charges were not only not exorbitant, but reasonable, considering the nature and difficulties of the case. A Practitioner charging the fees usual amongst General Practitioners has a perfect right to be paid for every visit and for every Surgical operation he performs. We have only to add that it seems the arbitrators by their verdict showed themselves convinced of the truth of Mr. Irvine's statement, and that as far as Mr. Wiglesworth's allegation respecting Mr. Steele carries weight, we publish elsewhere a letter from that gentleman, which throws a very different light on his opinion and practice.

COMMUNICATIONS have been received from—

Dr. CHARLES R. MAXWELL; Mr. W. PARK; Mr. LLEWELLYN POWELL; Mr. SYKES; Mr. A. J. VIEWEG; THE PRESIDENT OF ST. THOMAS'S HOSPITAL; Mr. CHARLES C. ATKINSON; THE MEDICAL OFFICERS OF WESTMINSTER HOSPITAL; Mr. T. BALDING; Mr. JONATHAN HUTCHINSON; APOTHECARIES' HALL; THE MEDICAL OFFICERS OF MIDDLESEX HOSPITAL; Dr. C. E. RITCHIE; M. A. B.; SUUM CUIQUE; CHARING-CROSS HOSPITAL; Mr. ARTHUR B. STEELE; Mr. J. N. RADCLIFFE; Dr. J. JONES; OBSTETRICAL SOCIETY; HUNTERIAN SOCIETY; Dr. FALCONER; Dr. W. PRATT; Mr. DANIEL STONE; Mr. JOHN BINKS; Dr. J. R. WOLFE; Dr. R. MAYNE; Mr. A. WIGLESWORTH; INQUIRER; Dr. A. H. HOWE; Mr. J. MARSHALL; W. A.; Dr. A. S. DONKIN; Professor GAMGEE; Messrs. J. EDMUNDSON and Co.; Dr. ALFRED WHITTLE; Dr. ROBERT FOWLER.

BOOKS RECEIVED.

The Fortnightly Review, No. 8. London: Chapman and Hall.

*** Contains an unusually good paper on the pestilence of 1348-9, commonly called the Black Death. It gives data as to the population, and as to the mortality of that period, which amply deserve consideration.

On Traumatic Keratitis. By Spencer Watson, F.R.C.S. London: McGowan and Danks.

The Vaccination Acts. By David P. Fry, Esq. Second Edition. London: Knight and Co.

The American Journal of the Medical Sciences, July.

Orthopraxy: the Mechanical Treatment of Deformities, Debilities, and Deficiencies of the Human Frame. By Henry Heather Bigg, Assoc. C.E. London: John Churchill and Sons.

On the Facilitation of the First Stage of Labour. By Andrew Inglis, M.D., etc. Edinburgh: Oliver and Boyd.

A Practical Treatise on Rupture: its Causes, Management, and Cure. By T. P. Salt, Birmingham. London: John Churchill and Sons.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 23, 1865.

BIRTHS.

Births of Boys, 992; Girls, 970; Total, 1962.
Average of 10 corresponding weeks, 1855-64, 1742·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	595	548	1143
Average of the ten years 1855-64	546·5	528·7	1075·2
Average corrected to increased population..	..	..	1183
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	3	1	7	3	4	7	13
North ..	618,210	5	5	9	4	5	11	21
Central ..	378,058	1	2	7	1	4	9	10
East ..	571,158	3	2	10	1	8	19	23
South ..	773,175	1	3	8	1	11	12	16
Total ..	2,803,989	13	13	41	10	32	58	83

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·167 in.
Mean temperature	60·9
Highest point of thermometer	81·2
Lowest point of thermometer	40·2
Mean dew-point temperature	53·2
General direction of wind	N.N.E.
Whole amount of rain in the week	0·16 in.

APPOINTMENTS FOR THE WEEK.

September 30. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

October 2. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

3. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

4. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

OBSTETRICAL SOCIETY OF LONDON (Council, 7 p.m.), 8 p.m. Dr. Marl Sims, "Inversion of Uterus." Exhibition of Bandeloque's Original Cephalotribe. Mr. Lawton, "Vascular Tumour of the Funis." And other Papers.

5. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

6. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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OPENING OF THE LEEDS SCHOOL OF MEDICINE.

INAUGURAL ADDRESS,

By JAMES PAGET, Esq., F.R.S.,
Surgeon to St. Bartholomew's Hospital.

The inauguration of the new building for the Leeds School of Medicine and the opening of the winter session took place on Tuesday, and possessed more than ordinary interest, the Introductory Lecture being delivered by James Paget, Esq., F.R.S., Surgeon to St. Bartholomew's Hospital. The anxiety to be present was so great that the President and Committee of the School engaged the Philosophical Hall, where the Address was delivered to a large and brilliant audience, embracing members of the Medical Profession of Leeds and other chief towns of the West Riding and many of the old and present students of the School. The Mayor of Leeds and many of the principal inhabitants of the borough were also present. Mr. J. Hey, President, briefly introduced

Mr. Paget, who was received with loud and prolonged applause. He said:—It is not for me to say why I am here. The reasons for which I was invited to give the introductory address on the opening of your new school were satisfactory to those who could best estimate them; the honour is one which to myself can be only too flattering. These personal matters I may therefore pass by. But on one subject I may be expected to give an account,—namely, how a metropolitan teacher can be justified in endeavouring to promote the prosperity of a provincial Medical School; for the rivalry between the two sets of schools has been so constant and so sharp that it may seem like treason to one's own side if one wishes well to the other. I need not deny that when it was first proposed to me to lecture here, some such thoughts as these passed through my mind; but I soon dismissed them by answering to myself two or three questions, which, as they will need to be answered in many cases of rivalry, I may commend to those among you who are entering on a profession full of active competition. Can one's rival be abolished? If he can, ought he to be? If he cannot, in what condition is it best to have him? Now, as to the first two of these questions, it was abundantly clear that neither provincial nor metropolitan schools can or ought to be abolished. One reason among many may suffice. The liberty of teaching is a right which cannot, without the clearest cause, be restrained or controlled. It may be admitted that a theory of centrality for the purpose of education always means well—it seems so wise to give the whole business of teaching to those who can exclusively or chiefly devote themselves to it, and who can always be under the control and guidance of some central power, who can always in these cases be assumed to be infallible. We cannot wonder that where the scheme is possible it is often followed, or that there should be some few among ourselves who could wish it were possible in every case. But Englishmen have decided, by a large majority—and that not as a sentiment, but as a fact as certain as any in political economy—that in free countries free competition is far better for the common weal than any scheme of guidance from a centre, and that at least in secular matters free teaching is as clear a right and as useful as liberty of commerce. On these grounds, therefore, if no others be adduced, it is clear that neither class of schools can be abolished. But then a metropolitan teacher might well ask himself, In what position is it best to have one's rival? I suppose that every one has at times wished that his rivals should be inefficient, careless, and unpopular. But wiser thoughts would negative this wish and prove it to be wrong, both for ourselves and others; for every thoughtful man must have seen how often in the common routine of life we fail to do our best for others, and miss the happiness of doing it when we are not in the excitement of the personal exertions which rivalry produces. To suppose that we should, in a profession so laborious as ours, of our own mere will and for duty's sake do the best we can for others, would be to suppose ourselves, at all times and under all circumstances, capable of a heroic virtue. Few men, I imagine, will hold themselves so capable; yet as our lives must be spent in doing good to others—for, in one sense, that is the whole business of our Profession—it is well that we should have even the lower motives of personal need and active rivalry to guide us to good works. Well it is for every one of us when we can do our best for the good of others out of mere duty, and far better it is for others. Their interests are not left to the risks of our indolence and depravity of purpose. He who with his full power is ministering to his own welfare is ministering to the welfare of others. For this, I think, seems to be a true principle of the organisation of society—a principle parallel to that which we may trace in physiology, in which every part, and texture, and organ is helping to maintain the nutriment of the body in the state most fitted for it. If this analogy be, as I think it is, a true one, then we may see in rivalries, not the mere prevalence of ill-will or ill-doing, and we may take part in them, wishing prosperity to our rivals as well as to ourselves. But about this special case of rivalry of our schools I cannot doubt; for I can feel that it is useful to us all; to our Profession and to the public, and I do not care to diminish the appearance of rivalry by suggesting that the London schools may have certain parts in which students who have been educated in the provinces may very usefully prolong their studies. Therefore, I can, without being a traitor to my own school, wish full prosperity to yours. I wish nothing better than to have a fair fight and no malice with this or any other school. But let me now proceed with what I regard as my duty to-day. And, with the permission of those who are now no longer students of the Medical Profession, but who will, I think, feel with myself, that the best purpose of an introductory lecture is to guide as far as we may those whose minds are still to be bent to the best uses, I shall address myself almost entirely to students rather than members of the Profession. I shall confine myself to the endeavour to do my duty to the best of my ability by speaking words that may turn to good purpose in the minds of those who hear me. On such an occasion I should point out first that there is here a special responsibility. There is a responsibility not alone of teachers but of students, which must bear a direct proportion to the advantages they enjoy. I can wish prosperity to the Leeds School of Medicine as I might to others, but to this especially, because of the good work which it has already done. For thirty years it has been engaged prosperously and honestly in the promotion of Medical science among teachers and Practitioners. During that time it has educated men who have become eminent in the highest branches of the Profession. Many who were pupils here are now teachers in schools; many more, and, if I am rightly informed, a very large proportion of those whom I have now the honour of addressing, got here the knowledge which, in its full development, is now making them ministers of health to the districts in which they live. All this has been done while the members of the School have been vigorously maintaining, even in this large and honest Yorkshire, the position of the Medical Profession in society, and that in the face of difficulties which are now happily removed, by the erection of the new School, and by that which is growing up to be among the very best of European Hospitals, the Leeds Infirmary. The effect of those improvements will leave nothing to be desired in the material instruments for teaching in the School, and nothing, therefore, to be required from the students but their own strong will, and clear attention and good use of those opportunities which are placed before them. Surely we may well wish God speed to an institution so fitted out as this for the purpose of good work, and if we need to point our good wishes by personal allusion, we may find reason for them in many here present, and chiefly in him (Mr. Sam. Smith), the one survivor of the small band by whom the School was founded—in him who, though he is past the jubilee of his Professional life, is yet teaching, by his good word and example, a most honourable career. But not less may we offer our wishes that there may remain to the new School, as they have been to the old, the prosperity and good name of those who have proved their error who maintain that high capacity for science or for art does not pass by inheritance, who have disproved that by the most emphatic and, so far as we know, the most unexampled instance—I mean the Heys and the Teales. But now I will speak wholly to the students; and I will endeavour to speak to them by giving advice, first, with regard to their examinations, and then as to the manner in which they will practise their Profession successfully and honourably. It

may seem that these two things should not need separate consideration—that every one who works honestly at his Profession for the sake of practice should be so sure of passing his examination that he need not trouble his mind about it, and that any one who obtains his diploma is therefore certified, both to himself and to all men, as quite fitted for practice. Doubtless this always should be so, but sometimes it is not. The guidance which I would give chiefly to students is, that they should prepare themselves for examination, so that their minds may be, during the whole course of their studies, as far as possible free from all care concerning them, and left mainly to their education in that which is to be their after business in life. I believe it has been said that students of average ability, who will work according to the curriculum, and give their energy to the work, and do their best, may leave examinations out of their mind, and give themselves no special preparation for them. But, according to my experience of students, this is the same sort of assertion as that if any man falls overboard, he'll never be drowned so long as he lies on his back, breathes deeply, and makes no dashing effort to save his life. I believe that this is quite certain, but I suppose no one except a skilled swimmer ever calmly anticipates falling overboard, and I never heard of any one, except perhaps one who knew something of swimming or floating, who did, upon thus falling in the water, trust entirely to his own specific gravity. So it is with examinations. They are not to be made light of, or anticipated without some mental disturbance. If a man would run no risk of being drowned, he must learn by practice how to swim and float; and if a man would run no risk of being plucked, he must learn by practice how to pass. He must be in the constant habit of examinations. This used not to be. In my own student time, and for many years afterwards, reading, attendance at lectures, and self-instruction were amply sufficient; but since that time the examinations have been doubled in numbers, and the best among them are considerably increased in difficulty, and the result is that comparatively few students are able to pass examinations without some special provision for them. Now, this preparation for examinations may be made in two different ways, one of which is discreditable and the other is not. Let me try to distinguish them, because not only in our own Profession, but in all those for entrance into which examinations are now instituted, the two things are very often confused, and the fair one has to bear much of the discredit which attaches only to the unfair one. Both alike have to bear the bad names of cramming, coaching, and the like—names which imply practices to which the better class of students are unwilling to expose themselves. Let me endeavour to distinguish them. The discreditable manner is that in which a student who has come near the end of his time and has never honestly worked, and is really quite unfitted for the practice of his Profession, is able to pass his examination by being crammed quickly with all the answers to all questions likely to be asked, and with no more. In this practice, too much only seems to be quite as dangerous as too little, but the practice is discreditable to all concerned. It is discreditable to the teachers, who thus, as it were, make flash notes; it is discreditable to the candidates who present them; and, most of all, it is discreditable to the examiners who pass them as if they were good. Now, I don't believe that any student here is intending to try to pass by these means; but let me warn you, gentlemen, that unless you make honest preparation for your examinations, you will be at last almost irresistibly tempted thus to try, and when the pressure comes it will induce a man to believe that it is not his fault, but his examiners', if he passes when he is unfit. Doubtless the great fault is with the examiners; but the fault of the examiners cannot palliate those of the candidates. Wrongdoing is not the less wrong because it is easy. Iniquity is never justified by opportunity. You must not, therefore, thus try to obtain diplomas. You may thus obtain them, for the facility with which they are thus obtained is one of the great scandals of our Profession. But, remember, if you have thus got a diploma and got a legal right to practise, you have not the moral right. You will still have your Profession to learn, or you will have to practise it to the damage of your patients or to your own shame. You must not thus try to pass examinations. You must so work as not to be liable to the temptation to try, and the way in which you had better work is by that method of preparing for examinations which is not discreditable, chiefly thus—steady, honest, daily work, according to the curriculum, according to the guidance of your teachers, and with repeated examinations, not only at the end of your career, but during the whole period of your studentship in the school. The advantages of this method of examination are more numerous than I need try to describe. They will be told you by those gentlemen to whom, very wisely, I think, this special part of the plan of the teaching of this school is allotted. But their chief use is in this—that they will help to enable you to keep your knowledge always in the condition in which it is most ready for immediate use. I need hardly tell you that the possession of knowledge and the power of using it are two very different things. Often in the hurry of life's business one sees reason to say that a little knowledge always at hand is much better than much more knowledge which is far off or unwieldy. Certain it is so in examinations. Two men of equal capacity come up at the same time: the one produces what knowledge he has, although it be the less, at once; the other does not. He can bring it to-morrow, but not to-day; or he could write a book, but he can't answer questions, and the result is, one passes, and the other is plucked. And this is not altogether unjust. I don't say it is quite right, but it is not altogether wrong; for an examination for a diploma is only one of those instances of tests in which we have to spend the great part of our Professional life, and in which knowledge scarcely deserves the name if it cannot be produced at the right time and in the right place. In this view every emergency of practice is like a stern examiner requiring a swift and true answer. When "men grow wiser as they grow older," it is because they are constantly acquiring the power of using their knowledge more readily and aptly. A great deal of the fruit of experience is not in learning to do better, but in learning to do well more easily. Let me, therefore, recommend to you, on these as well as on collateral grounds, the advantages of the examination which I advise you to submit to. You will find them the best means you can practise for learning the power of thinking calmly during difficulties; and he who has learnt to think and to speak calmly in the midst of external pressure, is already far on his way to success in life. Coolness in operating, in all the emergencies of Surgical and obstetric practice, is sure to command admiration; and believe me, its value in this part of the Profession is not at all greater, if it seem so, than in the wider field of prescribing and advising. In all times and parts of life self-possession—that is, the power of thinking during distracting circumstances—is one of the best possessions a man can have. Let me advise you, then, to strive after it with all your mind. The best place at which you can learn it is in the examination rooms. I may seem to have gone beyond my subject in thus pressing its value; but I am sure I shall not have wasted time, either yours or mine, if I can thus induce you to submit very regularly and constantly, as much as to any part of your teaching, to the system of frequent examination during the whole course of your studies; that the examinations be both oral and in writing, and of the same kind as those in which you will have to make your final passing; let them be before those who are in some authority, and before whom you will be ashamed to present yourselves with constant incapacity. And now let me try, as far as I can by my advice, to promote your prosperity and happiness in practice. I need hardly say that the first condition to that is, to gain all the knowledge you possibly can. Of course, you must gain more than is required for your examinations. I have spoken of them as difficult; but remember the compulsory examinations are only such as are deemed essential to the public safety, and the enough for safety is not too strictly calculated. Surely none of you would be content to be merely safe, only just fit for the practice or duty of your Profession! The measure of our duty is surely higher than that! It is not what we must attain to, but what we can attain to; and what we can attain not perhaps with little difficulty or slight effort, but with all the power and all the effort we can command. Nothing less is your duty, let nothing less be your will. Some are prone to think that their duty as students is limited to the qualifying themselves for the examination, and that the diploma is a sort of wages for an honestly-passed student-life, and that to strive for more would be superfluous and worthless. Indeed it is not so, even in a material sense; for whatever work a student may do, be it never so great, is sure to be paid for in after life. I think it is Goethe who says, "God does not settle his accounts with man every week." I need not tell you how true that is in spiritual things, and it is

very true also in the things of this world. The wages of student's work are not paid in his student's life, but they are most surely paid in after life; for the more knowledge he gains, the more able he will be for practice, and the more able he is in practice, the better will be his reward; so that on every ground, whether of duty or of interest, the only rule I can lay down is, get all the knowledge you can. I wish I could state as simple and plain a rule for the kind of knowledge you should gain. I can give you some rules, but I cannot venture to assign the relative value of all the subjects you will be required to study. This rule, however, I will lay down, that, whatever else you are doing, you should from day to day, and constantly, study diseases and their treatment in actual practice. The advice I venture to give you is founded on considerable observation of students,—observation extending over many years—and over a large field, and in which not only duty, but a great deal of curiosity, induced me to be very careful; and one of the results is to show that the best students, if I except the very few—unhappily too few—who, after taking high degrees in our University, have then gone to the study of Medicine—that as a constant rule the best students have been those who, from the very beginning of their career, either in Professional Hospitals or with intelligent and active General Practitioners, have studied practice under good guidance, and this often a very considerable time before proceeding to attendance on lectures. I know in stating this that I differ from some who have thought carefully upon the matter, who do not hold as I do that practical study should be first and last and midst of all other studies, and I have therefore again and again gone over and studied the matter, only to convince myself that the same rule holds—that they are the best students, and they succeed best in life, who from first to last and always mingle their practical studies with the principles and doctrines of their Profession. It is said that before beginning to study practice, it is necessary to acquire elementary knowledge in order that you may understand what you see when you come to the practice of the Hospital. If a student is to wait until he can understand what he sees on entering on the practice of an Hospital he must wait very long; for I suppose there never passes a day in which the young student or officer who is connected with an Hospital does not pass over many things which it would appear to be a very vain boast to profess that he understood. A large portion of our information is made up of observation by our senses, without consideration; there is a great deal of mere routine and technical knowledge, which any one can learn, and a great deal of knowledge acquired and stored up the understanding of which may come afterwards; but besides all these, there is in all the practical part of our Profession a large quantity of knowledge which cannot be in any proper sense of the word understood at all,—that is, which cannot be reduced to any principle of scientific Medicine, or referred to any law of physiology or any other Medical science, but yet it is real knowledge, true and very useful knowledge, which will come in time hereafter to be the very foundation of true Medical science—knowledge which you will find most useful in your after lives, the kind of knowledge which I should most strongly urge you to acquire as large a quantity of as you can, for you will find, give what diligence you may to the study of your Profession in school, the time you have here will not be enough to learn the half of it. But while I thus urge upon you the pursuit of practical knowledge—and in the school and Hospital here you have a field for acquiring knowledge which is, I suppose, quite unsurpassed,—let me not be supposed to be advising this to the depreciation of other subjects which you must study. I have said I cannot venture to apportion to each the relative claims they possess to your attention. It was well said by Mr. Smith, in that most wise and pleasing lecture which he gave here two years ago, that each teacher will tell you his subject is most important; from which you may learn that they are all of great importance. Of some, however,—and I speak especially of anatomy and physiology,—I am bound to say you should acquire a considerable, and, if possible, even a profound knowledge; for it is not only that in them you have to study the standard, with which you have to compare all your investigations in disease and to which you have to bring back by remedies as far as you can all that has been deflected from them, but that in them you may acquire what I call the pictorial habit of mind which is most important you should have as Practitioners. For in our calling that which is called the scientific habit is far more important than any other you can acquire—the habit, namely, of very careful observation, of calm remembrance and reflection, of very cautious judgment, patient waiting for effects, of slow summing up of conclusions. I do not for a moment admit the imputation that practical Medicine and Surgery do not deserve to be ranked as science. I know no fair definition of science within which they may not be brought, and yet it must be admitted that there are great temptations in our merely practical state to swerve from those principles of science which we may learn from all Physiology, or any other or more exact sciences, and that we are tempted to make comparatively hasty observations, and to draw swift conclusions, and sometimes when conclusions seem to be convenient and useful to adopt them before we have ascertained whether they are quite true or not. It is not for me to endeavour to show you why there should be this difference in the pursuit of such a subject as Physiology; the difference is, however, marked, and it is in the hope that in your own cases the differences may be less marked than in myself, or in men of my own generation, that I urge upon you all the study of these subjects. While urging you to make comparatively more careful observations than are customary, let me advise you, as one of the best methods, to record your observations. And in doing this, the observations must be much more full and accurate, and, if I may so speak, much better portraits than they commonly are. At the foot of an engraved portrait you very commonly see written "*ad naturam delineavit.*" Now, the sentence for any case or the description of any case you write ought to be "*ad naturam descripsit;*" and it should really mean that the account was written while the very object was before you and was being repeatedly looked at and carefully observed, for unless to those who have carefully acquired the art of written description from the life, the habit of recording cases in the evening is full of fallacies. What would you think of any artist who would never draw except in the evening from the features of persons he had seen for a few minutes in the course of the day? Why, you would expect very much what you find in a great number of cases of anatomical description—mere caricatures, fallacious outlines of truth. If you would learn this art carefully and well, you must write from the very life, and after continually looking at the thing until you have completely and clearly observed it all; for just as an artist really sees more of any face or any landscape than an ordinary observer, so will the student see very much more in a patient or a morbid specimen if he is in the habit of looking constantly at them and observing them daily. Let me tell you that you are not without the best model by which to form your writing on this plan. The description of the human body which is now allowed by the labours of generations of anatomists has nothing equal to it for fulness and precision in the writings of any other extant science. Study it, therefore, not for its own intrinsic value alone, but as the model according to which you may form,—if not the precise language and diction, yet the width and depth of your own observations in pathology; and for the same reason, and not merely for its own immediate value, though the value is incalculable, but because it is a good model for the guidance of your studies, I advise you to study profoundly physiology, for in that more than in any other science you may test the variety and abundance of inquiries which have to be made, the patience with which inquiries are listened for, the setting up of facts, the careful record and the careful reflection, the casting out of all fallacies, and those other qualities which go to make up a completely scientific mind. . . . This, then, is some of my advice to you: get all the knowledge you can, and let it all converge towards practical utility. While you are getting it, cultivate your minds as far as you can. The scientific habit of inquiry,—that habit by which alone you can guide yourself safely when you are beyond the guidance of teachers—and that alone by which you can get the true pleasure of knowledge; for the pleasure of knowledge is not merely in its possession, or even in its useful employment, great as that pleasure may be, but rather in the mental processes by which it is acquired and enlarged, and by which the view of truth is made wider and more clear. I suppose that one of the keenest intellectual pleasures is in the clearing up of truth. When one who has been laboriously working and gathering up facts sees at last light come in, and then order and mutual illustration among what had seemed to be only a confused heap of fragments of knowledge, does he not experience a pleasure superior to that which the exploring traveller feels who, having toiled up some steep ascent, sees only clouds and mists beneath and around him—who, after having thus ascended, suddenly feels that his toil is rewarded when the fleeting cloud and mist are melted into fantastic shapes, to the semblance of which his hope would

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fain give substance; and, still gazing, sees, as by unseen hand, the clouds disperse, and the whole scene lies outspread before him, beautiful in order, rich in its present fruits, and richer in promise? Such is the reward you may sometimes have in the acquirement of knowledge. Need I say more to urge you on to work? In the getting of knowledge is your duty, your interest, your pleasure. But some may ask whether knowledge is the only condition essential to success in practice. I cannot say it is. It is the first, best, and most honest; but it must be admitted that the proportion between knowledge and success is so often and so much disturbed by circumstances that some have concluded that knowledge is after all only a second or third rate power in the attainment of success in our Profession. There is great error in an opinion like that; but there is truth enough underneath it to make it well worth inquiry. I do not mean to speak of those external conditions on which success in our Profession may depend. The accidents of birth, place, connection, personal advantages, doubtless contribute largely to make men successful in our Profession; but here is no question we need entertain, for that is nothing special to our calling. The same advantages are found in some, in every other pursuit of life; and I tell the student if they have them their responsibility to make good use of them is very great, and if they have them not they can do very well without them; for there is not one of those advantages in life but may be far more than compensated by honest, stedfast, business-like work in our Profession. I speak now of those internal conditions of success, those which depend more on a man's self and his own power of increasing them. I cannot venture to say why it is that some men of large ability in our Profession fail of that success which their abilities deserve. I cannot venture to say of all why it is so; but I can tell the students some of the reasons why men of even great ability have failed. If a man will be always impracticable, always uncourteous and ungenerous in his estimate of others, always self-willed and self-complacent, it is no wonder if he does not succeed in his Profession, or if he requires for success more, much more, knowledge than is necessary for a better tempered rival. If a man will be always unpunctual, inconsiderate of the convenience of others, indifferent to the welfare and comfort of his patients, and indifferent to his engagements, it is no wonder if his Professional ability is not compensated by a proportionate amount of success. There is nothing unfair in all this; it is not a property of our Profession alone, for the same mental defects spoil the good results of knowledge in every other calling. There is, therefore, nothing to charge there as wrong that Professional success is not always proportioned to knowledge. Some will have it that knowledge, and knowledge alone, is the thing that should command success in life, and that all that swerves from this is unjust or dishonest. I know no good ground for a conclusion like that; and I know no fair reason why intellect and knowledge should have the sole command of success to the exclusion of moral virtues and excellences, or to the exclusion of that kindly conformity to the innocent customs and habits of society which constitute the gentleman. This, at any rate, may be said, that it is quite useless to discuss the relative merits of knowledge, and manners, and good habits of business; for there is no common measure to which we may refer them. Such a proceeding would be analogous to that as to the relative value of eyes and ears, of arms and legs, of which the only reasonable conclusion is that it is a blessing when we can have them all. And to that conclusion I advise students to come in their decision as to the relative values of knowledge and good mental habits. Have them all, and you will have no better opportunity of cultivating both as you will have in your period of pupilage. You will often hear it said of such and such a person, "He has been very successful, but he really has very little knowledge of his Profession." Now that is very rarely true; with the exception of the instances of ignorance making money by impudence, I believe it is very seldom found to be true. In the large majority of cases the fallacy lies beneath. Of many of those persons of whom you hear the charge, the only truth is that the knowledge is not that which we commonly mean when we speak of a scientific knowledge of the Profession. They are not profound pathologists; they are not very well skilled in minute diagnosis; they may not be very learned in the literature of the Profession. But many a man of whom this may be said has a very large and useful knowledge of his Profession. He may be very skilful in the discernment of the general differences of disease, in discerning the personal peculiarities of disease, and the constitution of his patients; very wise, besides, in the adjustment of diet and regimen, and in the management of the less potent medicines. Of such a man it is not fair to say that he has but little knowledge of his Profession. He may not have knowledge of the best or highest kind, but he has that amount of knowledge which enables him to do a vast amount of good, and deserve a great deal of success. I never meet such a man in practice without learning something from him—this at least, to have a very high estimate of any one who possesses a large knowledge of little things. It would require more time, and more heart than I have, to endeavour to express what lies at the bottom of this ordinary statement that Professional success is not proportionate to Professional knowlege. Let we, however, advise students to study carefully the course of those of whom this is said, and I shall be most mistaken if you will not find that all have some good quality, which you will do well to imitate. In some you will find a rare gift of common sense; with the force of genius they look right into the middle of a case and divest it at once of all that is accidental; and if they are not always right, yet they are never so widely or dangerously wrong. In some you will find unusual attention to their cases, constant watching, untiring looking out for symptoms, or means of doing good, and then if they fail the wrong and harm resulting from the failure are condoned by the manifestly good intentions with which the work was done. But above all is that business-like habit of constant punctuality, attention to business, attention to minute details, the never being absent from work, or even from the thought of that which requires it. I will not venture to say that either business-like habits or any other form or degree of industry is enough by itself to command success in our Profession. But this I will say, that without these habits great success is altogether impossible. Without habits of attention to business, neither genius nor intellect nor virtue reaches high success. No, not even ignorance and eccentricity. The result of all this, and of a good deal of the like kind that might be said, is simply this: There are certain mental habits which would spoil the effects of the largest knowledge; and there are certain mental habits which will largely increase its efficacy. The plain rule is to have them all. There is nothing incompatible between the intellect and virtue. Knowledge and good manners do not mutually exclude each other: the same mind may be scientific and business-like. Why, then, should we not all have these things? Well, if I may judge of you from myself, the hindrances are indolence and unreasonable love of easy pleasure. But there are hindrances which neither the love of knowledge nor stern necessity are at all times sufficient to enable us to overcome. And yet they must be overcome; and I know nothing that can induce us to strive to the overcoming of them better than continually reminding ourselves of the great issues we have in hand. I try to remind myself that the lives and health and happiness of men, their ability to help each other, and their need to help each other, are in my hands. Surely no present pleasure can be deemed enduring enough to counterbalance our future regret if, with these great issues in our keeping, we either wilfully or negligently fail to make ourselves fit for them to the very summit of our capacity. Speaking of amusement and pleasure, let me end the advice I have to give you by stating some rules concerning them. We must have some pleasure for the recreation of our minds. Keep in view, therefore, what is the true purpose of these pleasures. Let it be that which the very name of recreation may suggest, that they serve for the renewal of our minds, for the getting back of the strong heart and the strong will, and the clear head for the work which yet remains to be done. How much pleasure is required for this purpose must rest with each man's conscience, as well as what kind of pleasure. Yet let me say this:—Your amusements ought to be the amusements of gentlemen, and ought to be conducted in places in which you will have to meet on equal terms with none but those who are your equals in society. I would venture to advise you that your amusements as well as your work should be, as far as possible, in the society of the school and the Hospital. My own experience for many years, as Warden of a College, convinces me that it is a good rule that not only the common conversation, but even the levities of a common school and Hospital have much that is good in them. The jokes of a school are at least as good as the jokes of any other place, and its gossip is at

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least as amusing. Associate yourselves in amusement as much as in work with the pupils of your school. Whatever be your amusements, let me advise you not to be too ambitious for pre-eminence. Very few men can be eminent in more than one thing. If any man can be eminent in one, it is his business to be eminent in that which is his duty, and ambition can be safe only when it is encouraged in that for which a man is responsible—namely, the duties of his Profession. Let your ambition look always along the line of duty. There it may soar very safely; there it may look right full at its highest good, without being either dazzled or ashamed. And now, having finished my advice, let me wish you all the happiness in your Profession that I have tried to point out. And let me try to tell you in what that happiness will be found. It is not likely to be found in great wealth, or in luxury, or perfect ease of life, nor yet in high political or social station; for these things are so rarely attained in our Profession, that it would be dishonest to hold these out as probable rewards of any amount of work you can do; but the opportunities of happiness which our Profession offers are these:—Permit me to quote myself:—Competence of living, the society of educated men, blessings from the poor, recompense with gratitude from the rich, boundless fields of intellectual exercise, access to the richest stores of knowledge to the glory of the Creator, the relief of man's estate, and daily inducements to the exercise of the highest Christian virtues. I could wish you no greater happiness than the loving and peaceful homes you will find in these things. Let me wish them to you all. The pleasures of intellectual pursuits I know can hardly be attained by many of us, while the practical business of life must be laboriously pursued by night and day, almost alone, under circumstances most discouraging; but the pleasures of virtue are within the reach of us all. And herein is, indeed, the unmatched excellence of our Profession, that in its daily duties it offers to us the opportunities of the highest Christian virtues. Not one of us need go out of his daily path to find these occasions about him. Without preaching, he may teach lessons of highest wisdom. Without wealth, he may be a great alms-giver. Daily he may say with all reverence, "Silver and gold have I none, but such as I have give I thee," and what he has to give may be more than the acceptance from him of silver and gold might purchase. Thus he may live every season of his life, promoting his growth in virtue, and when he dies his last memories may be memories of duty done—the surest way to honour among Englishmen, and, through God merciful, the surest way to heaven.

OPENING OF THE LONDON MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

Dr. Andrew spoke to the following effect:—To-day's duty has been performed in this theatre so often and so well, that its difficulties yearly increase. We can but offer our best good wishes for your success, and point out the means by which that success is to be obtained—viz., by work—honest, daily work. Your time as students is too short for you to be able to waste any of it with impunity; but if any of you have already wasted more or less of it, remember that a vigorous effort, a diligent use of the opportunities you enjoy here, may still in part retrieve the past. You are bound to work by many considerations; the serious responsibilities which the practice of our Profession must bring with it, the duty to maintain the ancient fame of our school,—a school in which men like those who have passed away from us this year, Mr. Lawrence and Dr. Kirkes, have laboured. You have also to maintain the credit of a noble Profession; to take care that no disgrace fall upon it through the fault of those who profess it. Our Profession is a noble one, and yet there are reasons, some depending on our own fault, which interfere with its proper recognition by the public. Men expect too much from us, and, beginning by demanding impossibilities, end by denying the usefulness of the knowledge which we really do possess.

On our part the claims of our Profession are not always advanced firmly or judiciously; argument on Medical questions is sometimes personal in its tone, and, owing to a vicious system, Medical differences of opinion come out with unpleasant distinctness in courts of law. Practically, also, we do not assert sufficiently the claims of Medicine, as distinct from its ancillary sciences, to an equal rank with other branches of physical research. Now, if the term scientific is applied, whether rightly or wrongly, to such things as chemistry, botany, and ship-building, it cannot fairly be withheld from Medicine. We, no less than those who pursue any other branch of physical inquiry, are engaged in the investigation of law, in the application, for the benefit of mankind, of the knowledge we have gained. The object-matter of our inquiry is not less certain, not less subject to law, than any other; the faculties we must employ, reason, judgment, accurate perception, are the same, and yet the term scientific is denied to us. The fault is partly our own. We misstate the end of our art. Its perfection is to be judged of, not solely by its results, but by the capabilities of the material with which it deals. The endowments of living structures cannot be altered or modified except within very narrow limits; it is probable that there are diseases which must be always as incurable as old age.

Again, there is often a tendency to make Medicine a mystery; we cannot do that and at the same time claim scientific standing. On the other hand, we are apt to undervalue the knowledge we do possess. Every science rests upon ultimate facts—*i.e.*, facts which have not been explained; but in Medicine we are not content to accept anything unless we can at the same time explain it. But physiological reactions are as certain as chemical ones, in disease not less than in health, and belong to the same order of facts.

Medicine, too, has suffered perhaps more than any other branch of knowledge from imperfect observation and hasty generalisation, while its successful study requires especial accuracy and caution; for we cannot verify and repeat experiments as in other sciences, we cannot trifle with our patients' lives or control the conditions under which we must work, and we may be also wilfully deceived by our patients themselves. The difficulties in our way are so great that we ought rather to wonder at the extent of our knowledge than complain of its incompleteness. But we must remember that knowledge cannot remain stationary; it must advance, or else it will go back and be lost. It is the product of the labour of no single place or generation, but of all. Each must contribute its fair share. Above all, those who enjoy advantages such as ours must be blameable if the progress of our art is retarded by their remissness.

CHARING-CROSS HOSPITAL.

The Introductory Address was delivered by Dr. Chowne, F.R.C.P., who commenced by remarking that in the choice of a profession, and in considering and comparing the peculiar circumstances which may recommend the Church, the Law, or Physic, or, indeed, any other profession, although scarcely anything can be of greater importance than the mental preference of the student, which, for the most part, carries a mental aptitude along with it, the ardent mind might fulfil a determination to succeed, and the absence of a strong early predilection must not be regarded as an insuperable stumbling-block. To the votaries of Medical science there are many inducements, although in the way of riches, titles, or fame, in the ordinary sense of the latter word, they are but few. Of the Physician, indeed, the noiseless and "even tenour of his way" is amongst his highest perfections; and both his path through life and his fame are rather of a kind to make him happy than either wealthy or great.

The Doctor proceeded to say that it might be useful to address some suggestions of a precautionary nature to those who are either now commencing their ascent of that Mont Blanc of the Medical student—the Medical curriculum—or to those who have already climbed to the first, or even to the second, of those resting places, in Alpine parlance, called "chalets," but which are in academic language called vacations, and are now braced up for another march. He would venture to forewarn the students who are new to their forthcoming work, and to remind those who are not, that courage, and industry, and constant vigilance against mishaps will be necessary. The mention of mishaps almost in the same breath with the mention of Mont Blanc might recal to the mind that the avalanche which always threatens does sometimes, though happily not often, work harm to the wayfarer. The great danger to the student, however, is from minor but

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more common accidents and incidents, and small trips, and stumbles, and digressions, which he can avoid if he will, than from events beyond the reach of a reasonable forecast to foresee or of reasonable efforts to turn away from. There will be no giant or really great difficulties otherwise than as they may be measured by irresolute efforts to overcome them. Every student who has to climb the Medical curriculum should at once make himself acquainted with his real position and what he has to do. His position is that there is hard work before him; that he himself must do it, and that his time is limited; that time and tide wait for no man; that the earth will turn upon its axis, and that the sun will go down at its appointed minute, and will not be a laggard to suit the convenience even of the most excusable of idlers; that when the night comes the day is irretrievably gone. Some will have used it; some will have wasted, and must abide by the loss. Every day lost leaves a blank on the mental tablet, which will tell tales and impeach the delinquent when the time arrives for testing what has and what has not been committed to it. The application to study should have as few breaks as possible, consistently with health. The profit will be the greater the fewer the interruptions.

Some call anything that approaches to long hours of study slavery. Be it so; it is, nevertheless, the very kind of slavery by which the first men in the State become first men, by which the highest places of authority are won, and by which distinction and eminence, and elevation to the summits of the most honourable aspirations and ambitions are attained. Some recreation the student must have, but it should not, during his working time (the session), go a step beyond a needful rest for his mind, and it should be such as will at the same time conduce to his health. When the student can take notes well, he should do so; they help to commit to memory what might otherwise be lost, and they give a zest to after-reading. In reference to attending "Hospital practice," both in the wards and in the out-patients' department, Dr. Chowne stated that there is much which the student should see and carefully observe as well as hear; that by long and constant observing the eye acquires a knowledge and insight into certain visible peculiarities, called the "physiognomy of disease," which language cannot impart, but must be learned by the eye, and is inexpressibly valuable.

The first step in dealing with disease, "diagnosis," or recognition of the nature of the disease, seems at first sight like a mere colloquial affair of questions and answers. We human Doctors, as we are called, in contradistinction to veterinary Doctors, have great advantages; and who can guess what our veterinarian brother would sometimes give to get a word or two from his patient, or how sincerely he would rejoice "when first the creature found a tongue?"

The attention of the students was forcibly directed to noticing certain associations of certain forms of mental aberration with certain forms of bodily disease, of which the Doctor gave several examples—an extremely interesting subject, on which the late Sir Henry Halford read a very valuable essay before the Royal College of Physicians in 1831.

The value of Medical science in connexion with Medical jurisprudence was expressly alluded to, and the danger anxiously pointed out of evil designs on life being perpetrated where illness already exists, and might tempt the ignorant to speculate on impunity.

In regard to the student's keeping records of cases or of any other matters connected with his Medical studies, the value of new facts over that of new theories was especially commended; a fact abides, a theory is often but a fleeting, though a dazzling and a pleasing, sunbeam. Facts, however, whether old or new, require more care in the recording than they generally receive. It is not sufficient that the writer can understand what he has written, or that a cursory reader fancies he understands it,—it should not admit of being misunderstood, or even misinterpreted. Hundreds of records of facts are so weakly worded, so destitute of perspicuity, and of clear and exact definition, as not to be worth a jot—mere verbiage, and little better than a *quasi* learned dust of words, but without an atom of gold-dust, to say nothing of nuggets, however infinitesimally small. It is extremely disappointing when searching, volume after volume, for facts, that when found, one after another, they will not bear the most gentle handling —even for friendly examination, but go to pieces at once, like an old bone in a catacomb. It is desirable that the student should habituate himself to exactness where it is possible, although Medicine is not one of the exact sciences. The real worth of a recorded fact is its strength when opposed to a counter-fact; as the real worth of a witness is his strength when opposed to a counter-witness.

Subjects having sanitary aims will more than ever lie in the Medical student's path; and perhaps there is not a set of young men in the world, just starting to acquire a Profession by which they are to earn their living, who would set to work more heartily to strike at what would seem to be the very root of their means of doing so. Down with disease is the standard philosophy of the Medical man—and a very much to be admired philosophy it is, notwithstanding the suicidal look of it; nor can we be surprised that it is popular out of the Medical Profession. It is not doubted that the whole body of Medical men in these dominions hail with gratification every new fact having a sanitary application, and every new method by which such new facts can be obtained.

We can all remember when the balloon was regarded, both metaphorically and in fact, as a mere bubble and a toy—a large bubble and a large toy certainly, but a toy it was considered; it is now an instrument of science—a substantial agent of confirmed utility. Heretofore, the explorations effected by human genius, as regards the sphere which we inhabit, have been restricted to the earth, and the sea, and to certain limited strata of the atmosphere. The earth is delved, and yields up testimonials the most astounding; the sea is fathomed, and the secrets of its depths become comparatively familiar, but the atmospheric ocean in which we are immersed has been a region inaccessible to the personal experience of the philosopher, except so far as terra firma could conduct the steps of the celebrated Saussure, for example, and other naturalists. The fact is an interesting one, that he (Saussure) about a century ago (1768) made a journey from his native city (Geneva) to Lyons to see the aërostatic machine of Montgolfier. Fain would one know the thoughts which that machine inspired in his enthusiastic and contemplative mind. It may perhaps be assumed, however, that a reflection of those thoughts exists in the conceptions and the scientific aërial excursions of the present day. We see in the enterprising researches of Mr. Glaisher a new era. His zealous and adventurous explorations have already shed new light on some subjects highly interesting to meteorology, and can scarcely fail to raise a hope that they may lead to further knowledge that will be useful to the science of Medicine.

Another subject of deep interest will require the student's attention in connexion with diseases of uncertain origin called hereditary, existing in the living himself and genealogically transmissible, although not always transmitted; a study requiring the utmost caution against false conclusions. The laws of the animal economy in relation to hereditary succession of constitutional peculiarities are not sufficiently known to trace the influences which continue or divert, as the case might be, the course of such peculiarities, however certain and even visible their existence. Caprice, as mere caprice, cannot be deemed to have any being in this beautifully organised and beautifully governed creation. Peculiarities of form or surplusage, or deficiency of parts, may appear and disappear for several generations and be thoughtlessly called caprice because it is not comprehensible. But what finger can point at any fiat throughout the whole economy of this marvellous creation that is not incomprehensible? The difficulty of the subject is necessarily increased by the multiplicity of diatheses and combinations of diatheses which are mingled in the veins of every individual; and the importance of it is constantly increasing as a consequence of discoveries, real or supposed, which are constantly in progress. The subject is too difficult and too elaborate for the student to undertake as a whole, and his attention is directed rather to such facts as he may observe while in his actual pupilage, and to the elementary stages of it, reserving the deeper studies and reflections for a future period.

This address was concluded by some remarks on the advantages conferred by Medical societies, and by adverting to the satisfactory progress of the "Junior Medical Society of London."

GUY'S HOSPITAL.

The Introductory Lecture was delivered by Mr. Thomas Bryant on October 2. The lecturer having alluded to the importance of the occasion they had met to celebrate, and the interest which most men feel in such gatherings, passed on at once to the immediate subject of his discourse, saying:—I propose to show you how to make the most of the means offered to you for your instruction, and how to avoid the

errors which are incidental to your position; to indicate the principles by which you should be influenced in your career through life, and the best means of acquiring a healthy success; in a few words, to point out to you how to do, what, I may presume by your presence here, you have already decided upon,—how to become useful members of a glorious Profession, and to maintain that status amongst your brother men which is always awarded to the man of any position and profession who performs the duties of his office with efficiency, zeal, and honesty of purpose.

I need not inquire, he stated, into your motives for selecting the Medical Profession as your special study; I willingly accept them as being sound, in determining your choice. I do not believe you could have selected a career in life which opens up a wider field for observation, a more general employment of all your mental, moral, and physical faculties, or which has nobler objects and more certain results; for the entire occupation of the Practitioner of Medicine is essentially one of doing good, and, whilst furthering the welfare of his fellow-creatures, mitigating their sorrows, and perchance prolonging their lives, he is fulfilling man's highest privileges, at the same time, he may secure for himself all those worldly advantages which are so naturally coveted,—competence, consideration, and respect, if not wealth, high honour, and esteem. How then, he asked, are you to employ your time and faculties to the attainment of these high ends? How are you to methodise the one and develope the other to make the best use of the opportunities now opened to you for your Professional instruction?—for such questions are of the highest importance, and upon the manner in which you will to solve them must your success or failure in life be necessarily determined. Can I, then, impress upon you too forcibly the important truth that the opportunities you may now enjoy are open only to the most of you for a few short years, and that no future exertions on your part, or any good fortune, will enable you to make up for the neglect of the use of those means of instruction which are now offered to you. Let energy, industry, and perseverance be your constant companions, such qualities being absolutely essential for any great success; without them, the noblest faculties are rendered comparatively useless, and so-called genius is a delusion.

The lecturer then made some few allusions to the schemes of education demanded by the Medical corporations, stating that there was still room for further improvement, and until both learning and cramming are made subordinate to clinical observation and practical experience, individual judgment called forth by the public test of the student at the bedside, and the practice of our art more generally taught than abstract principles, and tested by practical illustration, the Professional public will neither rest satisfied with our examining boards nor will the education of our students be what it ought. He then dwelt on the use of book knowledge, and explained how it was to be made most available. By reading and study, he told us, we may become learned men; by observation, thought, and practical experience we become sound Practitioners; the literature of our Profession may teach us what to observe; by thought and observation we learn how to observe; and practical experience alone teaches us how to apply the results of this observation and thought to the case before us. He next dwelt on the value of clinical investigations and the practical application of our art. Let some portion of every day, he advised, be devoted to the observation of disease and to the consideration of what you have observed. Discuss the different points of the cases you have seen, and seize every opportunity of examining for yourselves by eye, ear, and hand, the cases as they come before you, for the power of observation is one of considerable difficulty, it is to be acquired only by long and continued training, nothing but individual energy and care will make you masters of this faculty, and the sooner this education is commenced the greater are the probabilities of your becoming good and trustworthy observers.

The lecturer then went on to show how a man of great reading is not of necessity a man of great knowledge, and that to read with profit you must read with the understanding. He would also have us careful in the acceptance or use of words which do not carry with them any definite and distinct idea, and illustrated the necessity of observing this truth by several instances out of the practice of his Profession. He then passed on to consider the plan of study he would wish the student to adopt, and would have him curb his natural wish to make rapid progress, and be satisfied with a sound one. Rest assured, he said, that it is better, more particularly at the beginning of your work, to learn a little well than much indifferently, and towards the end you will have made more real, though less rapid, progress than the pupil who, with natural anxiety to make way, has gained a vague idea of many things and of much knowledge which is not his own, for he has not received it into his understanding, nor obtained a clear perception of its bearings, he has filled his mind with good material, but has not digested it.

The lecturer advised the student to make an abstract from memory of any subject he might be studying, this habit tending much to facilitate progress. He dwelt, also, upon the necessity of giving close attention to the work he had in hand. It is this faculty of close attention of the mind, he stated, which accounts for the chief difference between men, the soundest and clearest thinkers having it in the greatest degree, and the careless and most superficial in the least. The habit of attention, however, he reminded us, is one readily cultivated. He advocated the habit of free discussion and questioning on all occasions; question yourselves, he said, as well as each other, for in doing so you check your own knowledge, and by looking at things in many aspects render your conceptions clear. He cautioned the student, however, against the error of mistaking the power of talking fluently on a subject for true knowledge, or glibness of expression for clearness of thought. A facile tongue with a little information may to the uninitiated indicate wisdom; but to the better informed it is estimated at its true worth. By all means educate as much as you can facility of expression; but be careful that such is rendered the medium of conveying definite ideas; let distinctness of expression advance side by side with distinction in thought. He dwelt upon the necessity of each day having its own work, and of the variety of studies which our Profession affords; every faculty of the mind, he stated, is called into action by the diversity of our pursuits; every moral sense and human sympathy is equally played upon, tested, and strengthened; our physical energies are likewise exercised with the same regularity; no one faculty—mental, moral, or physical—is educated at the expense of another; all are required for use; as a complete education of the whole man, I hold our Profession stands pre-eminent. In this variety of work he would also have the student find his mental recreation; for, gentlemen, he said, you have much to do, but only a few short years to do it in; you have many subjects to study, and the majority of them must be acquired during your pupilage within these walls; it is absolutely essential for you to do your work whilst you have the time, and to make the best of your opportunities whilst they are yours; for am I wrong in assuming that it is the aim of you all to become sound Practitioners, and when you leave these walls to be fit for practice? These ends can only be secured by steady application, and close attention to the work before you.

The lecturer then passed on to consider the subjects of study for the Medical Profession, and inquired into our capabilities of grasping such a multiplicity of subjects; he asked what manner of man is, then, required for a Medical Practitioner? What are the mental and moral qualities which it behoves us to cultivate? He dwelt upon the relations which exist between the public and Practitioner, and showed how, being based purely upon honour, it was most essential for them to be scrupulously observed; and be cautious, he stated, in trifling with such honourable relationships, and be never tempted to betray a trust. Regard every engagement with the public as sacred, and under no circumstances voluntarily relinquish one when once undertaken, unless you resign it into the hands of another accepted by your patient.

He then passed on to consider the duties we owe to one another, to our Profession, and to the institution with which we are connected. He paid a high tribute to the memory of the late Dr. Addison, who, in an eloquent introductory lecture, laid great stress on our relative duties, asking his older hearers to recall the eloquence of his address, the high tone he inculcated in us all, the scrupulous care with which he would have had us conduct all our Professional relations; did he not prove that the surest way of guarding our own Professional honour was by protecting the Professional honour of others? and has he not impressed on us all that, however necessary it may be for us to be sound in our Professional knowledge, prompt in its application, and skilled in its exercise, it is equally—nay, more—incumbent upon us to be, as Medical men, of untarnished honour and in every sense gentlemen.

He then made a few remarks on some points of Professional misconduct, which at times bring discredit on our body. He condemned the conduct of the man who allowed himself too

readily to appear in court as a prosecutor, or on the side of the prosecution, against a fellow Practitioner, for so-called malpractice; and explained to the student how he was to act when appealed to under such circumstances. He asked, should a Medical man ever allow himself to appear in public as an advocate in any cause? Is not his true position essentially judicial, and as a consequence should it not be independent. He believed it to be lowering the dignity of our Profession by ignoring one side of a case and elevating the other; by giving up to non-Medical minds the task of judging of the true bearings of a question which they cannot clearly understand, and which an educated Medical mind can alone appreciate, whilst we are doing our best to confuse their thoughts and perplex their judgment by our adverse theories and rival opinions. Again, he went on to inquire whether it was consistent with the duties of a Medical adviser of a railway company to become the agent of the company in any extra Professional capacity? If it be right that he should avail himself of the facilities open to him as a Medical man for gathering information extra Professional; or allow such information given to him in confidence as a Medical man to be used for other purposes than those for which it was given. He condemned the practice, and gave some good advice as to the Professional man's true duties. As a conclusion, he would ask his hearers to realise the responsibilities of their task. Have you considered, he inquired, the good you may be permitted to do, or the frightful evil it may be in your hands to work? Need I dwell on the value of a human life, and show you how that life may be prolonged or shortened by the science you profess? Need I place before you the happiness or misery which rests upon that life to make you fully aware of the responsibilities of the trust committed to you? Gentlemen, I feel assured that such a task is quite unnecessary. I am addressing men, Christian men, who have been brought up in and taught Christian principles; who are ready to acknowledge that life, with all its duties, trials, and temptations, has something more than these to fulfil and overcome; that it is hedged in with responsibilities, with higher hopes and aspirations; and that its responsibilities are great or small in proportion to the capabilities of good or evil which are intrusted to us. It will be your fortune to have intrusted to your charge enormous capabilities of doing good or evil. Let this thought, therefore, be before us; let it be constantly before you in all your studies, for it is an encouraging one. It will make you feel the necessity of taking full advantage of your time and opportunities; it will render you more alive to the responsibilities of your present duties, and make you understand how your whole future career for good or evil entirely depends upon the way you use your present advantages. Gentlemen, realise the fact, that it is upon the use you make of the opportunities now offered to you that your whole future life will be one of usefulness and honour, or will be turned into a career which can only spread sorrow and mischief around. Think of the responsibilities which must attach to us all as Medical men, and then of the responsibilities of one who has undertaken these duties without a competent knowledge of his Profession, who is compelled to follow for a life a Profession for which he is unfitted, having failed to avail himself of the opportunities he had when a student like yourselves, and such opportunities have gone for ever. Gentlemen, think of these things, and make an inward vow that such a failure shall not be yours.

KING'S COLLEGE.

Professor Priestley said: At the commencement of another Medical year his colleagues had imposed upon him the duty of opening the Session, and of greeting alike new and old students. The office of lecturer on such an occasion was not an easy one; for besides provincial schools, there were no less than eleven Medical Schools in London that year after year opened the *annus Medicus* with an introductory address, and it might well be surmised that the mine of original materials suitable for such occasions was long since worked out. He proposed to address himself chiefly to new students, to whom the whole realm of Medicine was as yet a *terra incognita*, and the simplest facts of the science shut up, as it were, in a closed book. Older students, however, might be none the worse for having their memories refreshed by what they had learned before; for there were some truths so important that they did not suffer by repetition, nor could they be too frequently reiterated. The utterances of introductory lectures might be wearisome from the frequency of their repetition; but the practice of giving inaugural addresses was useful, for it gave the Professor charged with the duty an opportunity of speaking of general principles and rules of conduct applicable to the whole domain of Medical study, without trenching on the special departments of his colleagues. To-day he might be as one who ascends a high tower to take a general view of the country to be possessed, and, looking over the high walls and enclosures, regard the relations of the several departments each to the other, and the aspect as a whole; to-morrow they must descend into the several sections of work, and familiarise themselves with the details.

In all the attempts of the rational Medical Practitioner to attain the objects of his art, there were certain principles, and, so to speak, modes of thought, which influenced his conduct and practice, and this seemed a very suitable occasion for an endeavour to indicate certain prominent Medical truths which might serve as landmarks during Medical study. Like other branches of knowledge, Medicine had passed through vicissitudes, and various phases of development. Beginning first as a simple form of empiricism, it had then become clouded with mythology and superstition, and again been mixed up with philosophical speculation—ideas being substituted for facts, and conjecture taking the place of careful observation; or confidence was reposed in the good and evil influence of the heavenly bodies, and herbs were gathered when the moon was rising, full, or waning. But as early as the 5th century before Christ Medicine began to be studied as a science and practised as an art. That period of great intellectual activity which produced Thucydides, Socrates, and Plato, Euripides, Aristophanes, Zeuxis, and Phidias, also produced the divine man of Cos—Hippocrates—to whom we owe so much. It was he who pointed out the great truth, which remains steadfast to the present day, that in the human body resides a power which not only preserves it in health, but will, if suitable conditions be procured, restore it when striken with injury or disease. What the laws of gravitation are to astronomy, and those of affinity to chemistry, such are those of what are termed "vital force" to Medicine. Without a due recognition of the *vis Medicatrix*—of the *vis vitæ*—the Physician must be constantly over estimating his power over disease or going hopelesly wrong in his efforts at cure; and a thorough understanding of this great principle was the more important to the new students, inasmuch as it influenced every proceeding of the scientific Physician and Surgeon. The rational Medical man set about the treatment of disease in a very different fashion to that usually supposed by non-Professional persons. Commonly it was supposed that the Medical Practitioner had, or ought to have, or would have, when science was more perfected, a specific remedy for every ailment. Indications of this fallacious idea were seen everywhere. Even the press, so powerful for good or evil, copied and re-copied supposed cures by specific remedies, and thus fostered the delusion. The truth was, that but a small number of diseases were traceable to morbid poisons, and the number of specifics we possessed, or were likely to possess, were still smaller. The large proportion of ailments were owing to unnatural conditions of life, impairing nutrition, and leading eventually to pain, disease, and death. He begged not to be misunderstood. He would not lead the student to undervalue the resources of art. It was quite true that there was no knowing how to cure diseases by art without first knowing how they were cured by Nature; but the parody was not true that the art of Medicine consisted in amusing the patient while Nature cured the disease. Unfortunately, we had but to make acquaintance with the vital force to learn that, unaided, it is in many cases borne down by adverse influences. Nay, more, that, however salutary in its general operations, it may be so perverted as to lead to infinite mischief. "Though Nature knits up wounds by her adhesive inflammation, by the very same method she glues the intestines into fatal entanglements, shackles the heart, and chokes up the windpipe. . . . Nature is ever the same; blessings are mixed with curses; the poisonous berry and the nutritious root are found on the same plant; there are balmy dews and pestilent fogs, fertilising streams and destroying deluges; and the lair of the murderous lightning is in the cloud that floats across the blessed sunshine." Such were the incongruities to be understood and contended with; and, although the rational Physician did not treat diseases by specifics, yet he had great power in controlling morbid action. He was, as a rule, so to speak, in the position of a constitutional minister—rarely in that of a master. He was the servant and inter-

preter of Nature; removed hindrances out of her way; sometimes, it might be, he restrained and controlled her. But the function of the Medical man extended beyond the treatment of disease *in præsentiâ*. In the department of preventive Medicine he had unbounded opportunities for usefulness, illimitable scope for philanthropy. The lack of sanitary knowledge was deplorable, and the results most disastrous. It seemed to him that there was much analogy between the duties of the clergyman and Medical man. The latter must be ever preaching as well as working; and as he saw young and old cut off by diseases which might have been prevented, if his heart was in his work, he burned with desire to bring back the bodily economy to the supreme guide, just as the clergyman yearned to bring back the erring soul to its Maker. It would be in their province, as Medical men, to counsel the young, the old, the wealthy, and the poor, how each in their several ways might lead physically better lives—in a word, they would have "to carry hygiene into the army, the factory, and nursery, down rivers, and across fields."

And how were students to qualify themselves for these great responsibilities and duties? Long ago Hippocrates wrote that it was indispensable the good Physician should have the qualities of learning, sagacity, humanity, and probity. Learning they must have, to aid them in solving those great problems of life which came especially within the province of the Medical man. It might seem hard that for them the portals had been narrowed—the entrance to the Profession made more difficult, as compared with previous years; but they would eventually see that the recent more stringent regulations in reference to preliminary education were just and right. It was but fair, in contemplation of the great interests involved,—the charge of health and life committed to their care, that nothing should be omitted in the way of mental discipline, lest the grasp of Professional knowledge later should prove to be defective because the early training had been imperfect. It could not be too much insisted upon that a Medical curriculum had its chief value in the habit of thought it impressed on the student, and in the way it taught him how to observe, and rely on his own resources. Medicine was not a mere handicraft to be followed as a means of living, but a study that might cultivate the entire powers of the intellect.

Having dwelt on sagacity as a composite quality, consisting of the power of accurately observing and drawing correct inferences from the premises, the lecturer showed how the Medical man must be constantly acting on probabilities, and that there was no worse sign of the knowledge or honesty of a Medical Practitioner than to hear him speak of his cures, or prognosticate too dogmatically what would be the result of his treatment. Like law and navigation, it was full of uncertainties, and even large experience did not dispel modest doubt and diffidence.

Humanity and sympathy a Medical man must have, and exercise as a great power for good—the confidence a patient had in their Doctor greatly aiding the value of his remedies.

Probity was especially needed, for the Medical man was exposed to unusual temptations. The craving of people for new fashions in Medicine, the defective knowledge abroad of the scope and value of the Medical art; the ease with which large fortunes might be made by professing any startling form of charlatanry, offered serious inducements to the struggling Practitioner to depart from rectitude. And besides the open forms of dishonesty, there were so many covert ways in which want of principle might show itself. He might exaggerate a patient's illness to magnify his own skill, or "make the most of him." He might by many wily and unscrupulous ways undermine the reputation of a Professional brother, and end by dispossessing him of his patient. He (Dr. Priestley) considered that the basis on which all true Medical etiquette was founded was, "Do unto others as you would that they should do unto you," and any action that would not bear this test came of evil.

Lastly, sound physical health was almost indispensable to the Medical student and Practitioner. They ought even in their novitiate to set an example of the way they observed sanitary laws; they ought to work steadily and moderately, availing themselves of opportunities for physical exercise, legitimate in kind and amount. He rejoiced that there was no need to warn them against certain pernicious practices yet prevalent among students abroad.

Scarcely a student he met in Heidelberg last year whose scarred face did not bear evidences of previous encounters in duels. Some had fresh wounds, from which the surgical stitches were not removed. The practice of duelling was a relic of barbarism, alike a disgrace to authorities and students, which fostered false notions of honour, and propagated the idea that stains on character could be wiped out by scratching and piercing each other like brute beasts. Fortunately, unseemly conduct was rare at King's College. There was a contagion for good as well as for evil, and a breach of good conduct would be resented by the whole school. The rewards of the Medical Practitioner did not flow rapidly, but there was abundant gratification in the judicious exercise of Medical art. It was well not to be greedy of gain, but to give the love of their art the first place, and, as a natural sequence, the monetary rewards were the more likely to follow. The sanctifying and softening influences of his Profession were among some of the best rewards brought to the Medical man, and he would the better perform all his duties the more he exemplified all Christian virtues. It should be his aim, like the man described in the "Gentle Life," "to be humble minded, meek in spirit, but bold in thought and action; to be truthful, sincere, and generous;" to be more careful of wounding the susceptibilities of others than jealous for his own self-love; "to be pitiful to the poor and needy, respectful to all men; to guide the young, defer to old age; to enjoy and be thankful for our own lot, and to envy none. This is indeed to be gentle, after the best model the world has ever seen," and there can be no better model for a Physician.

ST. MARY'S HOSPITAL.

The Introductory Address at St. Mary's Hospital was delivered by Dr. Handfield Jones, F.R.S., one of the lecturers on Medicine. After the usual greetings to the older students and friends of the School, and to those who joined them now for the first time, the speaker proceeded to touch on various topics. He commended to the students the choice of a profession which they had made, on the ground that it afforded them no mean opportunity of serving God and benefiting their fellows. Though it offered them none of the high prizes which were to be won in other callings, it brought them into pleasant and friendly relations with many who were most worthy of their esteem and regard, and this in itself was no small advantage. To do good work, and to be loved for doing it, was surely an enviable lot, and this was in the reach of all who practised their Profession intelligently and faithfully. The true *ιατρος* should seek his eminence not so much in outward distinctions as in attaining increased power and mastery over disease. For the promotion of this great object combined effort on the part of the Profession was strongly advocated. Quackery, he believed, could never be suppressed by any legislative interference, and he did not think it was worth seeking for. Even among our French neighbours quackery flourished, in spite of prohibitions and fines. An instance was related showing that even attainments in physical science are no preservative against the reception of patent absurdities by the mind, which, though fully aware of their falsehood, cherished them nevertheless. The extraordinary influence of certain mental states over the body was next adverted to, and some remarkable instances were cited, both of the prevention or repression of disease by cheerful excitement, and of the apparently curative powers imparted to insignificant remedial means by strong feelings of hope and faith. It was notorious that constipation, which had required on former occasions the strongest drugs, had yielded in a much shorter space of time to bread pills, while the patient believed he was taking some very powerful remedy. It was of great importance for the student to be well aware of these facts, and to see their bearing upon the treatment of disease, as well as upon many instances of apparent success of means which every rational person must believe to be totally without physical agency. In connexion with this subject, the lecturer took occasion to state plainly the real ground why the Medical Profession refused to have anything to do with homœopathy, or to meet its practitioners in consultation. It was not that the dogma *similia similibus* was the real obstacle—this, if it were all, might be held, as many other queer notions have been held in men's minds, and prove no hindrance to their co-operating with their fellows in matters of mutual concernment. But when a Medical man believes that the weaker a medicine was made the stronger were its effects, or that the billionths of common salt, silica, or sulphur could exercise curative virtues, though we take in our daily food much larger quantities of the same substances every day, he puts it really out of the power of a man of ordinary calibre of mind to consult with him. You might as well call two engineers to act

together in building a bridge, one of whom believed that the thinner and weaker the supporting structures were made, the greater would be their power of enduring strain. It is no intolerance or prejudice, but common honesty, that compels rational Practitioners to decline meeting those who entertain these peculiar views. Were they to do so they must feel that, according to their own principles, they were acting as charlatans. The charge of bigotry, or unwillingness to receive improvements in Medicine, was most completely refuted by the ready way in which the Profession had advocated sanitary improvements, to their own unquestionable disadvantage.

The next subject touched upon was the question how far diseases could be regarded as sufficiently constant and regular processes to make it possible to determine what is called their natural history,—*i.e.*, to ascertain what course they would pursue in the great majority of cases if left entirely to themselves without any Medical treatment whatever. The lecturer remarked that it was difficult in many cases to distinguish between the original morbid action and the complications to which it gave rise; that the duration of diseases of the same kind depended, in some considerable measure, on their gravity, —*i.e.*, on the degree in which the system is affected by the morbid influence; and that they were modified also materially in their course by constitution and diathesis, and the prevalent epidemic influence. Diseases by their outward show might be very much the same, might have the same names, and be counted in the registers as identical, and yet in their tendencies and essential nature might be most different. This was completely recognised by the best authorities, and yet was far too little considered in discussions on the treatment of disease. Looking at all the facts, he could not but assent to the view which regarded diseases "not as nosological abstractions, but as deviations from the healthy standard involving a great variety of elements, each of which may, in its turn, differ in degree, character, and relation in any given number of patients brought together for comparison," as it was well expressed by Dr. Sieveking. Now, if the groups of morbid processes which we call diseases are made up of such varying and unstable materials, how can we hope to ascertain the periods during which they will continue when left to themselves? Must not these be as varying as their elements are?

The latter part of the lecture was chiefly addressed to the junior students, who were counselled in all earnestness and affection to make the Bible their rule of life, and to believe that in leading religious and God-fearing lives they were insuring their truest happiness. Even the godless will admit now-a-days that there is nothing unmanly in religion, that some of the most eminent and capable in every walk of life are men of this stamp. It was, however, maintained that in proportion as a man draws near to God he elevates and ennobles his own nature; while in proportion as he recedes from Him, and ceases to experience His influences, he becomes debased and degraded. None have more need to realise the power and pervading presence of the Creator than those to whose hands is entrusted the task of ministering to those bodies which are or may be the temples of His Spirit. It would be in every way unworthy to neglect those studies which are to fit us for so important a ministry, and to prevent us from being drones in the working hives. This would be indeed unmanly. There was, he trusted, little fear that any of the students of St. Mary's would prove shirkers of their work, but it might not be amiss to insist how much depended on the mode in which work was done. Much time might be spent about study, and yet little accomplished for want of earnestness and energy. The lecturer earnestly recommended the practice of taking notes of the cases witnessed in the wards and out-patient rooms, and quoted an extract from the autobiography of Sir B. Brodie in which the importance of this clinical study was strongly enforced. With regard to lectures, he agreed also completely with the same high authority that they were greatly too numerous, and advocated, indeed, their abolition as means of systematic instruction. He thought that the tutorial system should be substituted to a very great extent for the Professional, and that what schools of Medicine should do was to provide students with the means of studying their subjects efficiently, and of familiarising themselves with the actual things of which they had descriptions in standard authors. With the excellent works now published in every branch of Medicine and its collateral sciences, and with the material objects before him, a student who wished to work could not fail to acquire sound and lasting knowledge; while it was too well known that on the old *régime*, where words were of more account than things, the lecturer had very often to be supplemented by the grinder. The examining boards, the lecturer held, should confine themselves very much to testing the student's knowledge when he presented himself for their diploma, and should leave it to the student to acquire his knowledge in the way which he found most advantageous.

In conclusion, it was pointed out that the desire of great temporal success ought not to be the chief incentive to earnest exertion, but the determination to fulfil our duty; that the might of moral principle was greater than that of ambition, and that its ultimate reward was surer.

WESTMINSTER HOSPITAL.

The Session was inaugurated with an Introductory Address by Mr. Barnard Holt, Senior Surgeon to the Hospital, who inculcated the absolute necessity of a sound preliminary education, to enable the student not only to appreciate that which he has to learn, but to fit him for the position which every member of the Medical Profession may hope to attain. Mr. Holt said:—Although I am desirous of avoiding the topics that have been so ably handled in former years by my predecessors, yet it is impossible not to follow in some degree in the same track. It is necessary to recommend the same great moral principles—love of truth, active benevolence, untiring industry, and a desire for the acquisition of knowledge, which form the basis of Professional excellence. In a highly educated assembly like the present, every one has imbibed notions more or less distinct of his moral duties, probably some taste for literature, and perhaps some feeling for art. These acquirements, however, go but a little way towards the accomplishment of that moral and intellectual training which is a necessary element of the Medical character, and which has won for our Profession its present social elevation. Even the fortunate possessor of the most comprehensive preliminary education will find that he has much to effectuate by his own industry. There is an education derived from self-discipline and reflection that no school can bestow. The more cultivated the mind of the Practitioner, the more his intellect is sharpened by rationalistic exercises; the more his moral perceptions are developed by a vigilant conscientiousness, the more his nature is softened by an indulgence in the refined pleasures of taste, so much the more efficient will he be in the practice of his art, the greater will be his perspicuity in discriminating nice shades of disease, the richer will be his invention of resources, the more persevering his zeal for the welfare of his patient, and, above all, the more liberal and just will his bearing be towards his Professional brethren, whom his enlightened understanding will have taught him to regard, not as rivals, but as colleagues and allies in the great crusade against pain, disease, or death. Mr. Holt then alluded to the students' reasons for selecting the Medical Profession, and impressed upon them the necessity of exerting themselves to the utmost, and losing no opportunity of gaining practical knowledge by attendance in the wards. You are about to enter our Profession—a Profession which, to practise it as it should be practised, will sorely try your self-denial—yet a Profession of the highest honour—a Profession of the most sacred trust. Do you enter it for emolument, for fame, or with the desire of doing good, or, I might add, in order to combine a competency with the high feeling of the benefits which, by a severe course of study, you may confer on your fellow-creatures? I am afraid, as a general rule, these inquiries are never made; it is a very difficult thing in the lottery of life to bring the young mind to consider seriously all the bearings of the profession he selects. It may be that you enter our Profession because your father is already a worthy member of it. It may be that your parents desire to provide for you a competency which you may obtain by the exercise of our honourable Profession; but whether it be one or whether it be the other, let me beg of you that you will avail yourselves of every opportunity to become proficient. If time allowed me, I would direct your attention to the nature of our separate faculties and the astonishing results of their combined actions. I would try to show you how they antagonise one another, and that the victory of good over bad qualities, or bad over good depends upon your own principles and determination; that you have a controlling energy by which you can array your mental powers and prepare them for the contests in which success is glorious.

The lecturer then remarked upon the indivisibility of Medicine and Surgery, which he regarded as one science, and after giving a brief history of the progess of Surgery, alluded

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pointedly to the present state of the Profession, and the inclination of the public mind to specialities and special Hospitals, which he severely criticised, and said that although Medicine and Surgery were essentially one science, the great division into Physic and Surgery is not without its advantage; that although it in no manner absolves the Physician or Surgeon from becoming acquainted with all the details that appertain to a thorough knowledge of his Profession, yet it enables him to accumulate a larger experience in the branch he selects than if practised generally. The Surgeon in general practice has but little opportunity for that deep reading and contemplation so necessary for him who is desirous of occupying the highest rank. It is impossible among the multiplicity of his engagements, both by day and by night, that he can so familiarise himself with all the improvements in Medicine and Surgery as to be capable of forming the best opinion, and in many instances the refined, so to speak, diagnosis, which in intricate and difficult cases is to turn the scale to health or death. This, Mr. Holt said, was well known by the gentlemen to whom he referred, and although they might be highly educated, and have a large experience which was available for all ordinary occasions, yet they cheerfully availed themselves of the opportunity of consultation whereby they not only benefitted their patients, but themselves became familiar with the more extended experience of their fellow labourers.

The lecturer then dilated upon the necessity of a thorough knowledge of anatomy and physiology as the basis of all sound Professional principles, and inculcated the necessity of clinical study as superior to systematic lectures. The book of nature was the book for study, and by it and it alone could the Practitioner be successful.

In conclusion, Mr. Holt said:—"I have thus faintly endeavoured, gentlemen, to impress upon your minds the indubitable fact that in choosing the Medical Profession you have entered upon a career in which all the good and great qualities of human nature are called forth. I have also shown you the way in which this desirable object can be reached. Industry and perseverance are necessary to success in every line of life, but most especially so in the attainment and practice of a noble art, which puts to the proof the rarest of the human virtues, and has occupied the thoughts of some of the most gifted of our race. Our Profession is indeed a noble calling; in every branch it affords occasions of self-sacrifice, and demands the exercise of the highest powers: the Physician by his varied learning, the Surgeon by his disciplined skill and fortitude, and the general Practitioner in his wide field of usefulness. If he fail in the achievement of fame, which is but the lot of few, he is sure, by the conscientious discharge of his duties, not merely to win the hearty respect of his species, but to command that perfect self-contentment which is the constant attendant of an approving conscience, and the very core and essence of happiness here and hereafter."

After the lecture the Medical officers and lecturers received the students and their friends at a *conversazione* in the Board-room of the Westminster Hospital, where numerous objects of interest were collected and refreshments were served.

THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At a meeting of this corporation, held on the 2nd inst., the following office-bearers were elected for the ensuing year, viz.:—President: John Gibson Fleming, M.D. Visitor: Andrew Anderson, M.D. Treasurer: John Coats, M.D. Honorary Librarian: George Rainy, M.D. Vaccinator: James Dunlop, M.D. Councillors: The President, *ex officio;* the Visitor, *ex officio:* John Black Cowan, M.D.; John Coats, M.D.; A. D. Anderson, M.D.; James Watson, M.D.; Chas. Ritchie, M.D. Board of Examiners: Chas. Ritchie, M.D.; William Weir, M.D.; James Steven, M D.; James Adam, M.D.; Thomas Watson, M.D.; William Lyon, M D.; Andrew Buchanan, M.D.; James Morton, M.D.; George Buchanan, M.D.; Andrew Anderson, M.D.; Robert Perry, M D.; R. D. Tannahill, M.D. Examiners in Arts: Professor Ramsay; Dr. Bryce. Finance Committee: The President, *ex officio;* the Treasurer, *ex officio;* James Watson, M.D.; Wm. Lyon, M.D; Chas. Ritchie, M D.; James Steven, M.D.; William Weir, M.D. Library Committee: The Honorary Librarian, *ex officio;* Alex. Lindsay, M.D.; James Adams, M.D.; G. H. B. M'Leod, M.D.; Peter Stewart, M.D.; W. Leishman, M.D.; T. M'Call Anderson, M.D. Inspectors of Drugs: George Miller, M.D.; Alex. Lindsay, M.D. Clerks: L. Hill, LL.D.; William Hill. Librarian and Secretary: Alex. Duncan, B.A.

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Medical Times and Gazette.

SATURDAY, OCTOBER 7.

A NEWSPAPER'S OPINION.

THE opening of the various metropolitan Hospitals and the delivery of the introductory lectures have been a godsend to journalists. No matter what newspaper we take up, we are sure to find a critical review of the annual Medical orations or a little sensational writing upon female Practitioners, or a more comprehensive article upon the present condition of Medicine and of the Medical Profession. It is both instructive and interesting for us to find out in this manner what other people think of us and of our work; whether they appreciate the kind of difficulties which we have to encounter, and the means which we employ in combating them; and what is the nature of the physiological and pathological opinions held by the general public.

The *Times* newspaper is either sadly ignorant of the state of our Profession or the Profession is grievously in want of reform.

The *Times* argues that the practical science of Medicine, having no general interest, has been left in the hands of a little knot of men who make their living by it, and who, instead of looking upon it as a science, and studying it by interrogating Nature, and bringing all available light to bear upon it, hedge it round with mystery, hand it as a secret from one to another, and jealously guard it from extra-Professional criticism.

It darkly hints that this state of things will not be tolerated much longer; that Medicine will even be called to the bar of public opinion, and be forced to confess her secrets, and trace, step by step, the train of reasoning which guides her.

We have always imagined that Medicine was rather a favourite subject with the British public. To judge from the columns of correspondence on Medical subjects which crowd the pages of our daily papers, we might conclude that the practical science of Medicine was very generally interesting; and that the public by no means hesitate to give their opinion upon it. The British public are not so helplessly idiotic as to entrust the care of their lives to a class of men without having first ascertained that these men can really be of use to them. Nor are they so devoid of intelligence that they fail to make themselves acquainted with the more prominent facts taught by physiology and the general principles which guide us towards a rational cure of disease. Ever since the time when Sydenham practised and wrote we have been systematically interrogating nature. We no longer attempt to evolve out of our own consciousness what Nature ought to do, but we watch her in her operations. We no longer are traditionalists. Our present tendency is, perhaps, to set too light store upon authority. Our whole energy is concentrated upon the collection of facts and the attempt to deduce great general principles from these facts. We protect those who

are unable to judge for themselves from falling into ignorant hands by incorporating ourselves into a society which will admit none who does not give proof of intelligence, of liberal education, and of special Medical study; but we ourselves go seeking information from all. If any one can tell us anything useful, we do not pause to inquire whether our informant have a diploma. We get many useful hints from agriculturists, from breeders of cattle, and from mothers.

"But," says the *Times*, "Medicine must have the same tests applied to it as are applied to other practical sciences." What better test can be applied than the test of actual results? Dr. Simpson sums these up. Two hundred years ago, when Sydenham was practising, the most destructive diseases were plague, ague, dysentery, scurvy, childbirth, and small-pox. These maladies no longer enjoy their fatal pre-eminence. We have banished the plague, which in the olden times often destroyed in London more lives than all other maladies counted together. We have rooted out and modified the ague, so that it is rarely a fatal affection now, while every year it destroyed thousands formerly. Scurvy has almost disappeared from our mortality bills. Dysentery, though still sometimes a fatal disease, is infinitely less common and infinitely more under Medical treatment than it was at the time of Sydenham. In the middle of the seventeenth century one in every forty or fifty women died of childbirth or its consequences; but gradually as Medical science has advanced that mortality has decreased, till now not above one in 150 or 200 die. Small-pox has been almost entirely destroyed; in England alone vaccination saves 30,000 lives every year. The triumphs of Surgery are so apparent that it is needless to insist upon them. But, it is said, you cannot cure cholera, you cannot exterminate the cattle disease. No, we cannot; but we shall in time. By all means let the non-Medical world assist us; let us introduce, if possible, more of system into our method of observing. We should get on far more quickly than we do if we were more closely incorporated. Already a step has been taken in the right direction by the inauguration of officers of health.

But this is not enough. What we want is a central bureau, whose chief officer shall have position and power, with branch establishments scattered over the country, provided with a sufficient and properly paid staff, whose duty it will be to prosecute every particular inquiry to which they may be directed by their superior. We cannot believe that "Nature guards the secret of the true character and remedy for these dreadful scourges which afflict humanity, and refuses to yield them to the most patient and careful investigations." She will yield them, but only in time. The difficulties in the way are tremendous, and scarcely to be appreciated by those who have not encountered them, but we have a well-grounded belief that they are not insuperable.

A LANGUISHING SERVICE.

Englishmen are supposed to cherish a national and inherited love for the peculiar charms, dangers, monotony, and excitement of the waves which we all devoutly believe we have been ruling since the time of King Alfred. That the Profession of Medicine share in this feeling is evident from the number of Medical candidates who are always waiting for employment in the service of great mercantile companies, such, for instance, as the Peninsular and Oriental. As a Profession, also, we are ever ready to serve the State whenever the State requires our aid. If Government to-morrow were to call for Medical men to proceed to Russia and Hungary to investigate the causes of cattle-plague, or to go to Swansea to confront the yellow fever, or to Southampton to assist Professor Parkes and Dr. Wiblin in cutting short the outbreak of cholera, we believe they would be overwhelmed with the number of offers poured in by the Profession from all parts of the kingdom. Yet if we were asked to name at this moment the most unpopular branch of the public service, we should unhesitatingly say the Medical Department of the Royal Navy. If we were asked to state the reasons of our belief, it would be only necessary to refer to the Quarterly Official Navy Lists published by Murray. Take the one that has just appeared as an example. To compensate for the deaths of the quarter, we are informed that the Admiralty have only succeeded in obtaining *one* fresh entry; whilst during the same period five Medical officers—one Surgeon and four Assistant-Surgeons—have resigned their commissions. At this rate, it is quite clear that the Medical Department and the wrongs of the Medical officers will, in the course of a few more years, be extinguished together. Badly as the Medical officers of the Army have been treated by the Horse Guards, it seems that the Admiralty, in following the example set them by their neighbours, have not only, like apt scholars, imitated, but have exaggerated all the worst features of their model. It is, indeed, a question whether the most objectionable proceeding which the military authorities ever ventured on in the case of the Medical officers of the Army—viz., that of tampering with and suppressing certain portions of a Royal Warrant, was not adopted from the practice of the naval lords, who as long ago as 1806 found a parallel piece of *mala fides* the easiest and most pleasant mode of dealing with an order of Council, which treated naval Surgeons with too much justice and liberality. It is now a matter of history that Sir John Pakington's Navy Warrant of May 13, 1859, which gave to Medical officers in the navy rank and position enjoyed by Army Medical men, has been set aside and altered by the present Board until throughout the service disgust has entirely extinguished any feeling of satisfaction produced by the original measure. The only mode by which Government can restore the Naval Medical service to even a moderate degree of popularity, is by the publication of a sweeping measure of reform. In rank, retirement, and the privileges of rank, the Naval Medical officer must, at least, be put on a footing of perfect equality with the Army Surgeon.

The time at which retirement is enforced must be the same in both services. Shore allowances and prize money according to relative rank must be granted, and Naval Medical officers must not be excluded from those honorary distinctions by which the nation rewards courage and conduct. We this week publish an obituary notice of a Naval Surgeon and hero, whose name would reflect honour on any country and on any Profession. It is true that on the representations of Admiral Pellew Daniel Saunders was promoted by the Admiralty for the act of self-devotion related in his memoir, but the recognition of his services was totally inadequate and inappropriate. Promotion to the rank of Surgeon for making way through a hot fire and rescuing a wounded man was as suitable a reward as it would be to have made Havelock or Clyde President of the Royal College of Physicians. Why did not Daniel Saunders receive the Victoria Cross, or at least die a Companion of the Bath? The only answer that can be given to the question is that he was unlucky enough to be a Surgeon in her Majesty's Navy.

Already we begin to have practical proof of the injustice of the Greenwich Hospital Bill, to a consideration of which we recently devoted a large share of space. We are informed, on good authority, that Dr. Hilditch, the Senior Inspector-General of Naval Hospitals and Fleets, and now attached to Greenwich Hospital, is about to retire from the service. Captains, commanders, masters, and paymasters retire from that institution with full-pay and allowances under the provisions of the new Bill; but Dr. Hilditch will only receive the ordinary half-pay of his rank.

It is superfluous to comment on such a fact. The best comment on it, and others like it, is the number of Assistant-Surgeons who within the last three months have joined her Majesty's Naval service.

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SETTING OUR HOUSE IN ORDER.— HOW TO MAKE THE BEST OF OUR EXISTING WATER SUPPLIES.

However great the improvement effected in the quality of the water supplied to London may be, it must be admitted that water containing twenty and twenty-five grains of dissolved impurity in the gallon, about a tenth of which is of organic origin, is not of a quality that can satisfy the requirement of health, as a fluid nearly pure. Still, such is the nature of the water supply of London, excepting that derived from the London wells, which is in very many cases disgustingly impure. But since it is with the supply we have that we must for the present rest content, we should direct all our efforts to make its nature the best possible.

As for the water of the shallow wells, it should not be used at all if possible, because of its foulness. Upon the river companies' supplies only are efforts for their improvement worth being made. The stopping the use of the water from many of the shallow wells for human consumption—thanks to the efforts of the Medical Officers of Health for the metropolis and others — and the erection of fountains to furnish a purer supply, are certainly valuable measures. Well ascertained facts concerning the former outbreaks of cholera in London fully justify the advice that should but one case of cholera again occur in it, the water of the wells in the neighbourhood of the occurrence should be treated as a *poison*, and, as such, with all care shunned for human consumption.

Concerning the further purification of our river water supplies, suggestions offer themselves of means to be adopted partly by the water companies and partly by the consumers.

Seeing that the presence of *solid* organic matters in water, —for instance, particles of sewage matters—is, there is strong reason to believe, much more baneful than that of organic matters in a state of solution, the greatest clarity in the water should be sought for. By the provisions of the Metropolitan Water Act, in operation since the last epidemic, the companies are required to efficiently filter the water before it enters the mains; but at times, when rains have rendered the river unusually turbid, this requirement has been but imperfectly carried out. The difficulty of compliance with the Act at such times may be great, but still the thing is practicable, and should be enforced for the safety of the public. But even at the best of times the filtration at the water works is such as still to leave the water not so clear as is desirable. Hence, as far as is practicable, filtration by the consumer is much to be desired.

Another point, and one to which the Registrar-General, guided by the analyses of the late Dr. Thomson, has at times called attention, is, that the companies should arrange to have as much storage room as possible for water after it has been pumped up. For besides that, through being in consequence left longer at rest in the reservoirs, the water will become clearer, there are two important advantages thus gained. The one is, that water can be taken in store, and kept so, during dry weather—that is, when it is purer than usual, and then supplied, as far as it will go, in wet weather in place of water derived at the time from the river—then so much more impure than usual.

The consumer may, to a small extent, aid in obtaining for himself the best water by storage by keeping his cisterns as full as practicable from the supply during dry weather, and using as little as may in consequence be necessary of the water supplied during, or immediately after, heavy rains.

Another advantage to be gained by greater storage room is that the water may be more completely aërated after that by storing it has been cut off from further contamination with organic matters. If water containing unoxidised matter be left in a corked bottle for a few days, the water usually becomes fœtid; while if some of the same water be left in an open vessel it remains sweet. This difference is due to the action of the atmosphere in the one case and not in the other. Some of the organic matter contained in the water corked up in the bottle soon uses up the oxygen dissolved in the water, and then, through want of more of this, the remainder of the unoxidised organic matter putrefies. The organic matter in the water exposed to the air oxidises in like manner at the expense of the oxygen dissolved in the water; but then, through the free play of the air on the surface of the water, more oxygen becomes dissolved in it, and oxidation continues, instead of putrefaction setting in. In either case, the organic matters undergo change, but in the one case their change renders the water more offensive, and still leaves it noxious; while in the other it renders the water purer to the senses and less injurious to the system. So, then, the longer water can be kept in open reservoirs before being supplied for use, the more completely will its organic matters be oxidised, and therefore the more will the water be improved and purified, in a sanitary point of view. To the consumer a ready way lies open of further aërating the water intended for drinking purposes—namely, by allowing it to run in a fine stream from a height of some feet, so as to bring every drop of it in contact with the atmosphere. Water may be filtered, aërated, and slightly cooled (by evaporation), by the use of the homely expedient of a flower-pot filterer. This is nothing but one of the largest-sized common red flower-pots, suspended at a convenient height of a few feet in a shady corner of a yard or garden, having the hole in its base so plugged with a sponge as to permit of only an exceedingly fine stream of water passing through. There is one other means by which the consumer may render the water supplied to him more pure, and that is by boiling it. By so doing, some of the organic matter, otherwise liable to putrefaction, almost certainly loses this property. It has also been established that water contaminated by choleraic matters loses its infectious property by being boiled. Many persons object to the taste of water which has been boiled; but, if they would take care to allow it to become thoroughly cold and reabsorb air in place of that expelled from it by heat, they would, we believe, find no reason to object to it then. If, for instance, they supplied a filterer such as the one we have just now described with cold boiled water, they would obtain a much purer water than that they have without these operations, and one quite as well aërated, and quite as palatable.

We feel convinced that, by the practical carrying out of the simple means here suggested, our present metropolitan supplies of river-water may be used with safety should an epidemic of cholera visit us. But the closest watch, in the shape of frequent and regular analyses, such as those for which the public are indebted to Drs. Letheby, Frankland, Whitmore, and others, should be kept up on the water supplied by the different companies, as this has been proved to vary very much at times; for it is too well known that it is vain to ask, or even entreat, the masses of our less intelligent poor to adopt even the simplest precautions for their own safety, so that we may feel assured that if the water supplied to them is in any way unfit for their consumption, they will suffer from it, by taking no precautions, however easy, to deprive it of unwholesomeness before using it. Should, however, the water companies even adopt increased care in such a case in preparing the water they send out—as we feel confident they would—our water supply, it must be remembered, would even then, judging from past analyses of it, be greatly deficient in the purity it should have.

THE WEEK.

THE YELLOW FEVER AT SWANSEA.

During the past week no information of a strictly reliable kind has reached us in reference to the assumed cases of yellow fever at Swansea. All we can say, is that on Tuesday no fear of an epidemic was felt, while the cases that had occurred were looked on doubtfully. We forbear, therefore,

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for the present, and until we are better informed, from saying more on the subject.

FEMALE MEDICAL PRACTITIONERS.

We announced last week that Miss Garrett had passed the final Medical examination at Apothecaries' Hall. She is the first female licentiate of that body. We have already expressed our opinion that it is a mistake for a woman to wish to enter the Medical Profession, and we have not in the smallest degree altered our opinion. We still hold that women are not fitted for the exigences and toils of Medical practice, and that much of the study of Medical science is, or ought to be, entirely foreign to the special character and attributes of civilised woman. We will not, however, refrain from congratulating Miss Garrett on the persevering way in which she is endeavouring to gain the legal right to practise. We cannot but respect long work, tenacity of purpose, and perseverance under many difficulties, even although we have no sympathy for the cause in which such sacrifices have been made. It must doubtless be with no little satisfaction that she looks back on a career which is easy to no one, and which to a woman must have been especially hard and trying. It must be particularly gratifying to her to know that in her progress she has earned the respect and esteem of many eminent members of the Profession. But now that Miss Garrett has obtained an entry into our ranks, she has next the greater difficulty of obtaining practice. If after satisfying the proper legal requirements she thinks fit to make the attempt, we feel at least sure that our Medical sister will meet with courtesy and fair play at the hands of her Medical brethren.

PHYSIOLOGICAL TESTS FOR ORGANIC POISONS—RESUSCITATION—A FRENCH PROFESSOR ON THE CATTLE PLAGUE—THE ORIGIN OF NERVE FORCE—RAW FLESH AND ALCOHOL IN PHTHISIS—HOSPITAL DIETARIES—CLIMATE OF MALAGA IN PHTHISICAL CASES.

Drs. Fagge and Stevenson (*Proceedings* of Royal Society) have furnished a contribution to the physiological method of detecting organic poisons. Their principle is to ascertain whether the substance believed to contain any poison produces upon an animal the same effects as that poison is known to produce upon the same animal. The experiments conducted by these observers have reference to the detection of digitaline. The animals they employed were frogs. The conclusion they arrive at as regards digitaline is, that it is one of a small class of substances of which the action on frogs appears to be identical. They are cardiac poisons to frogs. The class contains, besides digitaline, upas antiar, helleborus viridis, the tanghinia venenifera, the dajaksch, or arrow poison of Borneo, the carroval and vao, South American arrow poisons, and the scilla maritima. Of these only helleborus and scilla are likely to be subjects of Medico-legal investigation in this country, besides digitaline. The characteristic effect of each of these agents upon frogs is the production of irregularity of the heart's action, followed by complete stoppage of its pulsation; the ventricle remaining rigidly contracted and perfectly pale after it has ceased to beat; the muscular power of the animal being at this time unimpaired, and persisting as long as in frogs in which the circulation has been stopped by other means, such as ligature of the heart. One curious result came out during the experiments of these gentlemen—namely, the establishment of a poisonous quality, so far as frogs are concerned, in extracts obtained from the contents of the human stomach, as from vomited fluids, when applied endermically. These animal extracts impair the action of the heart, causing paralysis of its muscle and stoppage in the dilated condition. At the same time, they generally destroy the muscular power of the animal.

The *Proceedings* of the Royal Society also contain the summary of a paper by Dr. Richardson upon the possibility of restoring the life of warm-blooded animals in certain cases where the respiration, the circulation, and the ordinary manifestations of organic motion are exhausted or have ceased. It details the results of experiments upon artificial respiration, artificial circulation, and the effects of increased temperature. The general conclusions arrived at are stated thus:—

"Artificial respiration is of service only when blood from the heart is being still distributed over the capillary surface of the lungs. . . . The further conclusion to which I am at this moment led goes, however, beyond the process of artificial respiration. . . . I venture to report that even when the heart has ceased to supply blood to the pulmonic capillaries, during the period previous to coagulation, the blood may be driven or drawn over the pulmonic circuit, may be oxidised in its course, may reach the left side of the heart, may be distributed over the arteries, and that thus distributed it possesses the power of restoring general muscular irritability and the external manifestations of life. Hence I infer that resuscitation under the limitations named is a possible process, and that it demands only the elements of time, experiment, and patience for its development into a demonstrable fact of modern science."

Professor Bouley, of Alfort (the *Veterinary Review*, September) is opposed to the notion of the spontaneous origin of the "cattle plague" in this country. He holds that it has but one home, and that is in the steppes of Eastern Europe and Asia. In opposition to those who would refer the present outbreak to the influence of bad hygienic conditions, heat, etc., he argues that if these circumstances could originate the malady—

"It ought to reign perpetually among the dairies in Paris and its suburbs where the unfortunate beasts destined to the production of milk are maintained in low, humid, suffocating stables without light and without air. Compared to the cow-houses of Paris, those of London are Louvres; and, nevertheless, the typhus does not break out in those. Since the inauspicious days of 1814 and 1815, we have not had it in France, and it is 110 years since it last visited England. . . . If England adopts the fatalistic doctrine that the typhus, to the infliction of which she is now subjected, is an indigenous malady, she will see her bovine population disappear as in Egypt; but this doctrine is false—radically false; and one thing only excuses those who sustain it. It is that they speak of that which they do not know. Yes; but where is the excuse for their speaking? The real truth, that against which all the errors will not prevail, from whomsoever they may come or by whomsoever they may be sustained, is this, that the typhus which has fallen like a curse on the flesh of horned cattle has been imported into England by the convoy from the Baltic, and that it is spreading by virtue of its contagious properties, which are of the greatest possible potency. If England had not been disarmed by her laws, it had been possible to have arrested its march by energetic measures like those adopted on the Continent, where the Austrian and Prussian sentinels, always vigilant, guard Western Europe and protect it against the invasion of the Russian scourge. But in England, it appears, *the bovine race must perish rather than a principle*. The maxim is sublime, no doubt, but it will be productive of very great disasters."

Dr. Strachan (*Edinburgh Medical Journal*, August,) has started an hypothesis respecting "the origin of nerve force," which we think deserving of notice, inasmuch as it is, at all events, as good as any other hitherto put forth, while it dovetails very well with the anatomical facts recently announced as to the completeness of the circuit formed by any one nervous filament proceeding from and returning to a ganglionic centre. Dr. Strachan suggests that taking the formation of a galvanic current as the probable analogue of the origin of the force the latter generated in the capillary vessels by the combination of oxygen with carbon and hydrogen, and by the other chemical actions there constantly going on, that the nervous filaments distributed upon the capillary vessels, and especially the clear fluid in the centre of each tubule, constitute the conductors of the force, which running its circuit to the ganglionic centre and back returns to the same place from which it set out. Thus he regards the circulation of the

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blood and of nerve force as mutually dependent on and influencing each other. He suggests, further, a process of induction between different nervous circuits similar to the induction known to take place in certain galvanic combinations, and would explain in this way apparently the phenomenon of reflex action. The hypothesis is ingenious, and well worthy of experimental investigation. Dr. Strachan, however, is not the only person who has seen the adaptibility of the galvanic hypothesis to the explanation of nervous currents, especially that form of it which, dispensing with the notion of an "electric fluid," explains the phenomena of chemical decomposition in the circuit by the establishment of a series of chemico-polar elements. Until the demonstration recently made by Dr. Beale, however, to which we drew the attention of our readers some months ago, anatomy gave no sufficient sanction for announcing such an hypothesis as that of Dr. Strachan. We believe that he is upon the right track, and hope that either he or somebody else will follow it up.

Two communications have been made lately to *L'Union Medicale* respecting M. Fuster's (of Montpelier) treatment of phthisis by means of raw meat and alcohol. M. Fuster gives at first a daily quantity of 100 grammes of raw meat, gradually increasing it to 200 or 300. It is given in the form of a soft pulp enveloped in sugar. The alcohol is given in the daily dose of 100 grammes (20° Beaumé) diluted with 200 or 250 grammes of water and 60 grammes of syrup of orange flowers. While using this dietary, he does not neglect the treatment of inter-current complications, such as emetics in gastritic complications, sponging with vinegar and water when there are hectic and sweats, etc. Of eighteen patients submitted to this treatment up to June 18, sixteen were phthisical and two were suffering from purulent infection—in the one case the result of a pulmonary vomica, and in the other, of pleural purulent effusion. Fourteen of the sixteen phthisical patients presented cavities or pulmonary tubercles in the stage of softening; the two others had pulmonary tubercles not yet softened. Among these, five of the phthisical patients and the two with purulent infection might have been expected to succumb within twenty-four hours; yet they all survived. The latter, indeed, it is stated, recovered within a few days. It is said that the pulmonary vomica cicatrised, and the patient who had it went out of the Hospital cured. The pleural effusion in the other patient was absorbed, and at the date of the report convalescence was established. As respects the phthisical patients the report is, that their strength is returning, the hectic fever has ceased, the colliquative sweats and diarrhœa are at an end, and the cough and expectoration have lessened; the appetite has re-appeared, the caverns are empty, and the physical signs attest the progressive reparation of the pulmonary lesions. Two cases only have died, and in these the autopsy verified the diagnosis. They were women, who obstinately refused to continue the remedy. Other instances are given of the success that has attended this treatment in the hands of Professor Fuster.

Dr. Beddoe, of Bristol, has communicated to the *Dublin Quarterly Journal* (August) an excellent paper on Hospital dietaries. It embraces the results of experiments on the convalescent diet in the Bristol Infirmary. At present he says all he wishes to base upon them is the opinion—

"That a convalescent Hospital patient may often consume a very large quantity of food without any, or without a commensurate increase of the urinary solids, but with considerable gain of flesh. In such a case I maintain that it is true economy to add largely to the ordinary diet, for by so doing the patient's sojourn in Hospital may be considerably abridged, his power to work may be sooner restored to himself and the public, his bed will be sooner available, and the finances of the Hospital will not, *quoad* the individual patient at least, be at all more drawn upon."

We extract from Dr. Madden's paper upon the climate of Malaga (*Dublin Quarterly Journal*) the following summary of the circumstances by which the Physician should be guided in selecting a health-resort for a phthisical patient:—

"A very considerable portion of the phthisical patients that are sent abroad from this country require a dry, warm, bracing, or tonic and equable atmosphere—being persons in a relaxed anæmic condition, often of scrofulous diathesis, who suffer from profuse expectoration, and are weakened by night sweats or diarrhœa. The principal *tonic* winter residences for these patients are Western Australia, Upper and Middle Egypt, Nice, Hyeres, Cannes, Montpelier (during a part of the winter only), and Malaga. The second class of cases which are met with in the health-resorts of Southern Europe and Africa are marked by frequent hard, dry, irritative cough, scanty expectoration, pulmonary hæmorrhage, and fast, irregular, thready pulse. In such cases any of the climates I have just mentioned would prove too exciting. The locality selected for the winter residence of these patients should have a sedative, warm, and somewhat humid atmosphere; and the Physician may choose between Madeira, Pisa, Rome, and, in some instances, Lisbon, according to the symptoms of each case. Algiers holds a kind of intermediate place between tonic and sedative climates, in some respects approximating to Upper Egypt and Malaga, while differing from them in others—the atmosphere being in many cases relaxing."

THE "TIMES" AND THE MEDICAL PROFESSION.

(*From a Correspondent.*)

I DESIRE to draw the attention of your readers to a leading article in the *Times* of Wednesday, October 4, commenting upon the impotence of Medicine and the ignorance of Doctors. The following extract will probably enable every one to guess at the aim of the writer:—"Great as has been the progress of *physical science*,(a) in the matter of the morbid pathology (!) of the human body it is slow and unsatisfactory in the extreme." Now, let me assure all physicists that there is not the prejudice in the Profession to physical investigation which the writer of this article tries to lead the public to suppose.

Will the physicists weigh and measure for us the poison of the cattle plague, abstract from its molecules their intense energy, and convert it into some less destructive form of force, or explain to us how solar energy is conditioned in the particles to bring about such terrible results? Here is a field for the mechanical and chemical philosophers to exercise their powers. Why do they not set to work, instead of taunting us with merely "*observing*." We have devoted, and are devoting, our life's energy to the subject, and have done, and are doing, what we can; and we shall only be too glad to have the assistance of their physical energy. But may I not ask — What have physics and chemistry yet done in the world of living beings that the leading journal should so boast of their gigantic power, and disparage so unmercifully our humble efforts at observation? The physics and chemistry of "Jupiter" himself tell us no more than a child can concerning the growth of any living thing. Both announce the fact of the growth; but the language of Jupiter, although a little more difficult to understand than that of the child, tells us nothing of the physics and chemistry of the process. Jupiter has his "canons of orthodoxy," one of which is that there is but one force, and that this one force is derived from the sun. By all means, let his disciples come into our Hospitals and condition the sun force of our terrible typhus, cholera, and other poisons into harmless heat or more simple energy. No one will welcome them more than we shall. No one will acknowledge the greatness of the physical discovery or diffuse it more actively when it shall have been made; but until something has been *done* in this direction, we may surely hold the opinion that there are many things in connexion with the nature, action, and propagation of contagious poisons not yet to be determined by the philosophy of "Jupiter."

(a) In the original the comma occurs after the word "body," imagine the writer desires it to be placed as in the text.

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(From another Correspondent.)

The *Times* of Wednesday favoured the British public with a leading article on the present state of the Medical Profession, which is justly calculated to arouse the indignation of every Medical man throughout the length and breadth of the land. It is difficult to say whether the gross injustice of the attack, or the utter ignorance, real or assumed, as to the real state of the case, is the most characteristic feature of the article in question. From the beginning to the end it is a tissue of misrepresentation, having for its object the depreciation of the well-earned status of the Professors of Medicine in this country. It is a bad "sign of the times" when one of the leading journals of the day thus lends itself to pander to the petty jealousies of rival professions.

The complaints contained in the article resolve themselves into two divisions: 1, That there exist amongst Medical men wide differences of opinion in principles and practice in Professional matters; and, 2, That Medical men have failed in devising means for the eradication of the cattle plague and the cholera; or rather, with regard to the latter, that they have allowed it to visit our shores at all.

With regard to the first of these complaints, one is forcibly reminded of a wise and philosophical king, who, attempting to make a few watches keep uniform time, and failing in the attempt, exclaimed, "How, then, can I expect to keep the same number of men in the same mind?" And so it has been from the earliest records we possess. Men of the highest order of intellect have been found to entertain diametrically opposite opinions on points apparently the most simple and self-evident. The writer of the article in the *Times* commences with a little flourish in favour of lawyers and the clergy—most inapt and unfortunate illustration! for where can be found greater discordance in principles and practice than amongst those two classes? It is a matter of everyday occurrence to find one judge over-ruling the decision of another on the simplest points of law, and to find on the bench of judges, amongst men whose whole lives have been devoted to the study of their profession, and who, for their supposed ability and learning, have been raised to the highest offices of the State, individuals arriving at opposite conclusions on the very laws that they themselves, perhaps, have had a hand in preparing. Turn to the dignitaries of the Church, "the great guns and the minor canons," what explosions do not almost every day startle the ears of the laity of this land from this quarter. High Church, Broad Church, and Low Church—"the Attitudinarians, the Latitudinarians, and the Platitudinarians," as they have been facetiously termed, where is the single point on which they possess one unanimous opinion? Both these professions have their written records, their printed oracles to refer to, and yet see how they differ! and because Medical men, studying the unwritten and often obscure book of Nature, happen to draw therefrom opposite conclusions, the *Times'* philosopher thinks fit to dub them fools unworthy of the confidence of an enlightened public!

And the Medical Profession have failed to eradicate the cattle plague and to arrest the progress of cholera! Most sad, but most true. But with regard to the first evil, it can hardly be said to have come under their cognisance at all as a disease, the treatment and post-mortem examinations having for the most part been conducted by Veterinary Surgeons; whilst with regard to the cholera, the writer of the article in question displays his ignorance of the laws which regulate epidemics in thinking that Medical men should be able to "stamp it out." He should know that it is one of those epidemics which runs a certain course, which, as far as our knowledge extends, is little, if at all, influenced by human means in arresting its progress. Much, very much, it may be affirmed, has been done to mitigate the severity of the disease. Thousands of valuable lives have been saved by preventative or curative means instituted solely by the Medical Profession, and the writer in the *Times* is guilty of the greatest injustice when he speaks so disparagingly of what our noble Profession has done with regard to this fearful disease.

In fine, when the judges and lawyers come to an unanimous opinion on the laws of the land; when by their combined efforts they have "stamped out" the crimes which it is their province to suppress; when churchmen of all shades of opinion unite in one undivided body; when the Bishop of Oxford and Bishop Colenso agree in the translation of the Pentateuch—when by their combined efforts they have established a reign of uniformity in matters ecclesiastical,—then, and not till then, should the members of the Medical Profession be condemned on the grounds that they differ in opinions and practice, and that they have failed to eradicate two of the most dreadful scourges with which we are acquainted.

THE MEDICAL TIMES & GAZETTE SPECIAL REPORT ON THE EPIDEMIC OF CHOLERA: WITH A PRACTICAL HISTORY OF THE DISEASE.

Chapter VI.

An Account of the Cholera at Constantinople in the Present Year, by an Eye Witness—The Epidemic at Aleppo, at Malta, at Gibraltar, in France, in Italy—Cholera in England.

As time progresses, more reliable evidence than the telegrams and daily reporters of passing events are able to give us comes to hand respecting the prevailing epidemic. We have the advantage this week of laying before our readers a full account, from a competent eye witness, of the choleraic malady as it entered the city of Constantinople, and developed there. This account of the plague, so intelligent and so graphic, telling in a column or so a world of important facts, was prepared specially for our history at the request of our friend, Dr. Lomas, who has this week been elected Physician to the Metropolitan Hospital; and the author of the account, who undertakes to describe that only which he himself saw, is George Blogg, Esq., of the firm of Blogg and Martin, of Bucklesbury. Mr. Blogg was at Constantinople at the time when the epidemic first appeared; and it will be seen that his statements entirely confirm the report of Dr. Dickson to the effect that the malady was imported. We have previously shown that the importation was from Alexandria, and, with the mere repetition of this fact, we offer to our readers Mr. Blogg's interesting narrative in the words he has forwarded to us:—

Mr Blogg's Narrative of the Outbreak of Cholera in Constantinople in 1865.

"I landed at Constantinople on 1st of July last, on which day the first fatal cases of cholera occurred in the deaths of two sailors who had landed at the Marine Hospital from a Turkish vessel coming from Alexandria with Osman Pacha and suite. From that time the rate of mortality rapidly increased, a village ten miles up the Bosphorus, named Yeni Keni, being specially and severely visited. The deaths in this place amounted in about fourteen days to between 300 and 400 in a population of less than 2000, so that more than half the houses were closed and deserted. The disease was particularly violent when it first attacked the city. Very few, if any, premonitory symptoms were exhibited; cramp and vomiting were rapidly followed by insensibility, and the patients frequently died in from four to six hours.

"The Medical attendance and measures for the relief of the

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attacked were organised more promptly than could have been expected from the Turkish Government. The city was divided into districts, over every one of which (or of a village) a Medical man was appointed with a pupil from the Medical school as an assistant. The sale of all fruit and vegetables was prohibited, and lists were distributed of articles considered deleterious, such as fish, unripe fruit, sweetmeats, and iced drinks. The poorer classes quickly took alarm, and quitted the city for the interior, both on the European and Asiatic sides. The official report of the Government states that from 400,000 to 500,000 persons left in this manner, means of transit being furnished by the Government gratuitously. As the mortality increased so did the panic, and fear exercised a very deleterious influence on persons of all classes. It frequently came under my notice that persons would believe themselves attacked when such was not the case.

"During the whole of the time I was there—from July 1 to August 23—the weather was remarkably fine and the heat great. Among the contributing causes to the spread of this fearful epidemic was no doubt the bad drainage, or, in fact, in many instances the want of any drainage at all. The Turkish houses are, as a rule, wanting in the most necessary conditions of healthiness, and I can personally speak of the insufferable odour prevailing in all houses of the poorer class. All offal and filth is thrown into the streets, and what is not consumed by the dogs remains under a burning sun, a heap of putrefying animal and vegetable matter. The only drains are open ditches in the middle of the narrow streets, and often hardly leave room for a horseman to pass, their sluggish contents emptying into the almost stagnant waters of the Golden Horn, the current of the Black Sea passing by the entrance of the port, and leaving the water in the harbour unchanged. The crowded burial-grounds are doubtless another fruitful source of epidemic disease. These grounds are situated in every part of the crowded city, and are rendered more deleterious from the fact of the Turks, from religious superstition, burying their dead as near to the surface as is possible, seldom at a greater depth than two feet from the surface.

"From the manner in which the villages on the Bosphorus, usually considered healthy, suffered, I can but conclude that the before-enumerated causes existed there, with the addition that carcases are frequently thrown into the water, where they float until they reach some bay, or else float slowly ashore. I can personally speak to having frequently seen the carcases of horses, bullocks, and dogs lying unburied, rendering the air unbreatheable for some distance around their temporary resting-place.

"The lower class of Turks, Armenians, etc., live almost solely on vegetables, and from the difficulty of carriage these are nearly always brought into the city in an unripe condition.

"The virulence of the epidemic seemed to abate after the first few weeks, and although the deaths went on increasing up to August 7 the percentage of persons cured became much greater as time went on. At first not above 10 to 15 per cent. of the attacked recovered, but later from 30 to 35 per cent.

"The disease was by no means confined to any particular class; the rich and the poor suffered alike. This prevented the rich from feeding and encouraging their poorer neighbours; they were constantly flying from place to place in the hope of evading the malady.

"I can but think that the cholera was contagious. In one instance the clothes, mattresses, etc., of the sick were washed at a fountain, and unfortunately, the waste pipe being broken, the foul water communicated with the clean, and in one day sixty people died at Tatavola, a small portion of the city which was supplied by this infected stream. The greatest number of deaths, according to the details furnished to me by the Government, occurred on August 7, when 1270 persons died. The total number during my stay was 23,000 deaths, on a reduced population of not more than 600,000, inclusive of the villages on the Bosphorus. Great difficulty was found in burying the dead, and the Government deserves all praise for closing the burial-grounds within the city, as well as for prohibiting the conveyance of the dead in open biers, as is the custom among the Armenians. In some instances whole families perished, and the bodies were only found and removed when in an advanced state of decomposition."

It is impossible to read Mr. Blogg's report without being struck with the facts it discloses. It shows, first, that the disease, as it appeared at Constantinople, was an importation; and secondly, it proves that the fatality of the disease—and may we not say its propagation?—was clearly and rapidly fostered by the conditions under which the persons in the infected districts were surrounded.

These are important facts, but they dwindle by the side of one other. They are general statements, which we have heard so many times that we take them on acceptance as truisms. The special fact to which we would draw attention is that one in which the author shows that a supply of water impregnated with the *débris* of matters from the clothing of persons who had suffered, communicated the pestilence to one particular district, causing a sudden and fearful mortality. In this fact we have a simple and striking repetition of the Broad-street epidemic in London, in the year 1854. In that case there was a well in Broad-street into which the contents of a sewer had been percolating for months. Of the water of this well hundreds of persons had been drinking, and although cholera had been present in other parts of London, there was no epidemic in St. James's, the parish in which Broad-street is situated. At last a case of cholera was imported by a person who used the privy that was connected by means of the cesspool with the well, whereupon more than 500 persons who received water from that particular source were attacked within three days.

The same truth was also shown in the development and mortality of cholera in the south districts of London in 1854. The evidence on this point is not speculative, like most of that which relates to cholera, but is founded on demonstration and on a larger series of corroborative facts than ever were brought to bear on a Medical subject of inquiry.

The Epidemic at Aleppo.

The *Levant Herald* of the 20th ult. states that the disorder had broken out there, and that on September 1 there was general terror and confusion in the city. The correspondent who writes the report states that the malady was brought on August 14th by the Persian caravan, and at the outset caused four or five deaths daily. For some time the deaths averaged 40 or 50 a-day, and on September 1 they had reached 250—a number almost incredible in such a place as Aleppo. The panic which prevailed surpasses all power of description. All the Europeans either fled or shut themselves up in their houses in the strictest seclusion. The consuls were amongst the very first to set the bad example. The Austrian, British, Spanish, and Danish consuls, as well as the Regent of the Consulate of Italy—this last a native—left the infected place, and closed their chanceries, whilst the others retired into the recesses of their dwellings, and refused to see any one, on whatever pretence. This naturally produced the worst possible effect on the public mind, and the terror infected the Mussulman part of the population, many of the notables of which, altogether contrary to their former habitudes, have either taken flight or have shut themselves up in their dwellings. The only consul who remained at his post, and to some extent persisted in the discharge of his duties, was the French. This functionary exerted himself for the relief of the distressed, and has been the means of giving assistance to several persons attacked by the epidemic who would otherwise have perished;

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but he was alone, unassisted even by his own countrymen, who, like the rest, all ran away or shut themselves up, deaf to all remonstrances. The Governor, Suraya Pasha, placed himself in strict quarantine in his country house, and would see no one. His example was soon followed by the *employés*; the conak was deserted, and the kadi left the town. The only persons who have done their duty under the calamity are the French Consul, M. Antoine Molinari, who deserves all credit for his devotion in the causes of the poorer victims, and Dr. Smania, of Venice. Upon their invitation the bishops of the different Christian communities were summoned for the purposes of establishing ambulances in various quarters of the town, but nothing was done, the bishops contenting themselves by declaring that if the Consul had any money to give them, they would undertake its distribution among the most necessitous of their own communion.

The Epidemic in Malta.

From Malta we learn that the epidemic is on the decline. The correspondent of the *Times*, writing from Valetta, reports that:—

"A decided improvement took place on the 1st of September, as shown in the bulletin made up on the morning of the following day, when the number of attacks fell from 45 to 18, and the deaths from 25 to 9. The great heat had very much abated on that day, when the island was refreshed by a strong and cooling breeze. On the two following days the number of cases rose again, but showed a falling off on the next day. Since then, the epidemic has been on the whole decreasing. For the week ending the 10th inst. 129 attacks were reported, against 239 for the week preceding. In the crowded city of Valetta there have been scarcely two cases a-day on the average during the week, and none to-day. The weather is becoming cooler, although the thermometer is rarely below 80 degrees. In consequence of cholera not having entirely left Cairo and other parts of Egypt, foul bills of health continue to be issued at Alexandria. The sanitary state of Greece is good. The official journal of Sicily says that the sanitary state of that island is satisfactory. From Marseilles we learn that the spread of cholera in that city was causing much alarm, and many of the inhabitants had fled. There were several cases on board the last Peninsular and Oriental Company's steamer, and one of the firemen, an Englishman, died on the day before her arrival at Malta. Letters have been received to-day from Constantinople, *viâ* Alexandria, to the 24th and 31st ult. The first speak of a diminution of the cholera and the partial resumption of business at Galata. The letters of a later date mention, however, that a fresh outbreak of the disease had occurred, and that every day the returns reported a larger number of victims, so that fears are entertained that the epidemic had not yet done its worst."

News from Malta up to the 28th of September is still very favourable. The special correspondent of the *Star* reports that on September 26th there were only seven fresh attacks; on the 27th there were seven more; on the 28th there were only three on the whole island. In Valetta there had been no fresh cases for two or three days.

The Epidemic at Gibraltar.

The following dispatch is from Gibraltar:—

"Cholera has been busy here during the last fortnight, has ascended a step or two of the social ladder, carrying off a few victims, and descended again to attack with greater virulence than ever the lower classes, chiefly the convicts. They have lost upwards of forty, and when one considers what alarm these deaths must cause in the little community, and how effectually they are shut out from the cheering influence of social intercourse, it is not to be wondered at that they quickly succumb.

"More than once we have had twenty deaths reported within twenty-four hours, and twenty-seven on one occasion. Altogether, the deaths amount to 380. This is a large mortality in a population of 24,000 (including the garrison) within fifty-six days. It is the most severe visitation from cholera which Gibraltar has experienced, being already nearly equal to the total amount of deaths, and in excess of the daily rate in 1834.

"There are some curious points of difference and resemblance. In 1834 the first case occurred on June 19, the last on August 3; and on the 7th a proclamation was issued by the Governor, appointing a day for public thanksgiving. The total number of deaths was 390. Proportionately, the soldiers suffered most. Twenty-four was the maximum of deaths within twenty-four hours. A westerly wind prevailed in that year. Official reports were daily published by command in the local journal. This year the first case occurred on July 19. None for twelve days after. The first case within the town was on August 19. The civil population has suffered most. Easterly winds have prevailed. No returns are published. In this respect it is difficult to say which course is the more wise. Official reports might allay the panic caused by rumours of mortality exaggerated as they pass from mouth to mouth.

"Jew and Gentile are now alike smitten. The deaths among the soldiers give an average of ten to each corps, besides as many women and children. The Artillery, so long exempt, have rapidly made up their quota. Some of the troops have been sent under canvas at the southerly point of the Rock; but even there they have suffered. The bastions along the line wall have contributed more than their due proportion. Many of them are unfit for occupation; indeed, they want but a pole in the centre to resemble the pit assigned to the bears in a zoological garden. Damp clothes are stretched across the confined enclosure, in deference to an order forbidding the beating of carpets and hanging out of clothes along the ramparts; such warlike signals might create alarm in the present disturbed state of Europe. No breeze penetrates to carry off the unwholesome vapours.

"One hundred and twenty people were stowed away in some of these places, but they are now vacated. Long as we have held this much-vaunted post, we have not yet sufficient barrack accommodation fit for occupation; we have not tanks for a sufficient supply of water; we have not stores in which we can trust the temporary storage of beef and other provisions.

"Meanwhile, about £1500 has been subscribed to alleviate the severe and wide-spread distress among the native population. Relief is daily yielded to thousands suffering from the want of employment. We are still roped in by the cordon, a measure condemned by the Government in 1855, when cholera was prevalent in Spain, and many towns established the barrier against one another. A Royal proclamation declared it to be impotent for the ends aimed at, only inflicting injury on commerce and depriving one another of neighbourly aid, and directed the governors of provinces to forbid them. This is now interpreted as having no bearing upon foreign towns adjacent to Spain. But the cordon is not the sole step our neighbours have taken against the pestilence. The priests and people at San Roque organised a grand procession last week, and carried in pomp a wooden figure of their patron saint, who, they say, is peculiarly powerful against cholera; and they bowed down before the idol they had made, and worshipped him, and prayed him to stay the scourge among us, that so intercourse might shortly be renewed. Such is the conduct of Spain, at once the most arrogant and the least enlightened nation of Europe."

The Epidemic in France.

The special correspondent of the *Standard* reports that the cholera returns from the south are still unsatisfactory. At Marseilles on the 30th, there were 21 deaths from cholera. At Toulon, our latest accounts are only to the 29th, when there were 62 fatal cases. The following tabular statement

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will show the gradual progress of the epidemic in that seaport from its first outbreak down to the latest date :—

Dates.	Deaths at Toulon from Cholera.	Other Causes.	Totals.
August 27	1	3	4
„ 28	2	11	13
„ 29	0	5	5
„ 30	1	12	13
„ 31	1	7	8
September 1	1	6	7
„ 2	0	5	5
„ 3	2	4	6
„ 4	2	9	11
„ 5	7	10	17
„ 6	10	3	13
„ 7	4	5	9
„ 8	9	8	17
„ 9	12	5	17
„ 10	3	5	8
„ 11	10	9	19
„ 12	27	14	41
„ 13	16	4	20
„ 14	16	11	27
„ 15	37	7	44
„ 16	49	12	61
„ 17	76	8	84
„ 18	67	10	77
„ 19	50	9	59
„ 20	46	3	52
„ 21	38	15	53
„ 22	61	8	69
„ 23	61	14	75
„ 24	59	12	71
„ 25	67	11	78
„ 26	81	10	91
„ 27	53	14	67
„ 28	62	8	70
„ 29	62	8	70

Respecting Italy, the same writer remarks :—"The cholera returns from Italy of the 28th ult. are as follows : Modena, two cases and two deaths ; Sassuolo, one death ; Acqui, two cases and one death ; Melazzo, two cases ; and Cartosio, one. The latest return from Barletta—27th—shows fourteen cases and twelve deaths."

In Paris the question whether or not cholera would find its way there, is being vigorously discussed, but as yet there is not panic. The *Abeille Medicale* of Monday, October 2nd, gives the subjoined notice :—

"Dr. Gallard, a physician of one of the Hospitals of Paris, after carefully examining all the cases of cholera or cholerine latterly observed in the capital, arrives at the conclusion that, for the present, Paris is free from the epidemic, and that its sanitary state is not worse now than it always has been at this season of the year. But are we threatened with cholera at some early period? Dr. Gallard thinks that if it were sufficient to show that diarrhœa is the dominant malady at present, in order to infer that a choleraic epidemic is imminent, it must be acknowledged there would be reason to fear it, there being at this moment many cases even of serious diarrhœa. But there is nothing more doubtful than the connexion which some Physicians want to establish between diarrhœa and cholera. In the first place, cases of the former habitually predominate at this season of the year ; and, in the second, their number has been on the decrease for the last two or three weeks. Lastly, if they are to be considered as the forerunners of any other disorder, they may quite as well, and even with greater likelihood, denote an invasion of dysentery or typhus as of cholera. Typhus fever with an adynamic tendency has been indeed observed to be on the increase in all the Hospitals. Hence Dr. Gallard infers that it would be premature to announce the speedy approach of cholera from the mere fact of the existence of diarrhœa in Paris ; and he further adds that, if until now it has remained confined to the coasts of the Mediterranean, and if in France especially it has extended beyond Marseilles, while even there its intensity is very moderate, it cannot be denied that for the present cholera has not yet knocked at the gates of Paris, although there is a bare possibility of its doing so. To the above remarks we may add that Dr. Guérin, in a recent communication to the Academy of Sciences, inculcates the necessity of paying particular attention to premonitory symptoms in individuals."

Accounts from Marseilles bearing date October 2 show happily that the epidemic is on the decline. Of 37 deaths in the whole place, 13 only were returned as from cholera or cholerine. The cholera wards of the military Hospital were perfectly empty.

The Epidemic in Italy.

In Ancona and San Severino the cholera has altogether ceased, and there are only a few convalescents at Lucera. At Molfetta the disease is virtually extinguished, and for the moment Italy altogether may be considered as once more free. At Naples, by way of prevention, an order has been issued that all steamers from Marseilles, Genoa, and Leghorn must undergo an examination by the sanitary commission, elsewise they will not be allowed the *libera pratica*.

CHOLERA IN ENGLAND.

From special information we have received, we fear that the report of the presence of true cholera at and near Southampton is at least possible. The case reported in the *Times*, and which terminated fatally, was followed by another very quickly. In this second case the patient sickened on the 28th of September, and was visited by Mr. Bencraft. The patient was a man in very good health up to the evening of the 28th. On the 29th Dr. Wiblin saw the man in consultation, but death occurred in nine hours, all the symptoms exhibited being of the Asiatic type.

At Bitterne, near the Royal Military Asylum at Netley, and about three miles from Southampton, matters are assuming a very serious aspect. There Dr. Osborne has had seven cases ; of these four have died, two are recovering, and one, at the time our report left, was in a doubtful condition. Two new cases had also occurred at Sholing Common, but the results we have not heard.

The reports of these cases have led to active work. At Bitterne, the rector, the Rev. Mr. Usborne, has called a public meeting, at which Dr. Osborne, Dr. Wiblin, and Dr. Parkes were present. Dr. Osborne gave a detailed account of the cases he had met, and Dr. Wiblin, evidently with much anxiety, expressed, that reticence would be false, and that in his opinion (founded, as we all know, on a long and accurate experience) the Eastern plague had broken out. Dr. Parkes at once and with great force impressed on the meeting the vital necessity of giving the inhabitants pure water for domestic purposes, and ultimately a committee of inspection was formed and a relief fund organised.

We have no desire to create panic, but we agree with Dr. Wiblin that to be reticent at this moment would be timorous and false policy. There cannot be a doubt that the indications of an outbreak of the epidemic are present. Now, then, let us all be men, and show, as a Profession, that we are truly, as we have ever been, alive to the public interests. If each member of the Profession will at once note down the whole truth of every case of cholera he meets, will seek out cause, describe accurately symptoms, and specify without bias treatment and its results, there will be written such a history of the malady, should it visit us, as will place its etiology and treatment amongst the most certain of the facts of Medical science.

Next week we shall return to this topic. Meanwhile let us beg our Professional readers to understand that any information they may send us shall be faithfully and honestly utilised.

*** Since the above was in type, we have received information that up to October 4 there have been five deaths at Bitterne from the disease, and that six cases were then under treatment. At Southampton there have been only two deaths—on September 22 and 29. There are under treatment six cases with all the ordinary symptoms. Diarrhœa is also on the increase.

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MEDICAL REPORT OF THE THIRTY-FIFTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

HELD AT BIRMINGHAM FROM SEPTEMBER 6—13.

[*From our Special Correspondent.*]

(Continued from page 375.)

SECTION OF CHEMISTRY—(*Continued*).

ON ARSENIURETTED AND ANTIMONIURETTED HYDROGENS.

By Wentworth Lascelles Scott, F.C.S., F.G.S.L., &c.

"I HAD occasion some time back, during the progress of one of our celebrated poisoning cases, to institute some inquiries into the chemical history of antimony and arsenic in their chief combinations, and some new facts having come to light in the course of those researches, I have thought that a few brief observations thereon might not, perhaps, be deemed very uninteresting by the frequenters of Section B.

When hydrogen is evolved from a suitable apparatus in the presence of an excess of some soluble arsenical compound, it combines with the latter metal to form trihydride of arsenic, or arseniuretted hydrogen, which is given off as a colourless gas, as we all know, in a greater or less degree of purity. It is also well known that when carbonaceous, organic, and, more especially, fatty matters are present in the generating vessel as well, the gas emitted contains carbon in some form or other, which has generally been put down for a carburetted hydrogen in a state of simple mixture with the arsenic componnd.

I am not at this moment prepared to state that this is not frequently the case, but I am in a position to assert that it is not always so. In examining some highly arsenical liver (which I had purposely oxidised to a partial extent only in the first instance), I found that nitrate of silver was incapable of decomposing the gas completely—that is to say, I still had an arsenical gas of some kind or other issuing from the apparatus.

On repeating the experiments, this exceptional phenomenon did not appear; but upon another trial, having lowered the temperature a little, the former results were again evidenced. That this gas contained carbon as well as arsenic was readily proved on burning it in chlorine, by which means I effected a sort of rough analysis, going far to corroborate the previous experiments.

Some trials were then made upon rather a larger scale, using the terchloride of arsenic, various oils, and an amalgam of sodium and zinc as the materials in a generator of modified construction, which I shall presently have occasion to refer to more particularly. In many instances this arrangement answered perfectly, and I was enabled to obtain sufficient quantities of the gas to give me a good general idea of its composition. I say "in many instances," because I am obliged to confess that my object was often entirely defeated without that necessary and definite cause being apparent which would permit me to determine the best process and method of performing it with certainty in all cases.

I have reason to believe that a very delicate question of temperature and proportions is involved herein; for while several of my results agreed very well, the others were so extremely different as to show that the experiments themselves had utterly and primarily failed.

At this stage of the inquiry it would be quite premature for me to enter into any details of the properties or rational composition of this (as I am inclined to think) new gas; but I may briefly state that its specific gravity, in my opinion, will be between 2·82 and 2·48; that its odour is very similar to that of ordinary arseniuretted hydrogen; and that both heat (I might even say warmth) and light readily decompose it.

The mean of four of the most concordant of my analytical results gives,—

Arsenic	90·47 per cent.
Carbon	7·39 ,,
Hydrogen	2·14 ,,

but if I have the candour or the temerity to place these figures before you, I must at the same time observe that I myself regard them as purely approximative; time and further researches alone can determine whether I have hit upon a body which might be regarded as arseniuretted hydrogen, in which one atom of the latter element is replaced by carbon, or whether such a compound does not exist.

Finding many and grave difficulties in the examination of this arsenical compound, I naturally had recourse to antimony with the view of ascertaining if any similar result could be obtained as a collateral corroboration of the experiments on arsenic. I may remark, in a few words, in order to avoid absorbing the time of this learned section too greatly, I have hitherto failed in obtaining any products analogous to that I have just had the honour of noticing; while, however, in this direction my efforts have been defeated for a time, at least a new subject for inquiry has been opened up to me quite as interesting, and I think fully as important.

Finding, as I think I have before stated, certain advantages in the employment of the perchloride of arsenic, I have experimented largely with the corresponding antimonious chloride, and consider it to be without exception the substance best adapted for use in the examination of the compound or compounds of antimony and hydrogen.

In none of our English manuals or text-books of chemistry can I find any mention of antimoniuretted hydrogen in a pure and isolated condition, and certainly none of the ordinary methods for obtaining the gas which have been published will yield a definite and unmixed compound. According to my experiments, however, when nascent hydrogen finds itself in the presence of an excess of terchloride of antimony at a low temperature, pure antimoniuretted hydrogen is evolved; this gas, when in a pure or nearly pure condition, is decomposed with the greatest facility—in point of fact, with far too great facility for the purposes of analysis and general examination to be conveniently accomplished.

Without troubling the section with details of the apparatus in various forms, and of several processes which proved unsatisfactory, I had better, perhaps, at this stage, give a brief account of the arrangement last devised, and which gave me the most reliable results yet obtained.

Pure terchloride of antimony, to which a small quantity of the corresponding bromine compound had been added, was cautiously dissolved in a little moderately-weak hydrochloric acid, previously cooled to 32° F., next a supply of potassa in the usual stick form was placed in readiness, and thirdly a quantity of sodium amalgam (by preference containing also a little potassium) was prepared.

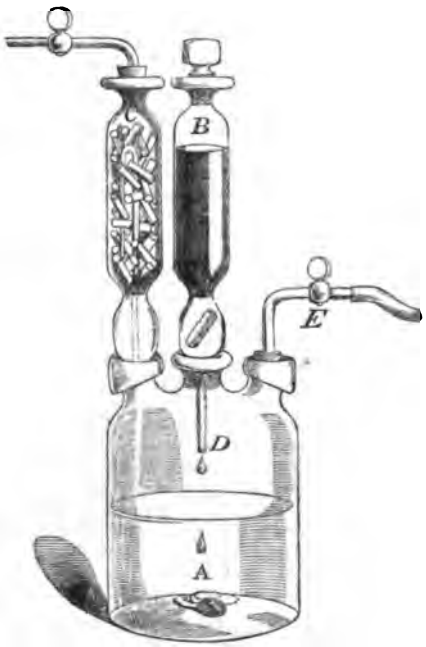
I may mention here, although somewhat digressively, perhaps, that to avoid the awkwardness of what I might term the deflagrating method of preparing the amalgam in quantity, I have employed a double bulb tube for the purpose, into one side of which I place mercury, and into the other sodium (or potassium, as the case may be), and some fluid hydro-carbon, having a sufficiently high boiling-point. The bulb-tube and contents being now immersed in boiling water or otherwise heated, until the sodium fuses under the surface of the naptha, the mercury may then be gradually transferred into the sodium-bulb by a gently tilting process, when the two metals combine with very little noise and no inconvenience to the operator whatever.

The apparatus for the production of antimoniuretted hydrogen I am unable, from accidental circumstances, to exhibit to-day; but in preference to a diagram those interested in the matter will be good enough to refer to these proofs (from a wood block cut for me by Mr. Orrin Smith), which will, I hope, render my meaning perfectly clear.

A three-necked Woulfe's bottle (A) is fitted with a wide tube or long bulb (B) furnished with a short syphon-tube and glass stop-cock at its lower extremity, where it fits into the bottle, and a simple stopper at the top; a similar shaped vessel (C), but without a stop-cock, is affixed to another neck of the Woulfe's bottle; while to the third a cork and narrow tube (F), bent at right angles, is adjusted. At the top of the bulb (C) a similar small tube is fixed for the exit of the gas.

The solution of the terchloride of antimony having been introduced into the Woulfe's bottle, and the sodium amalgam into the centre bulb,—the one fitted with a stop-cock, while

the other one is occupied by sticks of caustic potassa—the whole arrangement is next cooled by a freezing mixture, and a current of pure dry hydrogen is passed through the apparatus from the tube F, which has a short length of caoutchouc piping for the purpose of making the necessary connection. When a sufficient time has elapsed, the tap (E) is closed in order to turn off the hydrogen, all atmospheric air having been swept out of the bottle, and having excluded daylight, or nearly so, from the apartment, some of this sodium amalgam is allowed to drop slowly into the bottle through the tube (D) by gently turning the stop-cock before mentioned.



If the operation has been performed with due care in every detail, pure antimoniuretted hydrogen is slowly evolved, and, passing through the potassa bulb (C), is deprived of moisture, and a little acid vapour by the caustic potassa contained therein.

I hope ere long to be able to give something like an account of the more important properties of the gas, but its great liability to decompose even at low temperatures renders the task both tedious and difficult. Chloride of silver absorbs it to some extent, but even in the dark and at a low temperature will not retain much for any length of time. On one occasion a portion of the chloride so treated was suddenly exposed to bright sunlight, when a slight explosion took place, and a little of both hydrochloric acid and an antimoniate of silver were found to have been formed.

I have also succeeded, by generating under slight pressure and at a very low temperature both antimoniuretted hydrogen and hydriodic acid, in producing a crystalline substance of a yellowish white tint, which I presume to be a compound of the two gases.

It may perhaps not be thought out of place here to remark that I have obtained phosphuretted hydrogen by a process almost perfectly analogous to that I have had the honour of describing; this gas, with other products, being, I find, always formed when water and the terchloride of phosphorus are simultaneously decomposed by sodium, zinc, or other suitable metal: the reaction I have as yet had but little opportunity of studying; it appears to me to be of a highly interesting, as it certainly is of a somewhat complex, character.

Phosphoretted hydrogen, and especially the spontaneously combustible variety, can also be obtained by the action of terchloride of phosphorus upon ordinary ammonia."

In reply to questions from Professors Wanklyn and Williamson, Mr. Scott observed that the sodium amalgam employed by him was always carefully freed from all traces of carbon and hydrocarbon (derived from the naphtha before mentioned) by being gently heated in a current of dry hydrogen for some time. He had ascertained that the antimoniuretted hydrogen obtained by the process he had had the honour of describing, was pure, and contained no free hydrogen, both by analysis (with bromine, etc.) and by the fact of its total absorption by a solution of nitrate of silver containing a little free oxide of silver suspended therein.

A vote of thanks was then accorded to Mr. Scott, on the motion of the Chairman, who said that he considered Mr. Scott had very clearly made out his case, and there could be no doubt of his having isolated antimoniuretted hydrogen for the first time.

SECTION OF GEOGRAPHY AND ETHNOLOGY.

INFLUENCE OF CIVILISATION UPON THE DEVELOPMENT OF THE BRAIN.

By R. Dunn, F.R.C.S.

THE author began by premising as a basis for his observation the following postulates:—1. That the brain or encephalon is the material organ of the mind. 2. That there exists a close correspondence in form and size between the cerebrum and its outward bony covering—the skull; so that the varying forms of the human cranium indicate, as outward and visible signs, with certain well-understood qualifications, corresponding differences or changes in the shape and size of the cerebral substance within. 3. That the genus *homo* is one; and that all the races of the great family of man are endowed with the same intuitions, sensational, perceptive, and intellectual—the same mental activities, however they may differ in degree; and that they all have the essential constituent elements *in common* of a moral, religious, and intellectual nature. He waived the question as to the monogenesis or polygenesis of man; but asserted that from all historic times there have existed, and do still exist, aboriginal and typical races of men, widely differing from each other, and easily distinguishable by well-marked physical and psychical characters; such, for instance, are the negroes of Africa, the Mongols of Asia, the red men of America, aud the white men of Europe. From time immemorial, he said, there have always existed, besides the rude and savage hordes of hunters and fishers, two forms or phases of civilisation—the *nomadic* or the pastoral and the *agricultural*; the former essentially *stationary* in its character, but the latter eminently and strikingly *progressive*; the nomadic tribes of Asia, at the present day differing so little in their habits from those of their ancestors, that the Turkoman or Arab chief still welcomes the stranger after the same way which Abraham of old is reported to have done. The earliest traditionary record we possess of the state of the world when the earth was first peopled shows that there existed a *nomadic population*, who lived in tents; and *artificers*, who built cities—the earliest of all manufacturing towns. These two schemes of life, so far as we know, were contemporary. The dwellers in tents had seen the dwellers in cities, but preferred their own wild independence. Among the purely nomadic races, where civilisation is stationary, there exists, as might be expected, an *uniform sameness* and *characteristic fixity* in the shape of the head, strikingly in contrast with what is seen to prevail among the agricultural races and cultivated Europeans; for, where civilisation is progressive, there is increased mental activity among the faculties of the perceptive and intellectual consciousness, and, in consequence, a corresponding development of the nervous apparatus—the cerebral substance, through which they are manifested. He dwelt on the importance of viewing, in contrast, the typical crania of the negroes, of Australian savages, the Mongolian nomades, and the cultivated Europeans, maintaining that, as the skull is the outward measure and index of the brain's development within, we are able fairly to estimate the relative size and comparative development of its three great divisions, the anterior, middle, and posterior lobes; nay, among the typical races to recognise distinctive characters impressed and stamped upon their varying crania, as indisputable evidence of degradation and elevation of type. In proof of this, he adverted to the prognathous type as one of degradation; and remarked that cranial configurations such as these, and where the face, nose, and jaws, ape-like, are all protuberant and projecting, speak a language and point to a destiny which cannot be mistaken; for wherever and whenever ignorance and brutality, destitution and squalor, have for a long time existed, this prognathous type is invariably found to prevail. In striking contrast to this, he adduced, as a type of elevation, that of the orthognathic, seen among the European nations, the Saxons, Celts, and Scandinavians, where the jaws are upright and not projecting; the face scarcely, if at all, protruding beyond the forehead; and where, in place of the narrow, low, and retreat-

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ing forehead, associated with largely-developed, massive, and projecting bones of the face and jaws, we are struck with the symmetrical contour of the head, its size, and lateral fulness; but, above all, with the elevation of the forehead in proportion to the size of the face; and with its broad, expansive, and towering heights, clearly indicating a harmonious development of the whole brain, and a special fulness in the intellectual and moral regions. From the skulls he proceeded to the comparison of the brains themselves, of which they are the bony coverings, after stating that all physiological psychologists were agreed that the great hemispherical ganglia are the sole and exclusive seat of all intellectual action and volitional power. But then, he remarked, to be able to interpret and duly to appreciate the structural differences which we meet with in the brains of the typical races, involves and implies a more exact and complete knowledge of the functions of these different cerebral parts, and of the nervous apparatus of the perceptive and intellectual consciousness, than that to which, he was free to confess, we had yet attained. Still, he affirmed, we are not without some definite knowledge of the functions of the cerebral lobes as psychical instruments; and stated what were the views and convictions of his own mind, not hastily taken up, not merely founded on the multiplied craniоscopical observations of Gall, Spurzheim, Combe, and Carus, but on the facts of pathology, and of developmental anatomy, comparative and human—viz., that the anterior lobes are the seat of the intellectual, the middle of the personal or individual, and the posterior of the social and affectional, activities or attributes of the human mind. He recognised throughout the hemispheres of the brain, and in their tripartite division into anterior, middle, and posterior lobes, with Gratiolet, three stages or planes of development: 1. The inferior or lowest, the basilar and superciliary; 2. The middle, or median frontal; and 3. The highest, the coronal or superior frontal, the sole and exclusive prerogative of man. He then hazarded the opinion, that on the comparative evolution and size of the different cerebral lobes, in these stages or planes of development, the individual character is mainly dependent; and that, while the middle or personal are the denominating lobes of the brain, as to the animal, moral, and religious activities of the man, it is the anterior which indicate the character of his intellectual bearing and attributes, and the posterior that of his social tendencies, propensities, and affections. After a lucid exposition of his views, and as subservient to the better appreciation of the psychological significancy and importance of the structural differences which are noticed in the convolutions of the brain of civilised and savage man, he remarked that, as the anterior lobes of the brain are the seat of the intellectual activities of the mind, fulness of development and complexity of structure are sure indications of elevation of type; and that the converse, as Gratiolet, from extended observations, has amply shown, is equally true—viz., that simplicity of structure and perfect symmetry of shape and arrangement in the convolutions on both sides of the hemispheres are indisputable marks of degradation of function. Gratiolet, he said, had dwelt on the striking contrast which is presented between the simple, smooth, and symmetrical convolutions on both the hemispheres, on the superior frontal region of the brain, in the inferior races, and that of unsymmetrical character, and of the great and intricate complexity of the same convolutions among those of the highest. After commenting upon and contrasting the brain of the Negro and the Hottentot Venus with that of the cultivated European, Mr. Dunn gave expression to his regret that, among the other aboriginal and typical races, so little had hitherto been done in the examination and comparison of their cerebral organisations. Ethno-psychology, he said, was still a desideratum. He looked forward to the microscopical examination of the ultimate structure of the grey matter of the brain in the typical races of man as pregnant with the most interesting and instructive results. Already his friends Dr. Beale and Mr. Lockhart Clarke, he said, had proved to demonstration that perceptible differences exist in the minute anatomy of the gray matter of the convolutions in the brain of man and that of the monkey and the highest anthropoid apes. Dr. Beale had succeeded in demonstrating the connexion between the nerve cells and the very finest fibres in the grey matter of the convolutions; and he maintains that the central cells of every nervous instrument form, with the peripheral nerve-cells and connecting nerve-fibres, uninterrupted circuits; and that all nerve cells are conneeted with, or give origin to, at least two fibres. Mr. Lockhart Clarke had shown that certain structural differences are seen in the gray matter of the convolutions of the anterior, middle, and posterior lobes; and this fact, Mr. Dunn observed, was highly interesting and significant, when we bear in mind that it is upon the vesicular substance or gray matter of the brain, as its substratum, that the mind is dependent for the manifestations of all its activities in this life; and, moreover, that it is here that the ultimate molecular changes take place which are so intimately connected with the manifestation of mental phenomena. Nay, more, that as complexity of function necessarily implies, and is connected with, complexity of structure, and as the anterior lobes of the brain are the seat of the highest and most complex psychical activities, he said, it is but reasonable to expect that, in the machinery of their action, as Mr. Lockhart Clarke has demonstrated, the greatest complexity should, in the gray matter of the anterior lobes, be found to exist; that is, in the nerve-cells, nerve-fibres, and circuits. He concluded by adverting to the historical bearings of his subject—to the evidence which is presented by history of the conversion, in time, of one type of humanity into that of another, under the influence of outward circumstances, social states, and intellectual culture. As illustrative instances, he adduced the case of the transplanted negroes in America and the West Indies; amongst the Asiatic or Mongolian races, the Turks of Europe and the Magyars of Hungary; and amongst ourselves, as instances of degradation, the Irish of Leitrim and Sligo, and the vagabond nomades who infest our large cities and towns. In proof of cranial alterations for the better, from the influence of improved social conditions and higher intellectual activities, he directed attention to some casts taken at different periods from the same individuals. In each case the interval was not a period of leisure, but of great mental activity; and the result in each was seen in the decided enlargement and development of the anterior part of the forehead. In the museum of the late Mr. De Ville, in the Strand, there were upwards, he said, of fifty such illustrative examples, highly interesting and instructive, as pointing out and recording, beyond all controversy, certain changes in the form and relative positions of the anterior lobes of the brain, in connection with certain intellectual pursuits.

(To be continued.)

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D.,

Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF OXFORD.

(Continued from page 126.)

THE RADCLIFFE INFIRMARY.

I might owe an apology to the readers of the *Medical Times and Gazette* for the delay that has occurred in the publication of the concluding articles on the good city of Oxford. But, in fact, there is no apology deserved or needed, for such has been the variety and extent of matter sent to these pages for some weeks past that my poor history might honestly go to the wall and no offence to anybody. It is the privilege of those who write on the past that their subject is always in their hands, and their record is as fresh for to-morrow as for to-day. The writer of the events of to-day cannot be too fast; the commentator on the events of yesterday cannot well be too slow. The first perceives, the second reflects. This is the reason why men of mark are so much more fairly judged of by the future than by the contemporary age; in the future they become subjects for reflection, under which their assumed bad qualities pass away and their solidity stands out firm, solid, and true. This order is according to nature. We know so many people in the present life that we have time only to perceive them, and if in this hasty glance we catch anything we do not like we are liable to be led by the dislike, irrespectively of that which lies deeper. But when those whom we have perceived are gone from us to our loss and their rest, we forget the manner or aught else that bred dislike. We begin to reflect upon their real qualities, and to take perchance, for good or for bad, an entirely different view. Here are the elements of the law of appreciation of character, to the which all who live must bow. The law is as beautiful in its operation as it is necessary, and I would in these October days that every student might learn it. Learn that in and through the great career in physic which lies open to him, the true student must consent, *nolens volens*, from henceforth to the grave, to be perceived but not known; learn that, whatever he may

achieve, this age, at most, will spell out his name only to the next; learn that a man who always is perceived too favourably by the majority of observers is by inevitable decree a man who has nothing in him that will stand the test of reflection; learn that the opinion of the day and hour upon every act that lies within the circle of rectitude is the opinion which, if there be two possible opinions, is sure to be the false one; learn that popularity, so called, is a damned spirit which hangs, draws, and quarters true greatness, affords no solid pleasure while it lasts, and when withdrawn leaves a want behind which is despair.

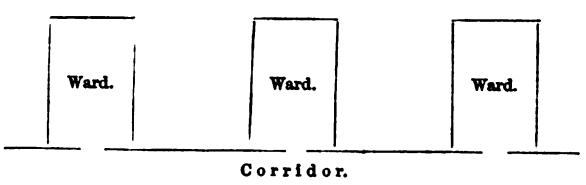
But enough of this. Let us back to Oxford, past the old Colleges, with their battered walls, partly concealed meadows and gardens and trees, and once more to jolly old Radcliffe's Hospital: Radcliffe, remember, who told such quaint stories that healthy men feigned to be ill, and paid their wholesome guineas—with Dutch Billy's great lubberly head holding, by the way, anything but a lubberly brain on them—that they might catch the Radcliffian joke: Radcliffe's Hospital, not built by Radcliffe, but by his trustees and named after him, as half Oxford almost is named.

The Hospital is not quite the model of such a place—I mean in its original cast; but the house is so beautifully situated and is so open it would be difficult to make it otherwise than sanitary. The construction of the old part of it is bad: the wards are indifferently arranged, the cubic space per bed is not more than six hundred feet, and the closets and lavatories are ill placed. In the year 1863, however, a south wing was added, which atones for the deficiencies of the old building so fully that one wishes there was nothing to look at except the south wing. In this new wing there is an out-patients' hall, a dispensary, a room for the Clinical Professor, and an accident ward the finest I have seen in any Hospital. As this ward may be considered model, and as the demand for information respecting model wards is increasing daily, it may be of some service to publish the official account of the Radcliffe new wing in so far as the accident ward is concerned.

The Accident Ward represents what is called "a ward unit on the pavilion principle," to which is added, for convenience, a casualty-room for the first reception of accidents, and for the various minor Surgical casualties which come under the care of the Resident Surgeons in a Hospital. Such an unit comprises the ward itself, with closets, bath-room, nurses'-room, scullery, nurses' closet, and other lesser appliances.

The pavilion principle is that of erecting a ward separate from the rest of the Hospital except at one end, so as to allow free ventilation and light from either side of the ward.

If there be space, it is clear that any number of wards may erected on this plan by uniting the ends through a corridor, thus:—



If the ward run north and south, then the morning, mid-day, and evening sun comes successively on both the sides and on one end; if east and west, as our ward, then only on one side and on both ends. The Building Committee had no option in this matter. Had the site been an open question, they might have arranged the whole building on the north side of the Infirmary grounds; then all future extension could have been carried out systematically to the westward. The garden can hereafter be used for this mode of extension beyond the old Fever Ward.

The ward is 78 ft. in length, by 26 ft. 6 in. in width, and 18 ft. in height. Twenty bed-places are fitted up, giving to each bed 1860 cubic feet of air. There are six windows on the south, with a similar and opposite set on the north excepting only the second from the entrance, which is replaced by a fireplace. The sashes are of oak, with stout plate glass a quarter of an inch thick, opening both at the top and bottom. To prevent draughts either through the window-frames or from the cold outer glass, glass frames have been provided resting on the window-sill, 2 ft. 4 in. in height, and of the same width as the window, which will in effect make the lower part of the windows double; and, if required, these frames can be raised to any height hereafter. Ventilation does not wholly depend on the windows: in the ceiling, between each truss of the roof, is a hinged trap-door, readily opened and shut—all together affording seventy-two superficial square feet of air-passage into the roof space. The roof is pierced north and south, and east and west, by eight opposed open ventilators for the exit of foul and introduction of fresh air. Besides, in the centre of the floor, between the feet of the beds, are six apertures, which can be opened or closed, communicating with a chamber in a cellar east of the ward. This chamber is supplied with fresh air by an aperture 3 ft. by 2 ft., and may be heated by the furnace which heats the Out-patients' Hall and the shop corridor. The air flue can be disconnected at will.

In addition to these sources of air and means for promoting its due circulation, there are in each pier, between the windows, air-flues with regulating valves, which open through the wall into the outer air.

There are two open fireplaces—one on the north side, replacing a north window; one at the west between the west windows. In the mantelpiece there is an aperture leading to the ventilating shaft which surrounds the flue. This shaft is constructed of Jennings's patent flue-pipes.

The ward is built over an excavated cellar 9 ft. deep. The joists are plastered on the under surface, with pugging between them. The flooring is one-inch deal, with three-quarter-inch wainscot-oak laid upon it; the latter dowelled and side-nailed. A slight current of air passes between the plastering and the pugging, and also between the pugging and the double floor.

The spaces on the floor under each bed are covered with white glazed Minton's tiles, with a glazed red border. These tiles are bedded in Portland cement, which rests on a bed of concrete laid in between the joists. Any moisture, therefore, spilt under the bed will lie upon the tiles, and may be easily wiped off the polished surface. Between the bed-places the floor is, as elsewhere, of wainscot, the tiles not projecting beyond the edge of an ordinary bed, that they may not be stepped on by patients leaving their beds.

Over every bed is a bed-pull. Curtains can be added, and fittings are prepared for curtain-rods; but Miss Nightingale having been consulted as to the best kind of curtains, and she having declined to advise on the way of fitting what she considered should not be fitted at all, the Committee have not placed curtains.

Two bed-spaces are placed between each window, and every patient is separated from his neighbour by 3 ft. on one side, and by 4 ft. 2 in. on the other, and has a window at the head of his bed.

From foot to foot of the beds on opposite sides are 13 ft. 6 in., allowing 6 ft. 6 in. for the length of a bed. Down the middle of the ward are placed cabinets on wheels for Surgical appliances, and at the east end a dresser.

The walls and ceiling are of cement, polished so as to prevent any noisome exhalations from lodging there. The tie-beams are of varnished deal. There are no ornaments or mouldings on which dust can rest. The preparation of these walls has been troublesome in several particulars. Their cleanliness, durability, and cheerfulness make them, however, well worth the labour and expense.

Besides the north and south windows there are two west windows, one on either side of the fireplace. Every patient in the ward can look, if he will, down the garden in summer, and in winter upon the open fire.

At the south-west angle is a bath-room and a lavatory, also lined with polished cement. They are supplied with hot and cold water; the basins are of enamelled iron in a slate slab, with supply and waste pipe; the bath is on wheels. At the north-west there is a double closet, separated by a passage, and a urinal, all thoroughly ventilated. The bath-room and closets are separated from the ward by swing doors, and outside these a warm-air flue from the hot-air apparatus, to approximate the temperature of the closets to the ward in severe weather.

There are provisions for water supply on the self-acting process.

The nurse's room to the east of the ward looks down the ward, but does not open into it, that she may have means of surveillance without loss of privacy. It has its own fireplace.

Beyond the nurse's room is a scullery, with a small range for occasional cooking.

Further east is a window-hatch for throwing foul linen into a truck outside the building; a sink for slops from the ward, and a private closet for the nurses.

On the other side of the entrance corridor is the casualty

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room, with its own proper appliances. A doorway leads hence into the garden for the use of the patients.

The Garden.—A space of three to four acres, considerately given by Alderman Rowney, has been diminished at the west end by the erection of St. Paul's Church, St. Paul's School, and a now disused and neglected burial-ground. Somewhat more than two acres are let off as a market garden for the sum of £28 a-year. The house has been hereby deprived of all the advantages which accrue to an institution from handsome grounds well and invitingly maintained, and the patients have been restricted to a walk round a small plot used as a drying-ground. This evil has been partially remedied by the generosity of Mr. Combe, whe has enabled the governors to take in hand thirty yards westward from the old building, and by the removal of a high boundary wall; but as the matter stands, the institution is debarred from using its own ground to a greater distance than thirty-five yards from the end of the ward.

Drainage.—The drains from the new wing are external to the building, that is, in the case of every closet they are detached from the main walls, and also leave the building at the nearest convenient point. They are made of 4-inch glazed pipes, jointed with Portland cement, and bedded in clay. They unite with a main 9-inch drain similarly laid, and this passes into the city system to the west of the Infirmary. Man-holes are provided at two points of the main drain, and at the same points charcoal ventilating shafts are added, according to a plan recommended by Mr. Rawlinson, engineer to the Health Department of the Privy Council.

The Mortuary.—The mortuary only remains to be described. Formerly there was but one apartment, in which the bodies of deceased patients lay, the friends assembled, the undertaker's duties were discharged, and, when necessary, the Medical inspections were conducted. This indecent state of things has been remedied, without any charge to the house. A separate morgue, an inspection-room, and a small waiting-room for the friends, have been fitted up in a convenient spot near the entrance.

DIET SYSTEM.—RADCLIFFE INFIRMARY, OXFORD, 1865.

1. COMMON DIET.

Sunday, Tuesday, Thursday, and Saturday.

Breakfast.—Bread, 4 oz.; Water gruel or milk pottage, 1 pint.

Dinner.—Bread, 4 oz.; boiled meat, 5 oz.; vegetables, ½ lb.; beer, 1 pint.

Supper.—Bread, 4 oz.; butter, 1 oz., or cheese, 2 oz.; beer, ½ pint.

Monday, Wednesday, and Friday.

Breakfast.—Bread, 4 oz.; water gruel or milk pottage, 1 pint.

Dinner.—Bread, 4 oz.; baked pudding, 10 oz.; beer, 1 pint; broth with peas, 1 pint.

Supper.—Bread, 4 oz.; butter 1 oz., or cheese, 2 oz.; beer, ½ pint.

2. FULL DIET.

Sunday, Tuesday, Thursday, and Saturday.

Breakfast.—As common diet.

Dinner.—Bread, 4 oz.; meat, 8 oz. daily, roast or boiled; vegetables, ½ lb.; beer, 1 pint.

Supper.—As common diet.

Monday, Wednesday, and Friday.

Breakfast.—As common diet.

Dinner.—Bread, 4 oz.; meat, 8 oz. daily, roast or boiled; vegetables, ½ lb.; beer, 1 pint.

Supper.—As common diet.

3. BROTH DIET.

Sunday, Tuesday, Thursday, and Saturday.

Breakfast.—As common diet.

Dinner.—Bread, 4 oz.; baked pudding, 10 oz.; broth with vegetables, 1 pint and a-half.

Supper.—As common diet, without beer.

Monday, Wednesday, and Friday.

Breakfast.—As common diet.

Dinner.—Bread, 4 oz.; rice milk, 1 pint; broth with peas, 1 pint and a-half.

Supper.—As common diet, without beer.

4. MILK DIET.

Sunday, Tuesday, Thursday, and Saturday.

Breakfast.—As common diet.

Dinner.—Bread, 4 oz.; baked pudding, 10 oz.; 1 pint of milk.

Supper.—Bread, 4 oz.; butter, 1 oz.; ½ pint of milk.

Monday, Wednesday, and Friday.

Breakfast.—As common diet.

Dinner.—Bread, 4 oz.; rice milk, 1 pint and a-half.

Supper.—Bread, 4 oz.; butter, 1 oz.; ½ pint of milk.

5. LOW DIET.

Sunday, Tuesday, Thursday, and Saturday.

Breakfast.—Bread, 4 oz.; barley-water, gruel, or arrowroot.

Dinner.—As breakfast.

Supper.—As breakfast.

Monday, Wednesday, and Friday.

Breakfast.—Bread, 4 oz.; barley-water, gruel, or arrowroot.

Dinner.—As breakfast.

Supper.—As breakfast.

All patients are allowed 4 oz. of bread and 2 oz. of milk at tea-time; tea and sugar are not provided.

(*a.*) Every patient on admission is placed on broth diet, unless otherwise prescribed for by the Physician or Surgeon.

(*b.*) Patients under seven years of age are allowed half diet without beer, and have one pint of milk for supper.

(*c.*) Any articles of diet are allowed, if prescribed by the Physician or Surgeon.

(*d.*) Patients are strictly forbidden to give any portion of their diet to others, or to receive any articles of food. Visitors receiving from patients any articles of food, or giving to them any besides those above named, will not be permitted to enter the house again.

(*e.*) Every patient is now allowed tea twice daily, with sugar and butter.

Taking it altogether, the Hospital at Oxford is something like the city itself, a mixture of old and new. The spirit that could not prevail so far as to demolish the old building altogether succeeded in tacking to its worn-out carcase a pavilion on the newest of principles. The contrast is striking—a contrast alike of thought and of matter.

Wards for sick children and other improvements and additions are in contemplation.

(To be concluded.)

OBITUARY.

DANIEL SAUNDERS, SURGEON ROYAL NAVY, M.R.C.S., L.S.A.,

WAS born in 1828, at Llandovery, in South Wales, and became a pupil of Mr. William Williams, Surgeon, of that town. He studied at Guy's, passed the Hall in 1849, and College in April, 1850. He then joined the service of the Hudson's Bay Company, and there strengthened the personal qualities that characterised him—self-reliance and contempt of personal danger.

Thus trained, he felt an ardent desire to extend his geographical knowledge of the Arctic Zone, and offered himself for the Royal Navy when exploration in search of Franklin and his companions was the absorbing thought among the brightest naval spirits of the day. He at once volunteered to serve in any of these expeditions, but found no vacancy for himself where so many of the tried officers of the navy were eager of employment.

Instead of being sent where he desired above all things to go, he was appointed to the *Winchester*, bearing the flag of the Hon. Sir F. B. R. Pellew, for the East India station. On board that ship his characteristics found early expression amid the disastrous scenes of the war in Burmah.

On that deplorable occasion, when the royal navy lost the gallant Captain Granville Loch in leading the attack on a stockade, covered by a jungle, and the death of its leader was followed by retreat, Mr. Saunders returned to the scene of conflict in search of a wounded marine, whom he rescued and brought away from the advanced post on his own back.

This gallant act was specially reported to the Admiralty, who at once, although he had served only eighteen months, directed his promotion to the rank of Surgeon, as soon as duly qualified, "for his noble and heroic conduct at Ava." He received that step at the end of three years' service, and, after a short detention on half-pay, was commissioned to the *Atlanta*, in which, and afterwards in the *Desperate*, he served from May, 1856, to October, 1863, on the West India station.

In 1861-62, in the Gulf of Mexico, his ship was remarkable for the good state of health of her company, when yellow fever was making sad ravages in the French and Spanish, and in many ships of our own, squadron. He attributed this immunity "to thorough ventilation, dryness below, cleanliness, avoidance of

exposure, and a not too rigid application to exercise and drill;" but we may reasonably infer that much was owing to the vigilance of the Surgeon. His correspondence indicated a pious spirit, and at that period he often expressed his thankfulness to the Omnipresent that his ship was unscathed by the epidemic. On one occasion he had to visit twice daily the Civil Hospital at Vera Cruz, crowded, even in the verandahs, with yellow fever cases, to watch eight seamen left behind by our squadron. Four of these men expired while he stood watching at their beds. Writing to an intimate friend, he noted: "I was apprehensive of being the means of conveying the infection to our crew, and took what precautions I could, and was thankful that no harm happened."

Scarcely a month passed after his return to England when he was recommissioned to the *Conqueror* for Japan; and after about nine months on that station he began to suffer from liver affection, but, true to his duty, remained at his post too long. His last letter, received by a friend, dated February, 1865, states, "I feel ill and unfit for letter writing." He remained until June 8, when he was invalided to return from Yokohama to England, which he was fated never to see again. He died at sea, on board the Peninsular and Oriental steamer *Ottawa*, on July 4.

He was a man of great worth and of retiring manners. It was difficult to obtain from his lips any recital of the events that had marked his career and made him so much admired. In all that did not relate to himself he displayed a frank, honest, liberal, and kind-hearted disposition, that won the lasting esteem of his patients and acquaintances, and has left a void amidst his friends that cannot be filled. The writer of this will not forget the modest surprise of his friend when first made acquainted with the fact that the gallant admiral under whom he gained his laurels at Ava had bequeathed him a hundred guineas to purchase some lasting remembrance of himself "in token of his admiration of an act of gallantry which he had never known excelled, lamenting that he could not obtain for him some more fitting distinction."

The navy feels the loss of such men as Daniel Saunders, whose character for humanity and courage was established, and so far tended to arouse and strengthen the same qualities in others brought within his influence.

*** We have also received the following authentic account of the circumstances which led to Mr. Saunders' promotion. It is reproduced from a letter with which we have been favoured:—

"At the disaster at Donnibew, when Captain Loch and others were killed, Dan, then a young assistant, saw a severely wounded marine sheltering himself behind a tree. Saying something like 'I'll not leave that poor fellow there,' Dan ran out through the fire and brought the man in. At dinner in the *Winchester* this gallant act was spoken of, when the then captain, Lambert, said 'it was nothing—just his duty;' poohpoohed the affair; but Admiral Pellew, who was also dining with the officers, and who then heard of the deed for the first time, desired his secretary to get hold of the particulars, and wrote to the Admiralty strongly recommending Dan. In consequence he was promoted when he became eligible; and the Admiral subsequently left him the £100."

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a General Meeting of the Fellows held on Saturday, September 30, 1865, the following Members of the College were duly admitted Fellows of the same:—

Francis Edmund Anstie, M.D. Lond., 16, Wimpole-street; and William Roberts, M.D. Lond., Manchester.

At the same Meeting, the following gentlemen, having undergone the necessary Examination, were admitted Members of the College:—

Balthazar Walter Foster, M.D. Erlangen, Birmingham; Robert Charles Brown, M.B. Lond., Preston, Lancashire; Pierre Georges Cox, Mauritius; and David Owen Edwards, Florence.

The following were reported to have passed the Preliminary Examination in the subjects of General Education:—

James Prime Bartlett, Notting-hill; John Richard Baumgartner, Gorleston; John Bolton, Gower-street; William Cheetwood, Waltham Abbey; Andrew Clark, Kensington gardens-square; Thomas Collins, Birmingham; Frederick William Elliott, Turnham-green; William Hodges, Bristol; Ethelbert Hosking, Woburn-square; Henry Ensworth Jackson, Highbury-grove; Frederic Loscombe, Bath; Charles Henry Mayhew, Upper Berkeley-street; Charles Mills, Guilford-street; James Part, Camden-road; George Henry Pedler, Fleet-street; Richard Porter, Droitwich; Arthur Milson Roberts, South Norwood; William Egerton Saunders, Peckham; Arthur Charles Simon, Upper Westbourne-terrace; David Smart, Cranbrook; and Charles Frere Webb, Basingstoke.

APOTHECARIES' HALL.—Names of the gentlemen and lady who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, September 28, 1865:—

Colles Litchfield Anderson, Berkeley-gardens, W.; Wm. Henry Dixon John-street, Sunderland; Elizabeth Garrett, Upper Berkeley-street, Portman-square.

The following gentlemen, also on September 28, passed their First Examination:—

John Rees James, John Coyte Bailey, James Frederick Cadle, Middlesex Hospital; Robert Pollock, University College.

Of the 128 candidates who presented themselves for the Preliminary Examination in Arts, on September 29 and 30, 1865, the following passed and received Certificates of Proficiency in General Education:—

W. Claridge, Henry Salt, L. M. Thomas, E. O. Copland, M. F. Simon, W. H. W. Wilkinson, H. Goude, Special Certificates of Honour; J. K. Andrews, A. H. W. Ayling, W. C. Barnish, F. W. Barron, A. H. Barrow, W. Berry, R. Brocklesby, T. Browne, J. P. Brumwell, J. L. Bullock, H. Button, J. A. Campbell, A. G. Cawood, H. Chaldecott, J. L. Chambers, C. Clapham, W. Claridge, J. R. Clouting, Ellen Colborne, E. O. Copland, D. Davies, T. Dawson, H. J. Day, T. Docking, W. T. Drew, L. Duke, A. R. Dunnage, S. V. Durand, E. Elphick, G. England, E. F. Gaitskell, J. C. Gibson, A. Gillingham, H. Goude, F. Greenwood, E. J. Hale, A. L. Harrington, A. J. Hogg, R. B. Hogg, S. L. Jackson, M. T. Kavanagh, A. Kershaw, C. H. Lawrence, J. T. Leigh, David Lloyd, R. H. Lloyd, W. H. Lloyd, J. Maffey, L. W. Marshall, J. B. Maskin, R. Mason, A. Mitchell, W. M. Nootl, C. J. Oldham, J. B. O'Connor, A. H. Parker, J. Phillips, B. J. Plummer, W. J. R. Ray, F. H. de Rheims, W. K. Rix, J. J. Robinson, W. Roche, J. R. Rouch, C. E. Rowling, H. Salt, A. Sangster, J. Scott, M. F. Simon, H. Skelton, H. C. Smith, W. W. Smith, R. Stephens, W. B. Taylor, G. D. P. Thomas, L. M. Thomas, G. F. E. Towt, J. Tuck, E. P. Vines, J. F. Vizard, W. Wearne, A. J. Whitefoord, G. H. Whittaker, W. H. W. Wilkinson, G. Willis, J. B. Wilson.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

GIBSON, ROBERT H., M.R.C.S. Eng., has been elected Surgeon to the Jenny Lind Infirmary for Sick Children, Norwich.

JONES, Mr. A., has been appointed Dispenser to the Royal Berks Hospital, Reading.

LOMAX, WILLIAM J., M.R.C.S. Eng., has been appointed Surgeon and Apothecary to the Penitent Female Home, Lincoln.

MOON, MILNER MONTGOMERY, L.R.C.P., has been appointed Medical Officer to the Devonshire Hospital and Buxton Bath Charity.

SEYMOUR, WILLIAM F., L.K.Q.C.P.I., has been elected Medical Officer for the Union Workhouse, Baltinglass, Co. Wicklow.

SYKES, Mr. J., has been appointed Curator to the Leeds School of Medicine.

DEATHS.

BULMER, GEORGE, L.S.A., at Park-square, Leeds, on September 19, aged 64.

COWPER, JOSEPH, Surgeon, at Osmotherly, Yorkshire, on September 3, aged 72.

EYTON, JOHN, L.S.A., at Overton, Flintshire, on September 5, aged 69.

KIRKHOUSE, GEORGE, M.R.C.S. Eng., at Pontardawe, Swansea Vale, on September 19, aged 36.

LONERGAN, WILLIAM F., M.D., at Bath-street, Glasgow, on September 13.

M'CLURE, ANDREW, M.D., L.R.C.S. Edin., Surgeon, of H.M.S. *Racer*, at Leghorn, on September 17, aged 41.

MILLAR, JAMES, L.F.P.S. Glasg., at Orchard Hill, Hamilton, Lanarkshire, on September 22.

PARKER, THOMAS P., M.D. Aberd., at Athenæum-street, Sunderland, on September 23.

SHIELDS, WILLIAM B., L.F.P.S. Glasg., at Irvine, Ayrshire, on September 24, aged 32.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Scarborough Union.—Mr. Fothergill has resigned the Scalby District; salary, £80 per annum.

Shaftesbury Union.—Mr. Brine has resigned the Shaftesbury District; population, 4933; salary, £70 per annum. Also the Workhouse; salary, £30 per annum.

Wandsworth and Clapham Union.—The Streatham District is vacant; area, 1932; population, 5186; salary, £30 per annum.

Woodstock Union.—Mr. Bomford has resigned the First Woodstock District; area, 4350; population, 2580; salary, £40 per annum.

APPOINTMENTS.

Blackburn Union.—John H. Wraith, M.R.C.S.E., L.S.A., to the Darwen District.

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Bridgnorth Union.—Thomas W. Haslehurst, M.R.C.S.E., L.S.A., to the Fifth District.

Cranbrook Union.—Charles H. Weld, M.R.C.S.E., L.S.A., to the Sandhurst District.

Depizes Union.—Valentine L. Trenor, M.R.C.S.E., L.S.A., L.M., to the Fourth District.

Melton Mowbray Union.—James Roberts, M.R.C.S.E., L.S.A., to the Waltham District.

West Ham Union.—James Byrne, M.R.C.S.E., L.S.A., to the Fourth District.

Whittlesey Parish.—Charles N. McCaull, M.R.C.S.E., L.S.A., to the Southern District and the Workhouse.

KING'S COLLEGE, LONDON.—The Introductory Address of the Medical Society of this College will be given on Thursday, October 12, at 8 p.m., by Dr. Kempthorne, one of the Vice-Presidents. Subject: "The Mutual Relationship of Students." The newly-elected President, Mr. Mason, will take the chair.

ELECTION OF A PROFESSOR OF MEDICINE AT QUEEN'S COLLEGE, BIRMINGHAM.—The Council of Queen's College, Birmingham, held a meeting on Tuesday last, Mr. J. B. Payn in the chair, for the purpose of electing a Professor of Medicine. Professor Clay moved the appointment of Dr. Nelson, as recommended by the Professional body. He stated that Dr. Nelson graduated at the University of Edinburgh in 1848. He was elected Physician of Queen's Hospital, Birmingham, in 1849, and subsequently lectured on Clinical Medicine at Queen's College. At his election, testimonials of a very high order were submitted from Professors Alison, Balfour, Miller, Trail, Simpson, and other eminent Professional gentlemen. He now submitted additional valuable testimonials from the same gentlemen, of a more recent date; one from Lord Lyttelton, late Principal of Queen's College; one from Sir Charles Hastings, Dr. Ranking, and others. He is author of a "Treatise on Health and Disease," and published a course of lectures on Clinical Medicine in the *Provincial Medical and Surgical Journal*. He is the author of a "Treatise on the Practical Study of Physic." He published several papers on the Use of Pepsine in 1857, and maintained a vigorous discussion on its therapeutical value, the utility of which was denied by opposing writers of that period, although the use of that medicine is now pretty generally recognised as a valuable remedial agent. He is also the author of several original and valuable papers on divers Medical subjects;—among them, one on the "Ferro-Albuminate System of Treatment of Albuminuria;" one on the "Successful Treatment of Diabetes by Pepsine;" one on the "Diagnosis of Abdominal Disease from Pregnancy;" also one on "Carbuncular Disease;" all of which evince great thought and originality, marked by elegance of diction, clearness of expression, and other qualities so pre-eminently necessary for a teacher of the principles and practice of Medicine.—Mr. Trow seconded the motion, which was passed unanimously, and the proceedings then terminated.—*Birmingham Herald.*

LEEDS SCHOOL OF MEDICINE.—The new building comprises a lecture-room; museums of human and comparative anatomy, pathology, and materia medica; laboratories for the use of students and lecturers, furnished with all necessary apparatus for the study of the elements of chemistry, as well as of the more elaborate processes of chemical analysis, and a collection of specimens illustrative of mineral and organic chemistry; a library and reading-room; and a complete suite of rooms for the prosecution of practical anatomy. In the arrangement of the plan the great object aimed at has been to place all the working departments on one level, and to group them round the theatre. Each department has thus easy access to the platform of that room, but remains separate and complete in itself. With this object, the theatre is placed in the centre, and occupies both the principal and the upper floor, so that the space necessary for raised semicircular seating may be obtained. At the upper part it communicates with the first-floor by doors, for the admittance of students to the benches. Below, the platform, which is on the level of the principal floor, communicates on one side with the anatomical department, and on the other with the chemical. The platform is lighted by a horizontal roof light, and is the only part of the room brilliantly illuminated—an arrangement by which it is hoped that diagrams, specimens, etc., will be exhibited in the best possible manner. The anatomical department consists of three rooms—a receiving room, a lecturer's private dissecting room, and a students' dissecting room, forty feet by twenty feet. In the latter great care has been taken to secure good drainage. An open ventilator runs the whole length of the roof. The north side of the roof is constructed of glass from end to end, and there are two windows in the north wall. A macerating room, lavatories, etc., are attached to this department. Adjoining this department is the museum of anatomy, physiology, and pathology, forty feet square. This museum is lighted from the roof, and by two windows in the east wall. The windows are so placed as not to interfere with the specimen cases on the floor, and the room is of such a height as to admit of a gallery and second series of cases above. The chemical department consists of a students' laboratory, twenty-five feet square, lighted on three sides and from the roof, a private laboratory for the use of the lecturer, and a room for chemical apparatus. The library floor of the building is appropriated to resident curator's rooms and library. The library, forty feet by twenty feet, is a handsome room with an open timber roof, lighted by three double windows in front and dormers at back.

THE DANGERS OF MADEIRA.—The invalid who contemplates spending a winter at Madeira must bear in mind that he is about to submit to self-imposed transportation to an island in the midst of the Atlantic, 600 miles from the nearest port of communication in Europe, difficult of access, and still more difficult to escape from; to an island which the waves of civilisation have not yet reached, where there are no resources of amusement or recreation for mind or body; where there is no society, no literature, no subject for conversation, save sickness and death; where communication with home is infrequent and uncertain; where everybody is indifferent to the great public questions which may be affecting Europe or America; where there is nothing to excite interest, no public question to discuss, no science to attract; where, in a word, there is only apathy, indolence, and stagnation. . . . . It is scarcely conducive to health for an invalid to be confined to the narrow precincts of the town, which is destitute of the smallest attraction or amusement. Yet the means of moving about are so uninviting that many people dawdle away their time as best they can at the reading-rooms, spelling old copies of the *Times*, or lounge about an open space of ground planted with half-a-dozen trees, the only public walk in the place, which is dignified with the title of the Praça da Constituiçao. Or there is the public library with a billiard-room, to which visitors are elected on payment of a small fee amounting to about thirteen dollars. Unfortunately, both are falling into decay for want of funds. The library contains above 2000 volumes, some of which have titles appropriate enough, such as "Zimmerman on Solitude," "Southey's Chapters on Churchyards," "On Death and Sleep," etc. Surely everything in Madeira seems calculated to remind the visitor of his situation, for even the street lamps are lighted with *physic-nut* oil. The routine of daily life admits of little variation, "one day certifieth another." Early in the morning, perhaps, the doctor comes, applies his stethoscope and hammer, and makes his observations upon the increase or decrease of your tuberculous deposit. From him you learn the condition of your friends; how one can't live a week, and how the other is existing with a bit of lung the size of an orange. After a little cheerful conversation on the subject of the last "*post mortem*," which developed a "splendid example," you feel well prepared to face the dreary day which is before you. About mid-day you are carried in your hammock to the Commercial Room—a sort of public reading-room, consisting of a dilapidated outhouse, representing the commercial prosperity of the place. Here you are greeted by your friend Robinson, who asks warmly after your health, and immediately compares notes on the subject of cough, expectoration, etc. You are soon joined by Jones, who with a long face asks if you have heard that poor Brown, who was quite cheerful yesterday, broke a blood-vessel and died last night while eating his dinner. Were you not also aware that Tomkins's case has been pronounced hopeless, and that there is some discussion as to who shall have the privilege of the *post mortem* on him? You exclaim audibly that, thank God, you are getting better, which occasions a cheerful remark from Jones that he thought you looking much worse during the last few days. Dinner-time having arrived, you are carried back to your house in a very subdued frame of mind, and remain at home until three o'clock, or half-past, when you set out on horseback for the New Road, where you take your daily exercise. This being the one-hundred-and-tenth time you have traversed the same street, and the same two miles of level road at a walking pace—nothing more rapid being allowed—since you have been in the island, you begin to feel slightly bored, and soon long to go back again. Accordingly, about five, you arrive at home, and after eating a meat tea, and drinking a

little thin gruel, you turn in for a pretty long night This mode of living is considered essential to a perfect cure.—*The Fortnightly Review.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. J. L. Milton is referred to the Medical Directory, where he will find the *status* and qualifications of the gentleman to whom his note refers.

A Query.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will some of your readers (Union Medical Officers) inform me if the postage of their Medical reports are allowed by the auditors of their unions? I am, &c. G. H.

"Setting our House in Order."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Under this heading you refer to the water supplied by the various London companies. I desire to draw your attention to the situation of the cisterns, which in most houses contain the water used for all domestic purposes, as well as the supply of the closets, the foul air ascending from which must contaminate the water, and so affect the health of those who drink it. I am, &c.

Connaught-square, October 2. RICHARD MOORE LAWRANCE, M.D.

Salmon's Obstetric Binder.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having had many complaints of the trouble experienced in fastening my obstetric binders, I have had a hook made purposely, of which a specimen is enclosed, and which I place upon the right side of the binder only: the noose of the hook being made shorter enables the ocilet to be released at once, and greatly facilitates the adjustment of the bandage. I am, &c. HENRY R. SALMON.

Drunkenness in Liverpool.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In reference to a statement in my last letter as to drunkenness in Liverpool, I wish to state that, after I forwarded the proof, a letter appeared in the *Mercury* from one of the most respected of our magistrates, stating that the sudden increase of convictions for drunkenness in 1862 was not due to the change in the licensing system, as it did not come into operation till 1863, and, further, that the apprehensions for drunkenness, as well as the number of public-houses and beer-houses, were, in proportion to population, less in 1864-5 than in 1854-5. As the figures I quoted had been published more than three weeks before being thus contradicted, I gave them without hesitation; but I should not like to leave them without giving the other side of the question also. I am, &c.

Liverpool, October 3. YOUR LIVERPOOL CORRESPONDENT.

More Naval Grievances.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The naval Medical service was never so unpopular as it is at present, notwithstanding the off-hand answer given to Sir John Pakington by the Secretary of the Admiralty in the House of Commons a short time before the close of the session. To account for this unpopularity various causes could be assigned, and to detail one-half would more than fill one of your valuable periodicals. There is, however, a piece of injustice I am desirous of exposing, relative to cabin accommodation for Assistant-Surgeons. The Admiralty state, "Cabins are to be provided for Assistant-Surgeons when the service will admit." In the face of this, on the Pacific station, in a ship now two and a-half years in commission, the junior assistant is still without a cabin. That the service will admit of the accommodation in this instance is proved by the fact that on a recent inspection by the senior officer an order was given to erect a cabin in the ward-room. On the departure of the flag-ship the matter dropped; and so things will remain till the end of the commission. Had the order been given to erect a cabin for an executive, it would have been complied with at once; but the question only affecting an Assistant-Surgeon was allowed to drop on the departure of the senior officer.

I trust young Surgeons will pause ere they join a service where gentlemen are treated in this unjust manner. If a remedy is not applied soon, the evils will so accumulate, by the non-entry of efficient men, that the future of the Medical branch of the service will be gloomy indeed; and for this the Admiralty are solely to blame.

I am, &c. NAUTICUS.

Irving v. Wilson and Another.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your journal of September 23, considerable space is devoted to the case of Irving v. Wilson and Another, in which my name is brought prominently before the Profession in an unfavourable light. The editorial remarks I consider both unjust and premature, especially you having heard only one side of the question. Now, as my evidence is so perverted and untruthfully reported as to convey to the mind of the Medical Profession an idea totally different from the real truth, I am sure you will, in all fairness, insert the following statement:—

In the first place, Mr. Irving had to go about 100 yards to see his patient, for which 5s. a visit, and four visits a-day, were allowed, besides 2s. 6d. for each introduction of the catheter; the consultations and medicines were allowed as charged by Mr. Irving; and I advised that £142 5s. being paid into court, instead of £80, as stated by your correspondent. The Profession, I think, will agree that this is not the ordinary mechanic's allowance.

Now, with respect to the number of visits, Mr. Irving states they were all necessary, although ten were made in one day to a child with pneumonia, and fifty-seven in eight days are put down to a patient with stricture, etc. Now, would any gentleman possessing a particle of honour and self-respect swear that all these were necessary? and yet several of Mr. Irving's particular friends come forward so disinterestedly and assert that, in their opinion, they were so; and these same gentlemen, elated by a sense of their own magnitude (like the frog in the fable), began to make the comparison as to what Professors Fergusson, Butcher, and Spence might probably charge for passing a catheter. I have no doubt this was very flattering to the young man, if the transition from the sublime to the ridiculous had not been too sudden and absurd to be appropriate. It was certainly endeavoured to be proved that Mr. Irving was frequently sent for. In this, however, he entirely failed, and, after hearing the wife and several others who were in the house positively deny on oath, I was forced to conclude that these different parties jointly were as deserving of credit as Mr. Irving's unsupported testimony,—an opinion evidently shared by the arbitrator, who reduced the bill above one-fifth, each party having to pay his own costs.

I desire now to say a few words respecting the catheter. In the first place, the patient is represented as at first suffering from gonorrhœa; second, stricture; third, swelled testicle; fourth, sloughing of scrotum; fifth, typhoid fever; and, lastly, softening of the brain. May I ask, need we be surprised at this fearful catalogue after the use of the bougie and catheter 199 times, conjoined with twelve injections, and this at a time when the urethra must have been in a highly irritable condition; or is it at all strange that a chancre should continue so many months after nitrate of silver had been abundantly applied to it thirty-one times? I therefore gave it as my opinion that the means used rather tended to increase than diminish the patient's sufferings.

In conclusion, I beg to say that, instead of endeavouring to depreciate the value of Professional services, I am always ready to support what I consider to be a fair, just, and legitimate remuneration, and, at the same time, to discountenance any such vulture-like proceedings, especially as the prevailing trait in the Professional character is to do unto others as you would they should do unto you.

Having placed these few facts before you, I am willing to bow to the decision of the Profession as to the reasonableness or unreasonableness of the entire proceedings. Apologising for occupying so much of your valuable space, I am, &c.

ALFRED WHITTLE, L.R.C.P.

Paralysis Agitans.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Allow me to answer "Inquirer" as to paralysis agitans, by giving an abridged translation of Trousseau's article thereon, taken from his "Clinique Medicale," a most excellent work, by the bye, which ought to be in the library and in the hands of every British Physician:—

Paralysis agitans occurs principally in the decline of life, yet it has been met with in a young man of twenty-seven. At first partial, this kind of chorea, this paralysis agitans, occupies, for example, an arm. At the same time that this member is constantly agitated with trembling it is affected with a weakness which, at first little pronounced, makes rapid progress. Soon the leg of the corresponding side is seized in its turn, and along with the feeling of a diminution of muscular force come involuntary convulsive movements. The patient cannot walk but by hops. The disease progresses and becomes general: the other arm and the corresponding leg are seized. The patient's carriage then presents something so characteristic that mistake is impossible; but a satisfactory description thereof is equally impossible. He holds himself and walks, his body leaning forward. The centre of gravity being thus displaced, he is obliged to run, so to speak, after himself. He goes ambling, hopping along; and it is impossible for him to change his place without assistance. A stick is not always enough, and some are seen incapable of walking but with the hands leaning on the shoulders of a servant, or held up from behind. This support happening to fail them, they fall inevitably.

But I ought to inform you that this nervous affection takes always a paroxysmal form, and after an access lasting from ten to forty minutes or more, or over, there is no pain, but a muscular fatigue identical with that resulting from violent exercise.

The affection generalising still more, the muscles of the neck enter also into convulsions, the head is constantly shaking; the muscles of the face are not spared; then the lower jaw falls, the mouth remains gaping open, and the saliva flows constantly out, inundating and destroying the garments. Speech is necessarily embarrassed and confused. The bladder also paralyses, and there is retention and consecutively incontinence of urine. The powers of generation are extinguished.

These convulsive movements are, if not violent, so often repeated that deformities result—the patients having their hands constantly leaning on something, the fingers are dislocated upon the metacarpians. The intelligence, at first intact, generally fades, and senility comes before its time.

This disease is inexorable, and, despite all means of treatment, carries off the patient in a space of time more or less short. Three patients which I (Trousseau) have observed to the end have died of pneumonia. But this is only a curious coincidence of a neurosis with a peripneumonia.

By the bye, speaking of Trousseau, was not Mr. Harding—the gentleman who has favoured us with the original communications on the degeneracy of vaccine lymph—was he not aware of that eminent Frenchman's opinion as to one of the causes of this degeneracy? It is in the lymph being taken from the pustules too late. He advocates taking it the sixth day, and he has found the vaccine taken at that period much stronger, producing larger and finer pustules, with a greater degree of general disturbance.

Bervie, N.B., October 2. I am, &c. W. PRATT, M.D.

COMMUNICATIONS have been received from—

Dr. C. HANDFIELD JONES; Mr. CHARLES WATSON; Professor GAMGEE; Mr. BRYANT; Dr. W. M. ORD; Dr. ANDREW; Dr. FLEMING; Mr. G. W. HASTINGS; Mr. J. L. MILTON; Mr. W. PARKER; Mr. H. R. SALMON; Dr. W. PRATT: Dr. R. M. LAWRANCE; G. H.; APOTHECARIES' HALL; Dr. H. G. RAWDON; Dr. MORGAN; ROYAL COLLEGE OF PHYSICIANS; M. D.; MEDICAL SOCIETY OF LONDON; Dr. EDWARD CRISP.

BOOKS RECEIVED.

Government: What is it? or, Rates and Taxation. By Franklin Coxworthy. London: 26, Fleet-street.

*** The writer says, with remarkable candour—"In 1847, it was demonstrated in our papers—in the *Chemist*—that electricity was the cause of gravitation, cohesion, light, evaporation, and cold, cold being the positive, and heat the absence of cold,—not cold the absence of heat; and, in 1848, deduced therefrom, the law that matter increases in weight by contraction and compression. These fundamental principles we forthwith proceeded to apply to the ventilation of sewers and to town drainage, for doing which, or immediately after which, we were officially debarred from promotion."

The Edinburgh Medical Journal. August, 1855.

*** Contains a paper by Dr. Strachan, on the Origin and Circulation of Nerve-Force; being an address to the Edinburgh Harveian Society.

The Edinburgh Medical Journal. September. Edinburgh: Oliver and Boyd.

*** We give the following quotation from a good paper by Dr. Matthews Duncan on the "Mortality of Childbed as Affected by the Number of the Labour:"—

"1. The mortality of first labours is about twice the mortality of all subsequent labours taken together.

"2. The mortality from puerperal fever following first labours is about twice the mortality from puerperal fever following all subsequent labours taken together.

"3. As the number of a woman's labour increases above nine, the risk of death following labour increases with the number.

"4. As the number of a woman's labour increases above nine, the risk of death from puerperal fever following labour increases with the number.

"5. If a woman has a large family, she escapes extraordinary risk in surviving her first labour, to come again into extraordinary and increasing risk as she bears her ninth and subsequent children."

Dr. G. W. Balfour, in speaking of Dr. Alison's Views upon Change of Type, thus expresses himself:—

"We see, then, that careful observation had gradually convinced Dr. Alison of two most important points:, 1st, that blood-letting is not absolutely necessary for the cure of acute inflammatory disease; and, 2nd, that it is not necessary either for its rapid or its perfect cure. So decided a change in the opinion of a conscientious Medical Practitioner, who, for a lifetime, had held opposite views, coupled with the fact that there is nothing in the past history of Medicine which tends to show that inflammations have ever varied in their constitution, though they have indubitably in all times, and more or less in every case, varied in degree, would seem to justify me in concluding that, had Dr. Alison been longer spared, he would ultimately have freed himself from this latest of Medical delusions,—the idea of a change of type in the constitution of inflammations: a change of type which, if it be necessary to explain the success of a non-evacuant system of treatment in inflammation, ought, by a parity of reasoning, to be necessary to explain the success of a similar treatment in cases of catarrh, of parturition, and of accident by precipitation, drowning, etc., in none of which is the formerly inevitable lancet now employed. The argument is as reasonable in the one case as in the other, and amounts to a *reductio ad absurdum* in both."

The Pharmaceutical Journal. September, 1865. London: Churchill and Sons.

*** A very good paper on "Pepsine," translated from the French of Frank Vincer. We make the following extract:—

"Comparative Action of 25 grammes of Water Acidulated, but without Pepsine, and 25 grammes of Water equally Acidulated, but with the Normal Dose of Pepsine:—

"*Water of the Normal Acidity of Gastric Juice.*	"*Solution of Pepsine prepared according to the previous instructions.*
"1. Immediate and enormous swelling of the fibrine. After three hours the water is almost or entirely absorbed. The bottle can be reversed without spilling the contents.	"1. Little or no swelling of the fibrine, no absorption of water. After three hours the solution commences. The contents of the bottle are liquid.
"2. After twelve hours the fibrine is still apparent, swollen, and transparent; no powdery residue at the bottom of the bottle.	"2. After twelve hours, and frequently before, the fibrine has completely disappeared in the solution; a powdery residue(a) remains at the bottom of the vessel.
"3. The liquid obtained at this hour filters very gradually.	"3. At this hour the whole of the liquid filters very rapidly.
"4. The whole liquid being filtered, nitric acid is added, by means of a tube, drop by drop. The first drop produces abundant precipitate, almost in a mass.	"4. Four drops of nitric acid added to the filtered solution produce no precipitate.
"Result.—Fibrine not digested, absence of pepsine, or the pepsine is adulterated.	"Result.—Solution of the fibrine, transformation into peptone, digestion perfect, and the pepsine good."

The Student's English Dictionary. By John Ogilvie, LL.D. London: Blackie and Long.

*** A closely-compacted and very full work. It gives sound modern etymologies, pronunciation, and meanings of words, and is illustrated by a few woodcuts of things that would be obscure by description merely.

Photographs of Eminent Medical Men. No. 8. London: John Churchill and Sons.

*** Sir James Clark, Bart., Mr. Propert, and Professor Acland are the "eminences" illustrated in No. 8. There is not one word that looks like extravagant eulogy, even if it could be supposed that either of the gentlemen in question could be praised in a mean and unworthy spirit of puffery.

Homes without Hands. By the Rev. Hy. Wood. Part 20. London: Longman and Co.

*** We must not allow this work to be completed without testifying to the easy, pleasant inducement such a work offers to the study of natural history.

La Femme au Point de vue Physiologique, Pathologique, et Moral. Par le Dr. Maurice Herzeghy. Paris: V. Masson et Fils.

*** A rather disappointing book.

The Veterinary Review. September. Edinburgh: W. P. Nimmo.

*** Contains several articles on the Cattle Plague, and amongst them a letter from Professor Bouley, of the Imperial Veterinary School of Alfort, which we notice elsewhere.

Notes on Personal Hygiene. No. 1. By T. W. Nunn. Pp. 20.

*** This appears to be the first of a proposed series of pamphlets. It treats of digestion and the use of alcoholic stimulants. There are some admirable common-sense remarks upon the latter subject in connection with the teetotal heresy.

Board of Works. Holborn District. Ninth Annual Report of the Medical Officer of Health for the year ending Lady Day, 1865.

(a) Parapeptone, digestible in the intestines.

Lectures on Venereal Diseases. By William A. Hammond, M.D. Philadelphia: J. B. Lippincott and Co.

A Dictionary of Practical Medicine. By James Copland, M.D., F.R.S. London: Longman and Co.

Lehrbuch der Psychischen Krankheiten. Von Dr. Max Ludesdorf. Erlangen: Von F. Enke.

Opinions and Statistics on the Immediate Treatment of Stricture of the Urethra by the Employment of the Stricture Dilator. By B. Holt. London: J. Welch, 24, Houghton-street, Strand.

Compendium der Practischen Medecin. Von Dr. C. F. Kunze. Erlangen: Von F. Enke.

Sympathetic Ophthalmia: its Symptoms, Diagnosis, and Treatment. By G. Lawson, F.R.C.S. London: R. Hardwicke.

Herbert Fry's Shilling Guide to the London Charities, 1865-6. London: R. Hardwicke.

Du Suicide et de la Folie Suicide. By A. Brièrre de Bolsmont. Paris: G. Baillière.

A Dictionary of Chemistry. Part 30. By Henry Watts. London: Longman and Co.

The Geological Magazine. September. London: Longman and Co.

Anniversary Address delivered before the Anthropological Society of London, January 3, 1865. By J. Hunt, Ph.D. London: Trübner and Co.

Ninth Annual Report of the Medical Officer of Health made to the Vestry of St. James's, Westminster.

Reports of the Health of Liverpool. By W. S. Trench, M.D. Liverpool: Hewson and Procter.

The New York Medical Journal. No. 5. August, 1865.

Medical Report of the Royal Lunatic Asylum, Aberdeen. 1865.

The American Journal of the Medical Sciences. July, 1865.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 30, 1865.

BIRTHS.

Births of Boys, 1066; Girls, 1090; Total, 2156.
Average of 10 corresponding weeks, 1855-64, 1752·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	616	598	1214
Average of the ten years 1855-64	577·5	543·4	1120·9
Average corrected to increased population..	..	..	1238
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	..	1	9	2	3	8	19
North ..	618,220	1	3	8	..	8	12	15
Central ..	378,956	..	..	5	..	2	4	11
East ..	571,158	2	1	23	1	10	10	25
South ..	778,175	2	10	6	1	5	16	22
Total ..	2,808,989	5	15	51	4	28	50	92

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·090 in.
Mean temperature	59·3
Highest point of thermometer	77·6
Lowest point of thermometer	43·5
Mean dew-point temperature	52·3
General direction of wind	Calm, NE, ESE
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK.

October 7. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

9. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

Medical Society of London, 8 p.m. Opening Address, by the President, Mr. I. Baker Brown, and a Paper "On Vesico-Vaginal Fistula."

10. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

11. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

12. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

13. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES

ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

Lecture II.

In my first lecture I considered paresis of nervous tissue as a primary functional disorder; I now proceed to consider the same when it appears to be induced by impressions conveyed to the centres through afferent nerves. This kind of paresis I distinguish as inhibitory, comprising under this head both reflex paralysis, properly so called, and also that, the exciting cause of which acts only for a time, and sometimes more after the manner of shock. The term "inhibitory," as most of my audience will remember, was first used by Pflüger, and applied by him to a certain set of nerves, whose sole function he considered was to arrest or diminish action. The vagi and splanchnics were those which he specially indicated as having this function. His work was published in 1857. The following year Mr. Lister took up the subject, entertaining the idea that the phenomena in question were merely the effect of excessive action in nerves possessed of the functions usually attributed to them. On further reflection upon this subject he says:—"The consideration of the contraction produced in the arteries of the frog's foot by a very mild stimulus, as compared with the relaxation of the vessels caused by stronger irritants acting through the same nerves, confirmed my previous notions. For I could hardly doubt that the cause of the quiescence of the heart or intestines on irritation of the vagus or splanchnic nerves was analogous to that of arterial dilatation in the web, and that, provided a sufficiently mild stimulus were applied to the so-called inhibitory nerves, increased action of the viscera would ensue corresponding to the vascular constriction."(a) In experimenting on the intestines it was found best to fix the ends of the poles to the spinous processes of the 9th and 12th dorsal vertebræ, while the skin and superficial muscles were removed from a portion of the abdomen till the parietes were sufficiently thinned to permit the intestines to be distinctly seen through them. The effect of transmitting currents of moderate intensity was to produce complete relaxation and quiescence of the small intestines, which had previously been in considerable movement, while the muscles of the limbs were thrown into spasmodic action; but on the discontinuance of the galvanism, the previous motion returned. Increase of the peristaltic movements was strikingly apparent and constant during the transmission of extremely feeble shocks. This was the case during the first twenty-five minutes, but subsequently it became less marked, and at the end of nearly an hour, when the current was increased, the *inhibitory* influence was also found to be much less complete than before, indicating that the parts of the nervous apparatus concerned were in a less active condition, no doubt in consequence of exhaustion. A noteworthy fact observed in these experiments was, that a violent struggle on the part of the animal when the intestines were in pretty free movement was followed by absolute and universal quiescence of these organs for several seconds. This seems to prove that the inhibitory influence is certainly sometimes exerted in the natural actions of the animal, and is not merely the result of artificial stimulation. The statement of Pflüger was also verified, that if, while the intestine is lying relaxed under the inhibiting influence of galvanism applied to the spine, a particular part be irritated, local contraction occurs, but is not propagated to neighbouring parts. "This fact," says Lister, "is of fundamental importance, since it proves that the inhibitory influence does not operate directly upon the muscular tissue, but upon the nervous apparatus by which its contractions are, under ordinary circumstances, elicited." This Lister believes to be the rich ganglionic structure lately demonstrated in the submucous tissue by Meissner, of Bâle. He states that he has found abundant well-marked nerve-cells in this situation. The distinction between the co-ordinating power and vascular contractility was very strikingly shown in the further progress of an experiment performed to ascertain the cause of the increased peristalsis which ensues on arrest of the circulation. The peristaltic movements of the portion of gut supplied by the ligatured arteries ceased entirely about twenty minutes after the vessels were tied, and the surface of the gut became there perfectly smooth and relaxed, contrasting strongly with the wrinkled aspect of other parts. But muscular irritability had outlived the co-ordinating power, as was shown by energetic purely local contraction taking place in a part pinched. The co-ordinating power lasts much longer than the inhibiting property in the spinal system, for Pflüger's experiment does not succeed in a dead animal, unless it be performed soon after death, although the intestines may continue to move for a long time. Division of the nerves proceeding to a portion of intestine had no effect in arresting the peristaltic movements in it, but when powerful galvanic currents were transmitted through the spine as before with an inhibiting effect, all movements ceased in the intestine, except in the small piece whose nerves had been cut, which continued in vigorous action as before. Mr. Lister observes:—"The persistence of the vermicular motion after complete division of the mesenteric nerves shows that the movement which occurs during life, like that which takes place after death, is effected by a mechanism within the intestine, and its continuance in the portion of gut so treated while other parts were relaxed, on the application of galvanism to the spine proves that the inhibiting influence acts through the mesenteric nerves, whose integrity is necessary to the effect. Now, if the mesenteric nerves exercised a controlling agency on the intestinal movements, so as by their action to keep the part at rest, division of these nerves would necessarily induce peristaltic action. Lister found, however, that no such result ensued. He sums up his inquiries by stating: "It appears that the intestines possess an intrinsic ganglionic apparatus, which is in all cases essential to the peristaltic movements, and, while capable of independent action, is liable to be stimulated or checked by other parts of the nervous system; the inhibiting influence being apparently due to the energetic operation of the same nerve fibres, which when working more mildly produce increase of function."

The only part of the foregoing observations respecting which I feel some doubt is that which refers to the exercise of an inhibiting agency by the intestinal nerves during powerful voluntary efforts. It does not appear to me to be quite the same thing whether the whole cord is strongly acted on by galvanism, or whether its motor apparatus alone is set in motion by the will. In the former case its sensory mechanism would also be affected, which would not occur in the latter. Suspension of peristaltic action may certainly be produced by active movements of the limbs, as one may often observe when there is an urgent need to evacuate the bowels. This, however, may be referred, I think, to a diversion of nervous power to the limbs; and on the same principle I should explain the following occurrence, which surprised me a good deal when it came under my notice. A lady and two gentlemen were taking a pedestrian tour, and for many days went through a considerable amount of exertion with a good deal of fatigue, but decided improvement in health and strength. The only inconvenience was, that all three became extremely constipated to such a degree that at one time it was almost necessary to obtain relief mechanically. There was nothing in the diet to account for this unusual state, and that it was owing to the continued exercise appears proved by its spontaneously ceasing after a few days' rest. In this instance it can hardly be thought that an inhibiting action of the mesenteric nerves persisted for several hours each day after the journey was accomplished. On the other hand, it does seem probable that so much nervous power was consumed in the motor apparatus of the limbs that the intestinal was left in a minus condition. Similar instances of diversion of nervous power from one part to another are not at all uncommon. It is only just to Mr. Lister to say that he considers it very questionable whether the motions of the heart or intestines are, under ordinary circumstances, ever checked by the spinal system, except for very brief periods. The fact that the nerves of these organs are capable of setting them at rest under conditions of extraordinary irritation is, nevertheless, a matter of great importance, especially in a pathological point of view, and appears to afford an explanation of facts hitherto little understood, such as failure of the heart's action from violent emotion or pain, and the constipation which attends strangulated omental hernia. Thus far Mr. Lister.

The original experiment of Weber, in which the heart's movement was arrested by galvanising the medulla oblongata

(a) *Proc. of Roy. Soc.*, No. 32, 1858.

or the vagi, has been repeated by Bernard, Lister, Hufschmidt, and Moleschott with the same results. The latter observers state that,—1. Slight electric irritation of the medulla oblongata augments the frequency of the heart's action; strong electric irritation diminishes, and very powerful puts a stop to it. 2. If the powerful irritation be suspended, the normal action of the heart may slowly restore itself, and it is then again possible to increase the frequency of the pulse by slight irritation. 3. Powerful mechanical irritation of the medulla oblongata diminishes the frequency of the heart's action. 4. By means of *appropriate* irritation the suspended action of the heart may be reincited. 5. When both sympathetic nerves are divided, slight irritation of the medulla oblongata produces, nevertheless, an increase in the frequency of the heart's action. 6. When both sympathetic and both pneumogastric nerves are divided, no increase in the frequency of the heart's action is produced by irritation of the medulla oblongata. 7. Neither is any increase produced in that way when the pneumogastric nerves only are divided. 8. It follows that the irritation is conducted to the heart through the pneumogastric, and not through the sympathetic nerves. 9. Slight irritation of the *spinal cord* increases, powerful irritation diminishes the frequency of the heart's action. 10. The effect of the irritation was manifest when the pneumogastric nerves only were preserved, but also when the sympathetic nerves only were preserved. 11. The effect ceased when both pairs of nerves were divided. 12. The irritation of the spinal cord is, therefore, transmitted to the heart through the sympathetic as well as through the pneumogastric nerves—through the former directly, through the latter most likely by reflex action. Lister's conclusions are very similar; he says, that in a healthy state of the nervous system very gentle irritation of the vagi increases the heart's action, while a slightly stronger diminishes the frequency and force of its contractions. He regards the sympathetic branches connecting the cord with the cardiac ganglia as having equal claim with the vagi to be called inhibitory nerves. The foregoing observations seem to me to make it tolerably certain that an influence may be exerted through nerves or nervous centres which arrests and paralyses their action. The only objection I am acquainted with to this view is that adduced by Dr. Brown-Séquard, who refers the effect produced to anæmiating arterial spasm in the part affected. Thus he regards the arrest of the heart's action as dependent on contraction of the coronary arteries induced by the stimulation of the vagi which send filaments to their plexuses. This view is, however, disproved by the observations of Panum, who found that the heart's rhythmical movements continued even for hours after its capillaries and veins had been filled with oil and its arteries with wax. Even in this condition irritation of the vagi produced temporary arrest of the heart's action. Lister cites Spiegelberg's observations as showing that the uterine contractions are promoted by mechanical irritation of the cord, and arrested by transmitting a powerful stream of galvanism through the spine. He refers to the temporary paralysis of the detrusor urinæ often witnessed in Surgical practice as the result of severe injury, as indicating that the bladder, while sometimes stimulated through the cerebro-spinal axis, is paralysed by its very powerful operation. Hence it seems probable, he says, that the movements of all the hollow viscera are liable to similar influence from the spinal system. And, again, "There can be little doubt that dilatation of the blood-vessels in consequence of a stimulus is due to an effect produced upon the nervous centres for the arteries similar to that experienced by the visceral ganglia when subject to the inhibiting influence." An inflammatory blush of long continuance may subside rapidly when the source of irritation is withdrawn. In one instance, redness, which had existed for about three days in consequence of tight stitches connecting the lips of a wound, gave place at once to pallor on their removal, Had the arterial dilatation in this case been the result of nervous exhaustion continued for so long a time, such speedy recovery, one would think, could hardly have taken place. Lister's final conclusion is, that it is safest in the present state of science to regard as a fundamental truth not yet explained, that one and the same afferent nerve may, according as it is operating, mildly or energetically, either exalt or depress the functions of the nervous centre on which it acts. It is on this he believes that all inhibitory influence depends, and he anticipates the principle will be found to admit of a very general application in physiology.

I have now given a summary of the views entertained upon this subject, and of the principal experimental evidence by which they have been supported. Mr. Lister's researches appear to me to be of very great importance, and to establish, backed as they are by others, the main point that a stimulating application may so affect an afferent nerve as to paralyse, to a greater or less degree, the nervous centre with which it is connected. When I was led to consider this subject in 1859, the point which most arrested my attention was its bearing on pathology. It appeared to me that there were many well-known, but unexplained facts which might well be viewed as exemplifications of an agency of this kind. I say of this kind, for it appeared to me that Mr. Lister's view required some modification. The conception which seemed to me most appropriately to colligate the facts was that the result produced depends in great measure on the relation which the impression bears to the nerve or to the nervous centre on which it operates, not only as regards its strength, but also as regards its quality. It seemed to me true not only that a stimulation might be too powerful, but that it might be in its essence injurious and depressing. The cause of this might lie not only in the nature of the stimulus itself, abstractedly considered, but in the vital condition of the recipient nerve or nervous centre. Instead of considering with Lister that an inhibiting influence depended on the energetic operation of an afferent nerve on a nervous centre, I believed that it was produced by a depressing influence conveyed or exercised by the nerve. It appeared to me that it by no means followed that because a stimulus was powerful, the nerve action produced thereby should be energetic. The case may, perhaps, be analogous to that of the moderate or excessive imbibition of a vinous stimulant. The former stimulates the brain, and increases its vital activity; the latter depresses and disorders it. It is probable that the same is true of galvanism as of heat and cold, respecting which agents Müller says—"When their action is not carried beyond a certain degree of intensity, nor continued beyond a certain time, they are stimulants; but if their action be more violent and long-continued, they have a contrary effect." With respect to the terms stimulation and irritation, which have frequently been employed in the foregoing pages, it may be observed that they are often used evidently in the same sense, viz., to imply some agency which rouses a part into action, or increases its action. It is not well to quibble about terms, but, in strictness, I think a distinction should be made between them, the first being employed when the effect produced is healthy and beneficial, and the second when it is abnormal or injurious. Thus, I should say that a *stimulant* would rouse nervous and muscular tissues to the exercise of their proper actions, but that an *irritant* would cause perverted actions, such as delirium or convulsions. It is almost impossible to determine before trial in each case the way in which a particular substance will act. What is a stimulant to one person may in the same dose prove an irritant to another, on account of the different vital susceptibility of their tissues.

(To be continued.)

Note to Lecture 1.—M. Gubler cites in his classical memoir on paralysis (*Arch. Gènèr. de Médec.*, 1860, 1861) some remarkable instances of paralysis consecutive to the exanthemata. One is a case of general paralysis affecting a child, aged 2 years, exhausted by diarrhœa and an attack of measles. A cure was effected by generous diet and tonics. Another is that of a girl, aged 9, convalescent from scarlatina, when she lost first her hearing, then vision, and afterwards taste and smell. All treatment failed until iron was administered and some wine. In three weeks she was quite restored. A case is also cited from M. Pidoux in which a discrete variola was succeeded at the period of desiccation by palsy of the velum palati, followed by paraplegia, and afterwards by palsy of the arms, with depression and profound melancholy. With stimulating frictions, bark, coffee, and sulphur baths he recovered completely. M. Gubler recognises the essential dependence of these paralyses and of other similar ones on debility or nervous exhaustion, and ranks the palsy succeeding diphtheria in the same class, as "only a particular case of a general rule." He thinks, however, that they are quite independent of all (even functional) lesion in the centres and nervous cords, and holds that they are entirely peripheral. This view seems to me much opposed by the extensive prevalence of the paralysis, by the implication of the mental actions in some cases, as in the one just mentioned where there was profound melancholy, and by the occurrence of similar paralysis after epileptic paroxysms. It is also to be remarked that in these and many

similar instances the peripheral parts had not been affected by any injurious influence, as cold, or wet, or inflammation, which could in any way account for their paralysis.

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS. (a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College and of University College Hospital.

LECTURE X.

DIABETES MELLITUS — GLUCOSURIA — SACCHARINE URINE — ITS NATURE AND RATIONAL TREATMENT.

(Continued from page 359.)

Pathology.

We now come to what, at least as far as we, as practical Physicians are concerned, may be considered the most important part of our subject, namely, its pathology. Diabetes happening, however, to be one of those intricate diseases leaving behind it no characteristic anatomical lesion by which a clue to its seat can be obtained, it is not in the dead house, but in the clinical ward and physiological laboratory that the nature and treatment of the affection are most successfully studied. What has now to be said of its pathology and treatment will, therefore, be found greatly simplified by the knowledge we have already obtained of its physiology. In fact, we shall soon find that the presence of sugar in the urine, like the discolouration of the skin in jaundice, is not of itself the disease, but merely the most prominent sign of several widely-differing abnormal conditions, the correct appreciation and understanding of which entirely depend on our acquaintance with its physiology.

Diabetes has, for example, been found to follow upon—

Injury to the head, with or without fracture of skull.
Clot in the pons varolii.
Softening of the base of the brain.
Abscess of the cerebellum extending into the fourth ventricle.
Tumour (the size of a nut) in the left lobe of the cerebellum.
Disease of the sympathetic nerve.
Tumour of the pneumogastric nerve.
Deposit of bony spiculæ in the falx.
Excessive brain work.
Intense grief.
Sudden mental shock.
Blow on the epigastrium.
Pregnancy.
Uterine disease.
Disordered digestion.
Exposure to cold, etc.

Even in some instances diabetes seems traceable to hereditary constitutional peculiarity, for not only is it occasionally met with in more than one member of the same family, but it has even been found present in parent and child to the third generation. Thus we find it related (b) that Dr. Mosler had a patient whose father, mother, and two sisters died of diabetes, and that within three weeks after the woman came to the Hospital, her son, aged 15, also presented himself, suffering from the same disease.

Seeing, then, that diabetes springs from a multitude of causes, and that the symptom of saccharine urine is not itself the disease, but merely the most prominent sign of the hidden complaint, we can easily understand how a variety of morbid actions, quite distinct from each other, and perhaps of a diametrically opposite character, may produce it. For example, if the normal stimulus of the liver be exaggerated, an abnormal amount of sugar will be secreted, and if the quantity formed be greater than the amount requisite to supply the wants of the system, the excess, which then acts towards the organism as a foreign body, will be eliminated along with the urine, and the disease diabetes mellitus established. On the other hand, the case may be reversed, and there may still exist an abnormal amount of sugar in the blood to be eliminated with the urine, notwithstanding that only the proper amount has been secreted by the liver. This, of course, must of necessity happen when from any cause the process of assimilation has been interfered with, and the body fails to consume its normal quantum of saccharine material.

Hence, it is evident that we may have two perfectly distinct forms of the same disease, one of which might be named *Diabetes from excessive formation;* the other, *Diabetes from defective assimilation* (mal-nutrition).

I shall presently have occasion to show that this theory is equally supported by clinical observation as by the results of scientific inquiry. It will be found, too, that it furnishes us with a logical explanation to the fact which is so familiar to all who have had much experience with diabetic cases—namely, that while one man improves and gains both weight and strength on animal diet, another on the same regimen loses both flesh and energy, notwithstanding a diminution, perhaps, taking place in the amount of sugar excreted.

Piorry's idea of curing diabetes by giving, instead of withholding, saccharine matter may after all turn out to have more reason in it than at first sight appears. Like the animal diet system, however, it will be found only applicable to a certain class of cases. The great point for us, then, is to be able to discriminate between the two forms of morbid action, in order that our plan of treatment may be the one best adapted for the particular case.

How can this be done? Fortunately, the two forms of diabetes have certain peculiarities connected with their history which enables us in most cases to distinguish the one from the other.

In those resulting from *excessive formation* the patient is not necessarily emaciated and weak. He may, on the contrary, look both fat and ruddy—appearing, in fact, to be in the very bloom of health. This is especially true in slight cases, as well as in the early stage of even those which run on to a fatal termination. In this class of patients it is not until the disease has made considerable inroads on the constitution that there is any marked emaciation.

In the second class of cases, on the other hand, namely, those resulting from *defective assimilation*, emaciation is one of the earliest and most prominent symptoms, the loss of flesh being often very marked before the nature of the disease is detected. Exactly the reverse of what frequently occurs in the first class, in which the patient occasionally receives the first warning of the affection from the accidental detection of sugar in his urine.

An inordinate thirst and excessive elimination of urine is in all cases an indication that the disease is already in its second stage, the first stage being indicated, in those arising from *excessive formation*, by saccharine urine alone, and in those from *defective assimilation* by saccharine urine coupled with loss of flesh.

At one time, when a patient was said to have diabetes, it was considered tantamount to saying his days were numbered. As our knowledge has increased, however, we have learned that although it is but seldom possible for us to eradicate the disease, we can, nevertheless, so mitigate its effects as not only to prolong the life of the individual, but to render it a tolerable, if not even an agreeable one. Prout used to declare that diabetic patients are for ever standing on the brink of a precipice, for they are in constant danger of succumbing from the indirect as well as the direct effects of the disease, in consequence of there being in them an absence of that vital stamina which enables healthy persons to resist the inroads of disease. This is, no doubt, true, for the mal-nutrition which diabetes induces renders the constitution prone to take on low inflammatory actions, which, if set up in a healthy individual, would produce but a temporary illness, but when engendered in the diabetic, rapidly run on to a fatal termination. But, as forewarned is forearmed, this need not distress, but only make us the more careful at once to remedy any trifling deviations from the normal standard, which, in the healthy, might be allowed to pass unheeded.

Having only specified two forms of diabetes—1st, That by *excessive formation;* 2ndly, That by *diminished assimilation*—it may naturally be asked how this statement can be reconciled with the one previously made regarding the multitude of causes inducing the disease? Easily enough, as we shall now see.

Nerve Lesion and Disease as a Cause of Diabetes.

It is generally admitted that the various secreting organs of the animal body are stimulated to perform their different functions by direct and reflex nerve-action, and the liver proves to be no exception to this law. If the pneumogastric nerves

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—ED. *Med. Times and Gaz.*

(b) *Brit. Med. Journ.*, Dec. 31, 1864.

be divided in the neck, the glucogenic function of the hepatic organ is arrested, and when galvanism is applied to the upper (but not to the lower) ends of the divided nerves the saccharine secretion is re-established. Moreover, it has been ascertained that this reflex nerve-force, which travels by the pneumogastric nerves to the brain, is from thence reflected along the spinal cord, splanchnic nerves, and solar plexus, to the liver. (Bernard.) It has been further ascertained that it is not at all essential that the galvanism be applied to the cervical portion of the pneumogastric in order to re-excite the saccharine secretion, for, according to another well-known physiological law, irritation produced at any point of a reflex nerve circuit is invariably followed by the same phenomena.

As what I am now attempting to explain is the keystone to the comprehension of the pathology of diabetes by nerve influence, it is absolutely essential that my meaning should be clearly understood. I must, therefore, solicit your attention for a moment to the following experiment:—

Let the hind legs of a frog be prepared in the manner represented in the accompanying woodcut, every attachment being severed except that of the sciatic nerves with the spinal cord. Besides this, let the motor roots be divided on the right side

FIG. 27.

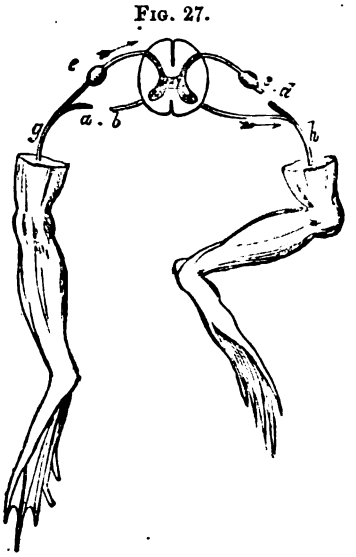

FIG. 27.—Reflex circuit in hind legs of frog attached to the spinal cord. *a-b*, anterior motor root of (*g*) right sciatic nerve. *c-d*, posterior sensory root of (*h*) left sciatic nerve.

(Fig. 27, *a-b*), and the sensory roots on the left (*c-d*), so as to leave only one complete nerve-chain. The application of a slight galvanic current to the toes of the right limb will then be instantly followed by contractions in the muscles of the left, showing that the nerve stimulus is transported through the sensory nerve of the right limb to the spinal cord, and reflected from thence, through the motor nerve, to the muscles of the left extremity. In order to produce this muscular movement, however, it is not at all necessary that the galvanism be applied at the extremity of the sensory nerve; for irritation produced in any part of its course (*g*, for example), at its root (*e*), or even in the opposite nerve chain (*h*), will still be followed by the same muscular contractions. Now, it so happens, with regard to the glucogenic function of the liver, that the pneumogastric is the analogue of the sensory, and the spinal cord and splanchnic of the motory nerves of the frog's limb; so that an irritation applied to any part of the pneumogastric nerves, spinal cord, or sympathetic reflex glucogenic circuit, is as effectually followed by a secretion of sugar as the application of galvanism to the sciatic nerves of the frog's limb is followed by muscular contraction. Moreover, the irritation, galvanic or other, has only to be applied to the glucogenic circuit sufficiently long or sufficiently powerfully in order to induce saccharine urine. Hence it is within the power of the physiologist to render animals artificially diabetic by a variety of experimental procedures implicating the various parts included in the reflex nerve-chain above indicated. Thus diabetes can be artificially established by applying the irritation to the extremities of the pneumogastric in the liver; as when stimulants are injected into the portal vein (the author), or by irritating the pulmonary branches distributed in the lungs, as where chloroform is inhaled (Reynoso), or by applying galvanism to the cervical portion of the nerves, or by irritating their roots, as when injury is applied to the floor of the fourth ventricle (Bernard), or by acting on the downward chain, as, for example, when the splanchnics are divided. (Graffe.) In fact, I might go on to prove experimentally that the *rationale* of saccharine urine, by reflex nerve action, is as comprehensible as the *rationale* of the muscular contraction in the frog's limb. Nay more, just as we may have muscular contraction following upon the *indirect* application of a stimulus to the nerves in the frog's limb, so we may have saccharine urine following upon the indirect application of the stimulus to the glucogenic circuit. For example, diabetes may be induced by a blow on the epigastrium, or from an injury to the head, as in the case which I already cited in a previous lecture. The patient at the time he was admitted into University College Hospital under the care of my colleague, Professor Erichsen, was suffering from paralysis consequent upon injury to the head received in falling from a scaffold. It may be mentioned that it was in consequence of the man having fallen upon the occipital region that I suggested the possibility of his being diabetic, and had the urine tested. In this case sugar was found the very first time the urine was examined, so that it is impossible to say when it first became saccharine; no sooner was the sugar detected, however, than the nurse was ordered to collect daily all the urine voided during the twenty-four hours, and transmit it to the laboratory for quantitative analysis.

The analyses were made by my former pupil, Dr. Pringle, and the following is a table of the results:—

July, 1857.	Quantity of urine. In cub. centim.	Oz.	Quantity of sugar. Grammes.	Grains.
18th . .	952 =	30·7	2·38 =	36·89
20th . .	1000 =	32·2	5·00 =	77·50
21st . .	2187 =	70·5	6·38 =	98·89
22nd . .	1875 =	60·5	3·90 =	60·45
25th . .	1955 =	63·6	3·48 =	53·94
28th . .	1000 =	32·2	1·25 =	19·37
31st .	Not sufficient sugar for quantitative analysis.			
August 3	No sugar.			

It will be seen that at first after the receipt of the injury, the sugar went on steadily increasing, and then, as the patient recovered, it as gradually steadily diminished, until at length it entirely disappeared.

This was prognosed when I first saw the case. For the condition of the man, as far as his diabetes was concerned, was exactly similar to the state of rabbits rendered artificially diabetic by puncture of the fourth ventricle, and we all know that at first the amount of sugar gradually augments until the injury in the cerebral substance begins to heal, and then the diabetes as gradually disappears.

Some may say, we had no proof beyond the existence of saccharine urine that injury had occurred to, or in the neighbourhood of the fourth ventricle. This is very true, but I think the reasoning from analogy justifies the diagnosis. However, as some may be sceptical on this point, I shall now cite a case where the diagnosis may be said to have been verified by the post-mortem examination.

(To be continued.)

ORIGINAL COMMUNICATIONS.

CHOLERA AT SOUTHAMPTON: ITS SUCCESSFUL TREATMENT BY COLD AND HEAT ALONG THE SPINE.

By JOHN CHAPMAN, M.D., M.R.C.P.

IN the number of this journal published July 29, 1865, appeared an exposition of my views concerning the pathology and treatment of diarrhœa and cholera. Since that date I have been anxiously watching for opportunities to test the accuracy of those views by applying them in practice. I am now enabled to furnish reports of seven cases which have been treated by the method recommended in the paper above mentioned. Those reports, as will be seen, happily justify the anticipations which I had expressed. Patients in the state of complete collapse from cholera may now be recovered with astonishing rapidity; while the subsequent congestions

and fever may be controlled to an extent which will fill the Physician with confidence in the power of the remedial agency at his command. That these statements are sober truths will, I believe, be held to be proved by the following reports of cases which were kindly placed in my hands for treatment either by Dr. Cheeseman or by Mr. Bencraft, Surgeon, of Southampton :—

Case 1.—Mrs. F., aged 29, eight months pregnant, living in one of the worst parts of Southampton, was first seen by me on October 4, 11.30 a.m. Has had diarrhœa about ten days. On the 2nd inst., in the afternoon, felt faint, and at 7 p.m. took to her bed. Had previously begun to be purged "dreadful." Since then has been purged continually every ten minutes, or oftener. Cramps have occurred at intervals during the ten days, but on Monday night they became very bad, recurring continually; has not had five minutes' sleep at a time for them; skin cool, but not very cold. Ate an egg this morning, and, as her first act of vomiting, has just thrown it up. No headache, but is very giddy; cannot stand one moment. Head decidedly cold; eyes deeply sunken; tongue cool. "Feels" (she says) "tight in the chest, and hot in myself." Very slight pain in bowels; passes water. Pulse 108, thin, and very feeble. Applied ice at 11·45 a.m. along the whole spine, and ordered it to be removed at once if any hypogastric pain were experienced. 2.45 p.m.—Was soothed during the first forty minutes, then began to have pain in the region of the womb, but continued the ice; cramps much lessened; bowels moved but twice; has been sick twice; pulse 104. Continue the ice every other half-hour, and give beef-tea. 7.15 p.m.—Bowels moved twice; sick twice, but retained the beef-tea. Cramps have subsided, but still has pain in the hypogastric region and down the thighs; is very comfortably warm all over. To apply the ice only between the scapulæ every other half-hour as before: to remove it at once if internal pain is induced. 11.15.—Has slept several times during the evening. Hypogastric pain continues; bowels moved once; sick twice; continue as before.

5th, 8.30 a.m.—Bowels moved twice; sick four times, twice provoked by medicine prescribed before I saw the patient, and given without my knowledge. Pulse stronger; warm all over; no cramps. Still has dull pain in hypogastric and lumbar region; nothing, however, of the nature of spasms. Has retained her beef tea, and says the ice comforts her. To reapply it along the whole back, until it melts, unless hypogastric pains increase. 5 p.m.—Is altogether better; pain lessened; no cramps; warm all over; bowels moved but once; stool decidedly fæcal; has vomited a little after drinking; sleeps often, and feels rather heavy in the head.

7th, 9.30 a.m.—Used ice three times since last evening. Has been sick three times. The bowels have not been moved since yesterday morning. Still warm; no cramps; pulse 104; has eaten two eggs and some fish. To use ice only if coldness, cramps, sickness, or diarrhœa should recur. To eat anything she may fancy. 10 p.m.—Has been much better all day; neither sickness nor movement of the bowels. Is now asleep.

8th, 9 a.m.—In the middle of the night began to "wander," and got up. Does not answer questions coherently this morning. The eyes have a peculiar aspect, as if expressive of cerebral oppression. Head, chest, and extremities warm; pulse rather strong and rapid. Has been neither sick nor purged. Loud bronchial breathing, but no respiratory murmur at back of each lung; breathing rather laboured. I *thought* the breath had a diabetic smell. Still no movement of bowels. To discontinue the ice, and to apply heat between the scapulæ, and to renew the warm water in the bag every hour. 4 p.m. —The heat gave immediate relief, both to the head and chest. In a few minutes after its first application she became quite coherent, broke out in a perspiration, and felt much better. Has had a long sleep—the longest since she has been ill. Says, "I'm wonderfully better; I only want a cup of tea to be all right now." Still neither vomiting nor purging. To renew water-bag at intervals of ninety minutes.

9th, 9 a.m.—Feels a great deal better in herself; slept two or three hours; still no sickness and no movement of the bowels; passes urine freely; skin cool; pulse 112; tongue coated. To continue water bag once every two hours, and to have a saline mixture. 4 p.m.—Still better and stronger; has slept much; tongue cleaner; no sickness; bowels still unmoved. Says she feels now that she only wants plenty of good food. On this occasion I ordered the use of the water bag to be discontinued, and took my leave.

Comment.—As this woman is pregnant peculiar care and patience were needed in her treatment by means of ice, otherwise a miscarriage must have been induced. Foreseeing before ice was first applied the danger of its prolonged use at one time, I ordered its removal at once if hypogastric pains were caused by it. It will be seen that my precautions were needful, but that by careful management such tolerance of the ice was ultimately established as to enable me to overcome all symptoms of her malady. The experience of the effects of the heat in restoring sanity, inducing sleep, causing perspiration, and relieving the lungs is not less striking and instructive.

Case 2.—Mrs. L., aged 29. First seen October 6, at 4 p.m. Began to have diarrhœa and vomiting at 6 a.m., stools being yellow. Cramps began at 10 a.m.; at 11 a.m. the skin became cold and discoloured. Symptoms gradually increased. At 4 p.m., when seen by myself, Mr. Bencraft, and Dr. Welsh, she exhibited the choleraic countenance in a very striking degree; eyes deeply sunken; lips blue; the whole surface of the body cold; cramps violent; rice-water purging and vomiting. Ice ordered to be applied continually. 10 p.m.—Decidedly improved. Markedly warmer; cramps and sickness much lessened. The cramps only recurred when the ice had melted and the bag had become warm.

October 7, 10 a.m.—Aspect and voice much improved; lips red; whole surface of body quite warm; pulse 100. Cramps only occurred once—when the bag had become warm. Bowels moved three times; vomited once. To continue ice as before. 8 p.m.—Body nice and warm. Pulse 94, fuller and stronger; slightly sick once; no cramps; bowels moved twice, the stools have a fæcal smell. Very thirsty and weak; indisposed to take nourishment. Had some beef-tea and milk, and kept it. To apply ice till it melts, then omit it for half an hour, then repeat it in the same way.

8th, 10·30 a.m.—Has had rather a restless night, wanting sleep, and troubled with hiccough. Warm all over. Pulse 90. No vomiting; bowels moved but once; no cramps. To apply warm water bag along cervical and upper dorsal region, and to renew it every two hours. ℞ Ferri et quinæ citratis, gr. v., ter die. 11 a.m.—Called again and found her asleep. 4 p.m.—Found she had slept about an hour—twenty minutes on three different occasions. Bowels moved once. To have tea and milk. 9 p.m.—Feels and looks much better; comfortably warm all over; pulse, as Mr. Bencraft said, "capital"—84; no vomiting or cramps throughout the day; bowels moved once. Enjoyed her tea, milk, and sago. The face is looking clearer. Now she expresses a fancy for food—viz., ham. To apply ice in lumbar region at 2 a.m. to-morrow.

9th, 11 a.m.—Ice was not applied as ordered. Has had a restless night, and between 4 and 6 a.m. had four motions, with copious amount of bile in them. Is generally warm; pulse 72. Complains of headache if she rises up. Tongue rather darkly furred on dorsum, clean at edges. Has had neither sickness nor cramp. Has taken half a cup of tea with milk; could not swallow any meat. To apply ice in lumbar region thirty minutes every four hours; but if diarrhœa returns to apply it continually. 8 p.m. (report from Mr. Bencraft).—"Mrs. L. is doing well. Pulse 72. She is not so restless or feverish; has taken some tea with milk, two good cups of beef tea, and a fruit tart which she fancied."

Comment.—It will be observed that on the night of October 8 I ordered ice to be applied at 2 o'clock the following morning, although both vomiting and purging had ceased. I did this because as patients are most frequently attacked with cholera early in the morning, so will they be most liable, as it seems to me, to relapse at that time. There being no ice in the house on the night in question, none was applied; and, as I anticipated, diarrhœa recurred. The power of the warm water bag in inducing sleep is exemplified in this case quite as strikingly as in the previous one.

Case 3.—Ellen S., aged 15, first seen October 6, 12 p.m. Began to menstruate five months ago. Of late years has had pretty good health, but has always been delicate in the chest; eight years ago had a severe attack of diarrhœa and "slow fever." This morning, at 7.30, had a stool, and complained of pains in her chest and stomach. She continued to be purged and to vomit at times, and at 4 p.m. assumed the ghastly cholera aspect, and said she thought she was going to die. Since then the purging and vomiting have been almost incessant. She is very cold all over, the wrists and tongue especially so; the head alternately cold and hot. Pulse almost wholly imperceptible; cold perspirations; very bad cramps; rice-water stools. When first seen the peculiar choleraic countenance was more striking than I had seen before; it was appallingly deathlike. Had a bilious pill at

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10.30, and pill of calomel and opium (gr. ½ of the latter) at 11.30 a.m. I ordered ice to be applied to the whole spine every two and a-half hours.

October 7, 9 a.m.—Is strikingly better; warm all over; tongue considerably warmer; pulse very distinct, 116; head comfortable; countenance immensely improved; no cramps at all. Has vomited but once. The fæces, which are still passed under her, have a distinct fæcal smell. Has had a cup of tea. Ordered to apply ice during an hour; then omit it half an hour; then resume it for the hour, and so continue. To have beef tea as often as she can take it. 2 p.m.—Continues warm; tongue warm; no cramps. Has been sick once, at 9.30; not since. Bowels not moved since 11 a.m. Has dozed a little; no headache. Has had half a cup of beef tea, and has kept it. 8.30 p.m.—Thinks she does not feel quite so well. Warm all over, except the feet; pulse 104; no cramps; sick once; bowels moved once; stool fæcal. Has had two half-cups of beef tea, and has kept them. Had the ice on every alternate hour. To continue the ice an hour, omit half an hour, and repeat continually in this way.

8th, 10 a.m.—Is still warm all over, especially the chest. Pulse 116. Has been sick and purged ten or twelve times during the night. The last stool was quite of the rice-water character, and contained a large round worm, which was dead. She complains of pain in the chest, and I cannot hear respiratory murmur at the lower part of the back of the lungs. Has recently slept about half an hour. To apply ice to lumbar region only, and continually. To apply warm water between scapulæ every hour. 4 p.m.—Found her asleep. Feels easier in the chest; vomiting and purging much lessened; stools have strong fæcal odour. Has had more beef tea. Continue. 10 p.m.—Still better; has slept an hour; pulse 100. Mr. Bencraft, who saw her with me, is struck with the improvement in her appearance. To use the ice as before, and the warm water every two hours.

9th, 10 a.m.—Has had rather a restless night, and complains of pain in the bowels. Pulse 92; breathes comfortably; sickness at intervals. To discontinue the application of the warm water bag, and to apply ice continually in lower dorsal and lumbar region only. 4 p.m. (Mr. Bencraft's report).—"Sickness lessened; bowels moved twice. Still restless and complaining of pain in the stomach." (Mr. Bencraft has kindly promised to keep a record of the further progress of this case.)

Comment.—As this patient has a weak chest, it was necessary to watch carefully the effects of the ice, and to apply it as symptoms suggested. Hence it was that although she had been much troubled with both sickness and vomiting during the night of the 7th I, next morning, restricted the ice to the lumbar region, and ordered heat to be applied between the scapulæ. It seems to me not improbable that in the preternaturally sensitive and excitable state of the bowels the dead worm which she passed caused the purging to recur. In this case, again, the warm water bag not only relieved the chest, but speedily induced sleep. I must warn Physicians, however, that heat can only be thus used advantageously in cholera cases when great care is exercised, both in respect to the length of time it is applied and to the temperature of the water used, as heat, even between the scapulæ, tends to prolong the sickness.

Case 4.—Mr. B., a strong man, accustomed to work at the docks, was attacked on the morning of October 8. I saw him with Mr. Bencraft in the evening of the same day, when he complained of incessant vomiting, purging, and cramps, and evinced great anxiety and distress; but though the skin was rather cool, it was not cold; and as, therefore, no marked algide symptoms were developed, the case was not thought to exhibit the characteristic symptoms of cholera in a form so decided as to be a desirable one for testing the efficacy of my method of treatment. He was, therefore, treated by medicine only.

October 9, 11 a.m.—I was again requested to see the patient, the algide symptoms being now very marked. Indeed, all the characteristic evidences of cholera were present; but just before I reached the patient, Dr. Lake had applied an ice-bag along the spine. I did not see this patient again. Dr. Bullar, however, who called upon me the same day just as I was leaving Southampton, informed me that by twelve o'clock a favourable change in the patient was observable, and that he was already becoming warm; and I have since received a note from Mr. Bencraft, dated 9 p.m. the same evening, in which he says:—"B—— is much better, warm all over, a capital pulse, but still sick; no cramps."

Case 5.—Mrs. T., aged 42; first seen October 4, 11.30 a.m. Has been suffering from diarrhœa for several days. On the 29th ult. she suffered much from cramps. Yesterday she was very ill with diarrhœa, and this morning her bowels have been moved six or seven times. There is no fæcal matter in the stools, which are wholly of the "rice-water" type. Complains of giddiness and deafness. Skin generally cool; legs and feet cold. Ice was applied at once. 3 p.m.—Feels better, and has had but one motion. 7·30 p.m.—Has felt inclined to be sick, but was not so. Had two motions, but no longer of the "rice-water" kind. Has eaten fish, and kept it. To continue the ice. 11 p.m.—Head and upper extremities very warm; lower extremities cool; pulse 80, intermittent. Has vomited once, provoked to do so by medicine prescribed before I saw her, and which I did not intend her to take. Had one motion. To apply ice in the two lower segments of the bag only.

October 5, 8.30 a.m.—Is warm all over except the feet. Pulse 80, intermittent. Has not been sick; bowels moved three times, but the stools more substantial; feels weak; is taking ground rice boiled in water, grapes, and preserve. To apply ice every four hours until the ice melts on lower third of spine only.

6th and 7th.—This patient progressed satisfactorily, but during the night of the 7th no ice was used, and early the next morning she was purged three or four times.

8th, 12 a.m.—Has eaten an egg and had some milk; is fairly warm all over; no cramps, and the last stool recently passed is semi-solid. To continue ice, as last ordered, three times a day, and at 2 o'clock in the morning. ℞ Ferri et quinæ citratis gr. v., ter die.

9th, 9.30 a.m.—Has had a considerable amount of sleep, but about 2 a.m., before ice was applied as ordered, the patient was violently sick, and purged several times; no cramps; skin nicely warm; pulse 80; tongue thickly coated in parts, and beefy-red in others. Has had an egg and half-a-pint of new milk this morning. To continue the ice along the lower half of spine, and to take a saline mixture. 4 p.m.—Patient feels much better, and is in good spirits, both she and her husband believing that she will soon be well. Having given such general directions as I thought desirable, I took my final leave.

Comment.—The experience in this case again justifies the belief that the liability to relapse is greatest shortly after midnight, and that it is especially necessary to take precautions to avert this result by applying ice immediately after midnight at all events, until the patient is fairly out of danger. The more cholera is studied the more it will be found, I believe, that the violence of the disease is exhibited in different patients in different parts of the body; in one the skin exhibits the most marked symptoms, in another the voluntary muscles, in another the stomach, in another the bowels are seemingly the chief seats of the disease, while in hot climates the head is often so suddenly and powerfully affected as to result in death from coma almost immediately after the attack. The patient whose case has just been described has been a long sufferer from deficient and painful menstruation, and from coldness of the feet—facts which denote that the lower half of the nervous centres along the back have long been in a state of chronic congestion. Hence it was to be expected, as experience has proved, that the choleraic attack would chiefly expend itself on the bowels and lower half of the body. For the first time during a long period the feet of this patient have become permanently warm.

Case 6.—Mrs. B., aged 46, widow, residing in one of the very worst parts of Southampton, began to be ill at 1 a.m. on the 2nd inst. Was attacked with constant sickness and purging; became cold all over, with cold sweat-drops "as big as peas," and her skin assumed a purple hue; was troubled with cramps of the extremities, the fingers becoming quite stiff. The same evening (the 2nd), Dr. Cheeseman wrapped her in a wet sheet, which seemed to lessen somewhat the coldness of the surface and to refresh her.

She was seen by me for the first time on October 3, at 9 p.m., when Dr. Cheeseman kindly allowed me to treat her. At that time the vomiting, purging, and cramps, which had also invaded the chest and abdomen, persisted undiminished. The muscles of the extremities were hard, somewhat board-like, showing them to be in a state of tonic spasm. The head was alternately hot and cold. The upper part of the chest was decidedly cold; the precordia and epigastrium warm. Arms and legs cold, the wrists especially so. She complained much of her chest and head. No urine had been passed during the

2nd and 3rd inst. At 9·50 p.m. I applied ice along the whole spine. At 9·55 the hard muscles had become soft and flaccid. At 10 p.m. she fell asleep, and excepting an interval of ten or fifteen minutes, slept an hour and a-half.

October 4, 1 a.m.—The upper part of the chest had become warm, and the extremities slightly warmer. Vomiting and purging lessened. 11 p.m.—Has vomited only eight times since last visit, and the bowels have been moved but four times, and not at all since 3 p.m. At 7 p.m. had become warm all over and looks less distressed. The cramps have almost wholly ceased to trouble her. The bronchial tubes are much clogged with thick mucus, but the quantity expectorated is already lessened. Am now told for the first time that she began to menstruate this morning, although she only ceased a week ago.

October 5, 5 p.m.—Complained of much pain of chest and "kidneys" during last night. Bowels have not been moved since 3 p.m. yesterday; has been sick six or seven times; ejects bile. The skin is warm all over. An injection of beef-tea given to-day has been retained. To apply ice between the scapulæ and along the lower cervical vertebræ just sufficiently long to control the sickness; the legs, which have become cooler, to be kept warm by clothes and hot-water bottle.

Although the algide symptoms of this patient were completely overcome, and the diarrhœa had wholly ceased, and although the last stools which were passed were quite of a fæcal character, and of considerable consistence, she ceased to improve, and finally sank in the evening of October 7. She was an habitual drunkard, is said to have lived on drink during the week preceding her attack, obtained gin early in the morning of the 5th, 6th, and 7th, and during the whole of the 7th, until about 7 p.m., was destitute of food, or the means of getting beef-tea, fuel, and ice. On the evenings of the 5th and 6th, I supplied a small sum, directing beef-tea to be purchased, but I fear that my little help was converted into gin. The nurse, who had been up several nights with her, whose apparently unremunerated devotion to her was a mystery to me, and who, no doubt, was wholly exhausted, was found by a Physician lying drunk by the side of the patient. Of course, as there were no means of treatment in the house on the 7th, I avoided visiting the house until evening, when I found the patient in a dying state. I must add that before my treatment began, the patient had had opium and calomel; forty grains of the latter.

Case 7.—Mrs. D., aged 73, married. October 6, 10 a.m.—Began to be ill last night with vomiting and purging, fearful coldness, and cramps, and continued in that state until I saw her, when I ordered ice along the spine. 7 p.m.—Hands still cold; feet much warmer, also felt the warmth in the abdomen; has been purged twice and sick twice; has not had any more cramps. To continue the ice until quite warm all over.

7th, 9·30 a.m.—Has had five bags of ice since treatment began. Is warm all over; expression improved; has a little headache; has a little pain about the bowels, but no cramps; bowels moved three times since 7 p.m. yesterday, and has not been sick at all. Has had some beef-tea. To continue the ice every other hour. Food *ad libitum*.

8th, 11 a.m.—Thinks she feels a little better, but has been purged four times during the night, and is very weak; is fairly warm all over. To omit ice from upper cell of bag, continuing the application as before. To have some arrowroot. ℞ Ferri et quinæ citratis, gr. v., ter die.

9th, 10 a.m.—I was told by her husband that she was dying; found her breathing with extreme labour; the inspirations very forced and deep; pulse at wrist feeble; aspect deathly; eyes dim. Applied ten-inch warm water bag; she revived considerably, began to breathe easier, swallowed a little brandy-and-water, was conscious, and answered questions by a laboured monosyllable. Gave her a teaspoonful of brandy twice; ordered it to be repeated at the end of an hour, the water-bag being continued and renewed meanwhile. She sank, however, in the course of the day.

There is a sewer-grate close to the door of the patient's house, and the husband informed me that a short time since, when the stench from it was worse than usual, she said, "That sewer will kill me." A lady friend, who had taken an interest in them for years, told me that they had often been without food, and that frequently when Mrs. D. had visited her, and was given something to eat, she stealthily divided it, in order to take the half to her husband. It is obvious that her aged frame, already suffering from inadequate nourishment, had been too much shaken by the violence of the attack to live through the reaction following it.

In the report of Case 6 it is stated that the patient began to menstruate, although she had ceased to do so only a week before. The extraordinary power of ice, when applied along the spine, in increasing the circulation, even in parts of the body which have become more or less atrophied, was very unfortunately exemplified in the case of this old woman, aged 73, who began again to menstruate on the day of her death! It is not improbable that the revival of this long-dormant function exercised a baneful constitutional effect, and contributed to hasten the fatal end. Several cases have come before me in which eminent Physicians, who have been consulted as to the safety of applying ice along the spine, have expressed the opinion that, at all events, it can do no harm. They will, I hope, see in this fact how mistaken that opinion is, and with what extreme care this potent agent must be used.

My week's experience at Southampton leads me to offer the following suggestions to Physicians about to treat cholera patients by modifying the temperature along the spine:—1. To apply ice along the whole spine until the algide symptoms are overcome. 2. As soon as they are overcome, to restrict the ice to the lower half of the spine, and to apply it there continuously until the vomiting and purging begin to subside. 3. Then, after each bag of ice has melted, to allow intervals—increasing in length as these symptoms decrease—before applying the next bag, and gradually to shorten the time of each application. 4. To avert any threatened cerebral or pulmonary congestion by means of the double-columned water-bag. 5. And, if there be insomnia, to induce sleep also, by means of heat.

The last observation I have space for here is, perhaps, the most important of all. Algide symptoms are produced not merely by congestion of the sympathetic nervous centres, but by congestion of the lungs, which prevents the circulation and oxygenation of the blood. The presence of algide symptoms is not alone, therefore, a sure indication of the necessity of applying ice along the spine; for if those symptoms proceed from pulmonary congestion, ice will increase them, whereas heat between the scapulæ will speedily restore heat to the whole body. The danger of mistaking the cause, and therefore the remedy, of coldness of the surface, is greatest in cases of cholera when the disease had advanced to its second stage.

POST-MORTEM EXAMINATION, EIGHTEEN HOURS AFTER DEATH, OF A MAN WHO DIED FROM THE EFFECTS OF LIGHTNING.

By LLEWELLYN POWELL, M.R.C.S.

Archibald McF., aged 35, a labourer, a stout muscular man, about 5 ft. 7 in. in height.

A strong smell of burning was perceptible about the body. The hair was singed considerably on the occiput and at the nape of the neck, slightly also above the forehead. At either corner of the forehead was a dark ecchymosis; the scalp was greatly ecchymosed over the vertex and at the occiput; there was also a large ecchymosis at the nape of the neck, and from this a livid band, about half an inch broad, curved round the right side of the neck and terminated in a large ecchymosis at the sternal end of the right clavicle. The anterior aspect of the left forearm was scorched, and along the centre of the scorched surface ran a dark line, about three or four lines broad. There was a slight ecchymosis on the right thigh and on the contiguous surface of the scrotum. About half way down the right leg was an extensive scorch encircling the leg, and a broad line, from half to three-quarters of an inch in breadth, ran down the inner side of the leg to the sole. The soles of both feet were extensively blistered and the cuticle charred. The clothing corresponding to the injured parts was scorched, and large holes were burnt in the soles of the socks. The boots, which were very strong and heavy with large iron nails in them, were scorched inside, but otherwise uninjured. Excepting the nails in the boots, there was no metal about the body, all the buttons being bone and pearl. The posterior surface of the body was very deeply stained by hypostases. There was a slight escape of seminal fluid from the urethra. The pupils widely dilated. Rigor mortis was unusually marked, requiring considerable force to overcome it. The inner surface of the scalp was ecchymosed. The brain appeared very anæmic externally. On cutting into it, it appeared rather soft; scarcely any vascular points; a little

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fluid in the ventricles; the choroid plexus quite pale and bloodless. The veins and sinuses in the base of the skull were filled with dark fluid blood. Heart flabby; the right ventricle contained a small quantity of dark fluid blood; the great veins distended with very dark blood, everywhere perfectly fluid—not a symptom of a clot, neither did it show the slightest tendency to coagulation after its escape. The lungs were intensely congested posteriorly, non-crepitant, and very soft. The abdomen was not opened.

Christchurch, N.Z.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

CASE OF DISEASED ELBOW EXISTING FROM INFANCY—ANCHYLOSIS OF THE TROCHLEAR PORTION OF THE JOINT FROM LARGE OSTEOPHYTIC GROWTH IN FRONT—HEALTHY CONDITION OF THE BRACHIO-RADIAL PORTION—EXCISION.

(Under the care of Mr. JOHN WOOD.)

Mary Anne E., aged 20, a fair-haired, rather stout girl, with a clear complexion and scrofulous look, was admitted September 1, 1865, with a diseased and anchylosed right elbow of long standing. States that she has had the joint bad as long as she can remember, and that at different intervals abscesses have formed and opened on both sides of the joint, one or more of which have been discharging a thin matter up to the present time.

The joint is perfectly anchylosed at rather more than a right angle, so that she has not been able to get the hand to the mouth for many years. There is, however, some power of pronation and supination, both voluntary and passive, but it is attended with difficulty. On the outside of the joint are some three or four depressed cicatrices, which have been healed for a long time. On the inside are several others, also healed, and one still patulous and of considerable size placed just behind and below the epitrochlear projection, which discharges a varying quantity of matter. A probe passed into this impinges on bare bone on both sides, traverses the site of the joint, and is brought up by contact with a hard mass just behind the radial head. The joint is much thickened antero-posteriorly, a large hard mass being present in front of it, just under the brachialis and biceps insertion. The olecranon also is large and thickened, but preserves much of its normal outline, and is totally immoveable upon the humerus. Is in good health in every other respect.

On Saturday, September 2, Mr. Wood performed excision of the joint under chloroform. A single vertical incision, about four inches long, was made through the triceps and down to the olecranon over the back of the joint. The soft parts were then dissected back on each side close to the bones, the ulna nerve released from the bone and hooked over the epitrochlea, and the saw applied below the olecranon. When this was divided it was found to be held in its place quite firmly, and resisted removal. The saw was then applied to the humerus close above the condyles, and so as completely to divide the bone. Mr. Fergusson's lion forceps were then applied to the intervening wedge of anchylosed bone, which was felt to be firmly held on its deep surface by the mass of bone before alluded to. By the application of considerable twisting force the wedge of anchylosed bone was removed in two portions, and then the cause of its firm retention was shown to be a mass or splint of bone, principally osteophytic, but partly composed of a hypertrophied coronoid process, which had become firmly adherent to the humerus above and to the ulna below, in the position of the lower part of the brachialis muscle and tendon. By forcible flexion of the arm this was broken from the ulna, elevated from its site by raising the humerus, and removed by the application of a small saw. The outer condyle of the humerus, the capitellum, and the head of the radius were all perfectly healthy, the two latter normally covered with cartilage and separated from the diseased part of the joint by firm fibrous tissue. Motion between them was, however, much impeded by the splint of bone in front. One small artery only required ligature. The wound was brought together by three points of suture, the wound dressed with wet lint, and the arm placed on an angular side splint.

5th.—Patient doing well; a small amount of consecutive fever present; the arm easier, and less pain than there was yesterday.

10th.—Very little discharge from the wound, which is much contracted and filled with healthy red granulations. Two small superficial sores have formed in the site of the cicatrices of issues formerly applied. Limb placed on a Mason's splint, which gives a power of passive and gradual motion, both of flexion and supination.

20th.—Patient looking well and strong; wound cicatrising rapidly, especially at the upper part; the arm is moved a little every day, and is at present bent so much as to be easily applied to the mouth.

October 3.—Incision entirely healed; a small sinus on the outer side still discharges a little matter. Patient well, but looks pale. To have Mist. quinæ co., ʒ i.; with tinct. ferri muriatis, ♏ xv. The arm can be held so that the hand touches the mouth; pronation and supination free and complete.

10th.—The small sinus has now almost entirely closed. To be discharged.

ST. GEORGE'S HOSPITAL.

INSTANCES OF CONGENITAL AND NON-CONGENITAL ABSENCE OF THE UVULA.

(Under the care of Dr. OGLE.)

Dr. Ogle has had several cases (four or five) among his out-patients in which the uvula has been quite absent, not having been removed by any Surgical operation. Two of these cases have occurred within the last two years. In one case the patient, a woman, aged 23, was subject to "cold" in the throat, hoarseness, etc., but had never had ulceration of any part of the throat either of syphilitic or other origin, and, as far as she knew, she had been born with the uvula absent. The mucous membrane, on inspection of the fauces, proved quite smooth and natural, and where the uvula ought to have existed was only the slightest deviation from the horizontal line of the soft palate.

A second case was that of a man, aged 50, suffering from phthisis. In this instance there had been extensive ulceration of the tonsils and other parts of the throat fifteen years previously, to which the absence of the uvula was doubtless owing. No inconvenience had followed this imperfection. Dr. Ogle alluded to a case of absence of the uvula at the present time in St. George's Hospital, in which the soft parts of the throat had the appearance of having at some past time been ulcerated. The patient is under the care of Dr. Page, by whom it was pointed out to him.

FIRM CONSOLIDATED MASSES OF MUCUS ADHERENT TO THE FAUCES.

(Under the care of Dr. OGLE.)

A case illustrating the formation of such substances giving rise to symptoms likely to excite anxiety, is related in a former report of cases from St. George's Hospital (see page 332). The present case is one somewhat analogous. The patient was a boy, aged 20, who only attended for a short time as an out-patient. The statement of his case, as written by himself, was as follows:—

"That which I now complain of is the discharge of a mucus substance from the nostrils, which had been slightly upon me from my infancy till about four years ago, when I betook myself as a teacher at school and a singer, since which time I have had the discharging worse and more frequently. The substance is very large and hard, consequently I have to apply great exertion in making it pass, after which blood streams copiously. Blood has not discharged lately."

On watching the case a little, no disease of the lungs or windpipe being detected, it appeared to be undoubtedly one merely of accumulation and concretion of mucus, which, by adhesion to the mucous membrane (no doubt in an unhealthy state), led to distressing symptoms. The patient did not remain long enough under treatment to alter for better or worse.

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PERSISTENT AND INTENSE NEURALGIC PAIN IN THE ARM AND HAND RELIEVED BY THE COMING AWAY OF A PIECE OF GLASS WHICH HAD BEEN DRIVEN INTO THE PALM OF THE HAND.

(Under the care of Dr. OGLE.)

A middle-aged man from the borders of Wales, of healthy appearance, but who had had ague, had, when young, got several particles of sand driven into the palm of the right hand during a fall on to the ground, when he tried to save himself by the hands. At the time no evil results followed, but a small hard "lump" formed in the substance of the palm. One and a-half years before he came to the Hospital as an out-patient, whilst milking a cow, he experienced a sudden pain in the palm of the right hand, extending up the arm. This increased, and had continued almost constantly ever since whenever he worked or used the arm in any way, and was at times so severe that he was wont to cry out with the agony. Mr. Pollock then saw him, and twice cut down into the palm, once below the fascia. These operations were attended by temporary relief; similar relief also attended the use of leeches to the part, as well as galvanism. Dr. Ogle advised the constant application of ice, but this, maybe affording some relief, could not be persisted in. After a few weeks he left London, and in due time a piece of glass worked its way out of the palm and he got quite well. Nothing has been heard of him for two years.

PATIENT WITH WELL-MARKED BUT MODIFIED SMALL-POX GOING ABOUT HIS DAILY WORK.

(Under the care of Dr. OGLE.)

The boy F. F., aged 18, made his appearance among the out-patients with a distinct pustular eruption over most parts of his face, which was evidently that of variola. He stated that he had had a bad cough fourteen days previously, which followed considerable headache. Five days before he came to the Hospital he had noticed an eruption on the face, which spread to the arms on the following day; afterwards a few of the vesicles appeared on the chest, and a greater number down the belly, along both thighs, and to a slight extent below the knees. Those that appeared later had been surrounded by a livid redness. There had been no vomiting and no shivering; the pulse was feeble; the bowels rather constipated. He had been vaccinated most probably as an infant, and certainly about two years before the present attack. Small-pox had been prevalent in his neighbourhood, and one patient in his street had died of the disease. Under the use of a smart calomel and jalap purge and ammoniated salines with bark he gradually recovered, and on the ninth day after he first came bark and acid were prescribed, and he was discharged as being no further in want of Medical aid, the eruptions all dying off quickly.

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Medical Times and Gazette.

SATURDAY, OCTOBER 14.

THE REAL QUESTION TO BE DECIDED BY THE ROYAL COMMISSION.

The *London Gazette* of Friday, October 6, announces that—

"The Queen has been pleased to appoint the Right Hon. John Poyntz, Earl Spencer, K.G., Robert Arthur Talbot Gascoyne, Esq. (commonly called Viscount Cranbourne), the Right Hon. Robert Lowe, Lyon Playfair, Esq., C.B., Clare Sewell Read, Esq., Henry Bence Jones, Esq., M.D., Richard Quain, Esq., M.D., Edmund Alexander Parkes, Esq., M.D., John Robinson M'Clean, Esq., Thomas Wormald, Esq., Robert Ceeley, Esq., and Charles Spooner, Esq., to be Her Majesty's Commissioners fully to investigate the origin and nature of a contagious or infectious disorder, which is generally designated the cattle plague, now prevalent among the cattle of Great Britain, and to ascertain as far as possible the mode of treatment best adapted for the cure of the affected animals, and the regulations which may, with the greatest advantage, be made with a view to prevent the spreading of the said disorder, and to avert any future outbreak of it."

We suppose that it is hopeless to expect at this late stage of our disaster that any new facts relative to its origin in England will be brought to light, but at least we shall have an authoritative opinion on the subject, pronounced after due examination and deliberation by a Commission comprising some of the most competent scientific men of the day. Such an utterance will be doubly welcome not only on account of the absorbing interest and importance of the subject, but because it is to be hoped that it will silence for a time a Babel of disputants, whose only qualifications to argue on the matter seem to be their ignorance and their prejudices. For ourselves, we think the balance of evidence is certainly in favour of the importation of the disease through the medium of the Revel cargo; but we neither sympathise with those who deny the possibility of its origination except on the Russian steppes, nor with the frantic declaimers in the columns of the *Times* newspaper, who, ignoring all the facts of the case, visit with their abuse any who venture to entertain an opinion opposed to their own. Since we last noticed the subject, the question of the treatment of the cattle plague has been discussed by several members of our Profession. The administration of large doses of the tincture of the perchloride of iron for the purpose of disinfecting and deodorising the contents of the alimentary canal has been suggested by Dr. Druitt.(a) Dr. Allnatt(b) recommends the treatment of the disease by large doses of the neutral salts on the principle proposed by Dr. Stevens in 1832 in his work on the blood. A correspondent, whose letter we publish in another column, suggests the administration, by mouth and subcutaneous injection, of the sulphites, as antiseptic agents, in accordance with the estimate of their therapeutic value held by Professor Polli. If it be conceded that affected animals should be treated at all, each of these suggestions should have a fair trial on an extensive scale. The Veterinarians, however, headed by Professors Gamgee and Simonds, stoutly maintain that all attempts at treatment of any kind are worse than useless. In this they but re-echo the opinion of Continental observers who have had extensive opportunities of testing the question. In the Report received by Her Majesty's Government from Professor Seifmann, of Warsaw, it is asserted that "were the disease absolutely curable, it is doubtful whether the process, which would necessarily bring many persons and substances in contact with the diseased beast, would not be the means of transmitting so much contagion that a greater loss would ensue than by immediately slaughtering the diseased subject." Undoubtedly this must be true, if, as the Professor before states, "the contagion is conveyed not only by infected cattle, but by those apparently sound,—by pigs, poultry, hides, manure, bones, offal, straw, buildings, and the clothes of herdsmen and others; in fact, by every substance that has been in contact with diseased cattle." This, however, is just what we want proved. If it be established by undeniable facts, it is clear, as the question is essentially a pecuniary one, that the danger of loss by curing is more to be feared than the actual loss by killing. But what we really need is evidence that the disease is as wonderfully con-

(a) The Right Use of Iron and other Remedies in the Cattle Plague considered in a Letter to Sir Fitzroy Kelly, M.P., etc., etc. Renshaw.

(b) On the Nature and Treatment of the Cattle Plague. By R. H. Allnatt, M.D. Churchill and Sons.

tagious as it is reported to be. Here is the great point on which we hope to get reliable information from the labours of the Royal Commission. If the disease is undoubtedly to be conveyed by poultry, pigs, dogs, harness, iron, wood, straw, surely we may hope that the contagious matter may yet be isolated, examined, and its real nature proved by inoculation. It may be, as Dr. Beale supposes, that the material of contagion is nothing less than germinal matter derived from a diseased organism, and that it is by the introduction of such germinal matter into the blood of healthy organisms that the diseases of the class to which cattle plague belongs are propagated. Dr. Lankester, in his recent address in the Health Department of the Social Science Congress, has supported this view by reference to what we know of the microscopical structure of vaccine lymph and the matter of small-pox. He observes that vaccine lymph may be conveyed dried on tips of bone or threads of cotton all over the globe unimpaired in its energy, and he suggests that this accounts for the alleged fact that the poisons of other diseases, such as Oriental plague, scarlatina, etc., have been conveyed in woollen and cotton fabrics, in letters and newspapers; that such poisons have been shut up in drawers and old chests, and at some unlucky moment, when brought into contact with the human frame, have started again into activity. Still we must pause for more evidence before we accept in its entirety the theory. It may be so, and if we can isolate and exhibit under our lenses the essences of these dreaded scourges it will be the greatest triumph that Medicine has accomplished. At all events, let the attempt be made by microscopical and chemical examination in the case of this Rinderpest. It behoves the Royal Commission to take care that the very best evidence on this subject be given to the world, and for this purpose to employ the most accurate and careful microscopical and chemical observers. No amount of money or of labour is too great to be expended in the pursuit. Success would be no local or temporary triumph, but it would be for all time and for all people. If the discovery of Jenner was the first great step towards a victory over the whole class of zymotic diseases, the second would undoubtedly be the isolation and demonstration of the poison by which is propagated a continued fever of the typhus group.

DOCTRINES OF MODERN CHEMISTRY.

No. I.

The present article is the first of a short series which we promised some weeks since on some of the principles of chemistry which from their development have rendered the adoption of a new method absolutely necessary to scientific progress.

The object of these articles is to assist in the important work of restoring a comparatively uniform adoption of *one system* by those who have to employ chemistry. To this end we shall try to prove to our readers the sound foundation of the new system on facts, mostly discovered since the formation of the old one, and the unsatisfactory foundation of the latter on hypotheses and many mistaken interpretations of facts. If this can be done, it is plain that no one, except from indifference or from prejudice, will adhere to the old system. Now, it has been done, and we essay to do it again only that we may aid in diffusing more widely an acquaintance with the new system, and in hastening its general adoption.

It must not be thought that the old system is denied its desert of the praise so often awarded to it. It was, indeed, perhaps the best that could have been formed at the time. But as the knowledge of facts has grown upon us, it has been found not only too narrow to accommodate this knowledge, but incapable of sufficient expansion on account of the artificial ties with which it is bound together. Nor must it be feared that the new system is destined to be subverted by another in a few decades of years, like the old is proved to have been. For in all parts of it arbitrary assertions are avoided and hypotheses shunned, unless in a few minor details of structure, and hence it is so expansive. Some of its generalisations may prove here and there too wide or too narrow, but they can contract or enlarge without injury to the system or disregard of facts, because from facts only are they formed.

We have not said anything on the relative simplicity of the two systems, because, should there even be considered to exist the greater simplicity in the old system, this, at the sacrifice of facts and as a source of error, would be worse than no recommendation at all. But the greater simplicity does not appear to reside in the old system; for the new one is, we believe, easier to acquire than the old, and certainly easier of application. The difficulties experienced in its use at present are to be attributed to the necessary prevalence of the old one by its side, and the obligation of changing from one to the other. Undoubtedly, these difficulties are great ones to those persons not constantly engaged in chemical speculations; but since the new system cannot yield to the old, having truth and progress with it, the propriety of making every effort to bring all to adopt but one system, and that the new, must be apparent.

Proportional or Combining Numbers.—The phenomena of the transformations of matter are possessed of the highest interest for every one, while their nature is such as has never ceased to excite the wonder of all those who have contemplated them. It is not so long since that the person who had acquired the art of producing them at pleasure—at least, such of them as were not familiar—was looked upon by the multitude with awe, as one who had obtained supernatural power. Nor is it long since those who were versed in the production of such transformations, knowing little of the conditions by which their occurrence is really limited, were prepared to witness, as results of chance and fanciful trials, those now held to be either impossible or at least opposed to what has been ascertained of the nature of the bodies which would be concerned in them. The careful use of the balance as one of the instruments for investigating transformation-phenomena gradually introduced to the minds of philosophers the conviction of the fact upon which the science of chemistry stands—the fact of the indestructibility of matter. Whatever change is effected in substances by their mutual influence, or by external powers brought to bear upon them, the total weight of the substances which undergo transformation is the same as that of those into which they transform. That is to say, when two bodies transform into one they furnish it in quantity weighing the same as they themselves together weighed; when one body transforms into two or several, it furnishes of these altogether its own weight; and lastly, when from several bodies several others are produced, the total weight is the same both before and after the transformation.

But the recognition of this great fact was not the only important result of the use of the balance. It was discovered by the same means that there were remarkable and necessary relations between the proportions by weight of the substances engaged in any chemical transformation and the nature of the change that occurred—the "laws of combining proportions" by weight of bodies which enter into chemical reaction were discovered. These discoveries have made the science of the transformations of bodies—chemistry—almost exclusively the science of the quantities of certain bodies required to form others, or, to use the common but unhappily adopted language of chemists, the science of the *composition* of bodies. Hence, the most important property of any homogenous substance is the proportion in which it combines with others. And to this subject we shall first call our readers' attention. For whereas a few years since chemists were accustomed to treat *combining proportions*, *atomic weights*, and *equivalents* as essen-

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tially the same things only expressed in the language of different authorities, and the numbers representing them as therefore identical, they now recognise, thanks to Laurent and others, the importance of confining each of these terms to the ideas which respectively suggested them, or, at any rate, to distinct ideas, from the fact that their representative numbers may be sometimes different, though always simply related.

When we examine the quantities by weight of hydrogen and oxygen necessary to produce any quantity of water, we find that they are always in the proportion of 1 of the former substance to 8 of the latter. In carbonic acid gas, the quantities of oxygen and carbon are in the proportion of 8 to 3; in hydrochloric acid, the quantities of chlorine and hydrogen in the proportion of 71 to 2; in ammonia, the quantities of hydrogen and nitrogen in the proportion of 3 to 14; in marsh gas, the quantities of carbon and hydrogen in the proportion of 3 to 1. In these cases the ratios are represented by the smallest integral numbers that can be selected; but if, after these ratios have been reduced to a common standard of unity, these numbers be compared with each other, they will be found to be remarkably related. Thus, if we take any quantity of hydrogen for unity,—say one grain—we have to set down that 1 of hydrogen combines with 8 of oxygen, 35·5 of chlorine, 4·67 of nitrogen, and 3 of carbon. And it has been found that chloride of nitrogen is the result of the combination of chlorine and of nitrogen in these numbers respectively, viz., 35·5 and 4·67; and similarly that anhydrous nitrous acid is the result of the combination of nitrogen 4·67 parts, and oxygen 8 parts. Further, to enumerate the remaining combinations, it has been found that 35·5 parts of chlorine must be combined with 8 parts of oxygen to form anhydrous hypochlorous acid, and that 35·5 parts of chlorine must be combined with 3 parts of carbon to form the bichloride of carbon. Nitrogen and carbon are not known to combine in the proportion of 4·67 to 3, and, so far, form an exception to the relations of these numbers. These relations are expressed in the well-known law of Richter, that the ratio in which any two bodies unite if referred to a common standard is represented by numbers which will also express the ratio in which either of them may unite with a third. If another element—such as oxygen—be selected as the standard of unity, it will only cause the ratios to be represented by a different set of numbers: thus, the combining quantity of hydrogen being taken as unity, the numbers are—

Carbon	3
Chlorine	35·5
Hydrogen	1
Nitrogen	4·67
Oxygen	8

That of oxygen being taken as unity—

Carbon	·375
Chlorine	4·44
Hydrogen	·125
Nitrogen	·58
Oxygen	1·

(To be continued.)

OBSTETRIC STATISTICS.

The ignorance of the nature, aims, methods, and results of scientific Medicine displayed by the *Times* newspaper in its recent attack upon the Profession offers the only, albeit a very miserable, excuse for the amount of nonsense on Medical matters which that paper publishes in its columns devoted to correspondence. It will give a portion of its "valuable space" to any charlatan who has a new or an old nostrum to propose for cattle disease or cholera. The other day it afforded an ingenious gentleman, who conceived that the Rinderpest might be produced by the South African Tzetze, an opportunity of promulgating his idea throughout the civilised world, and it publishes in its very largest type the etiological and hygienic conceits and chimeras of "S. G. O." It has lately favoured its readers with a letter from a Dr. James Edmunds, a gentleman, we believe, engaged in enlightening the fair sex on the mysteries of anatomy and physiology, which is intended to open the eyes of the unsuspecting British public to the horrible circumstance that their wives are being constantly sacrificed at a rate of one-third increased mortality by the employment of Surgeons and Physicians as accoucheurs. The method by which Dr. James Edmunds arrives at this result is beautifully simple. The general mortality from puerperal causes in London is one-third greater than the mortality from puerperal causes amongst the patients of the Royal Maternity Charity; the lying-in women of London are attended by Doctors, the lying-in women of the Royal Maternity Charity are attended by midwives; therefore the larger mortality of the former is due to their male attendants, who carry about with them all sorts of organic poisons derived from non-puerperal patients. This theory, so attractive in its simplicity, is made the groundwork for a proposition that the general practice of midwifery in London should be transferred from the Medical Profession to women, who in difficult cases will call in obstetric Physicians—naturally selecting, we may suppose, the gentlemen by whom they have been admitted to the arcana of obstetric science. Were it worth while to argue on the assertion of Dr. Edmunds, it would be easy to show that there are plenty of causes, apart from the toxical influence of Doctors, which make the puerperal mortality of London greater than the mortality of the Royal Maternity Charity. In the first place, the patients of the latter are all married women, a circumstance which it is well known gives a much greater proportion of recoveries than in the case of a mixed collection of married and unmarried puerperæ. In the second place, it is by no means true that the whole population of London are attended by male Practitioners, and the columns of the daily papers afford sufficient evidence that at least some proportion of the deaths of lying-in women is due to the ignorance of midwives. Thirdly, the poison to which puerperal women are specially obnoxious is derived not from Medical or Surgical patients, but from women under the same circumstances with themselves, and therefore is as likely to be carried by a female as a male Practitioner; we should say more likely, considering what we know of the personal habits of the gentlemen engaged in the Medical Profession and those of the class of women whence midwives for the poor are likely to be derived. An instance came within our knowledge some years ago of a number of paupers in a provincial town being attacked by puerperal fever conveyed to them by the parish midwife. We are quite aware of the fact that decomposing organic matter acquired in post-mortem examinations may give rise to puerperal fever; but we have yet to learn that in this country, where Medical men practise the cleanly habits of English gentlemen, it often does so. There is one other circumstance which Dr. Edmunds seems to have overlooked—viz., that the patients of the Royal Maternity Charity have some of the best male obstetrical skill in London at command in case of difficulty or danger; and that in this respect they are immeasurably better off than many of the poor who are left to their own resources, and fall into the hands of unqualified Practitioners of both sexes. We ought, perhaps, to apologise to our readers for having given so much space to Dr. Edmunds and his fallacies. The cause of female Medical Practitioners will never be forwarded by arguments so transparently faulty and weak. But this is a specimen of the kind of reasoning on matters Medical which the leading journal is in the habit of publishing for the edification of the educated classes.

THE WEEK.

THE YELLOW FEVER AT SWANSEA.

We have no further news respecting the spread of the assumed epidemic of yellow fever at Swansea; and we may, therefore,

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trust that the disease, if it were really tropical yellow fever, has obeyed its law of geographical limitation and has died out. In connexion with this subject, Dr. John Rose Cormack has written a very able letter to our contemporary, the *British Medical Journal*, in which he suggests that the Swansea fever is probably the same as the *highly-congestive form of the Edinburgh fever of* 1843. In that memorable Scottish epidemic, no Physician displayed more acuteness of observation and more industry than Dr. Cormack, and his Essay on that fever is a masterpiece of descriptive Medical writing. He shows that in the fever named yellowness of the conjunctivæ, and even yellowness of the surface of the body generally, were common symptoms, but, at the same time, the causes were dissimilar from those of true yellow fever; and he suggests the hope that the Medical Profession of Swansea and the Medical Department of the Privy Council, before they accept the theory that the cases of fever presenting yellowness of the skin, and which were presumed to have been introduced by the crew of the *Hecla*, was true yellow fever, will rigidly take and fully publish evidence, "not only as to the health of the crew of the *Hecla* during her voyage from Cuba and on her arrival at Swansea, and not only regarding the intercourse between her and the Swansea residents attacked with fever, but likewise as to the *type of fever and all diseases in Swansea at the date of the Hecla's arrival, and for months before and subsequently to that date.* Has disease exhibited a more than usually marked intermittent or remittent type? Have there been cases of ordinary relapsing or of other fever? This latter inquiry is specially important, and no inquiry will be complete till the questions have been clearly settled in the affirmative or negative." We cannot too earnestly second these recommendations of Dr. Cormack.

THE GREENWICH HOSPITAL INJUSTICE.

We have to correct a slight inaccuracy into which we were led last week in reference to the terms granted by the Admiralty to Inspector-General Hilditch on his retirement. We are now informed that that officer, being the only Medical officer whose services have been dispensed with in consequence of the passing of the Greenwich Hospital Bill, retires on an annuity equal to his Hospital emoluments, whilst the other officers placed on retirement *will receive the half-pay of their naval rank—a considerable sum—in addition to their Hospital emoluments.*

We regret to state that this is but a minor injustice resulting from the changes in Greenwich Hospital. There is still the great one behind. Whilst other naval branches have profited beyond their expectation in the re-distribution of its funds, the Medical officers, with this one exception, have received no benefit whatever, and even the promise made by Mr. Childers to the House of Commons when pleading for the Bill, "that increased employment of Medical officers should compensate for their exclusion from the Pension-list," remains unfulfilled.

SULPHURIC ACID IN CHOLERA.

M. Worms, the celebrated "*Médecin en Chef*" to the Military Hospital du Gros-Caillard, has requested us to draw the attention of English Practitioners to the favourable results which have been obtained in the treatment of cholera by sulphuric acid. Of course, it is not a new remedy in the disease; but the manner in which it is administered by M. Worms, and the results he has obtained, are worthy of attention. It is chiefly in the first stage of the disease, before the choleraic type has become fully developed, and when diarrhœa is the only alarming symptom, that the rapidly beneficial effect of the acid is observable; still, in the latter stages, where the cholerine has been converted into undoubted cholera, the treatment is also very efficacious. In cases of choleraic diarrhœa, M. Worms prescribes a mixture of three, four, or five grammes concentrated sulphuric acid, with a kilogramme of sweetened decoction of salep. Of this mixture the patient takes a large glassful every hour, rinsing the mouth several times after each dose. It is rarely necessary to exceed three doses. In civil practice M. Worms finds it convenient to prescribe a mixture of five grammes of concentrated sulphuric acid with 500 grammes of simple syrup. This would nearly correspond to a mixture of two drachms of the dilute sulphuric acid of the Pharmacopœia with two and a-half ounces of syrup. Two, or at most three, tablespoonfuls of the medicine are taken as a dose in a quantity of water. White wines are allowed to be drunk, but beer, brandy, and alkaline mineral waters are proscribed. In confirmed cases of cholera the treatment is equally simple. The patient is kept quiet, the limbs are shampooed when cramps make the operation necessary, every half-hour a glass of lemonade containing two drachms and a-half of acid to the Imperial quart is administered, the dose being usually given immediately after a fit of vomiting. Wine and ice are given freely. This treatment puts a stop to the purging, but not to the vomiting, which it, on the contrary, increases—the increase being generally to be hailed as a favourable symptom. M. Worms does not insist on the value of his method without having given it a fair trial. He found it useful in the epidemic of 1849, and has since invariably employed it when cholera has shown itself. Very recently he has had new examples of its efficacy.

FROM ABROAD.—THE CHOLERA—ACCIDENTS FROM LIGHTNING IN FRANCE.

Every foreign journal, whether French, Italian, or German, teems with communications concerning the cholera, and a panic may truly be said to prevail throughout the Continent. That there is ground for some alarm may be admitted from the number of deaths from this disease which have taken place at Marseilles, Toulon, and other French ports, and from the fact of numerous cases having appeared in Paris. At Toulon the deaths at one time rose as high as 68 per diem; and at Marseilles their total number from July 23 to October 1 amounted to 1679. The number is now diminishing rapidly, having gradually increased from the first week to the ninth, and then decreased as gradually. Thus, the deaths were 308 during the eighth week, 282 in the ninth, and 186 in the tenth. M. Maurin, in a communication to the Academy of Sciences, observes that premonitory diarrhœa was present in nine-tenths of the Marseilles cases, and that the symptoms did not succeed each other with the same rapidity as in former epidemics, thus allowing more time for treatment. Nearly every Hospital in Paris has now received numerous cases, as many as from thirty to forty per diem being admitted into the Lariboisière, which is situated in the district where the disease is most prevalent. No accurate returns have been published, but it is calculated that the number of deaths in all Paris does not at present exceed twenty-five per diem. The Hospital Physicians seem to be modifying their ideas concerning contagion, as all the cholera patients are treated in separate wards. The Administration has also ordered the immediate removal, cleansing, and disinfecting of the bedding used by cholera patients, as well as the washing and fumigation of the personal clothing. There is nothing new at present to record in relation to treatment, if it is not the employment as a stimulant of the *elixir de la grande Chartreuse*, procurable only at 32 fr. the litre.

That indefatigable statistician, M. Boudin, has just published a memoir, which he communicated to the Academy of Medicine, on the accidents produced by lightning. After adverting to the erroneous opinions held by Arago and others as to the paucity of these occurrences, M. Boudin quotes from the annual statements published by the Minister of Justice the actual number of deaths so caused in France during the twenty-nine years 1835-63. This amounts to 2238, or, including the three new departments, to 2342. The returns only relate to persons immediately killed by the lightning,

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and take no account of the much larger number of those only injured—the injured persons numbering in some notable instances seven or eight times more than those killed. At all events, there can be no exaggeration in putting them down at three times a larger number; and this would furnish a total of 9·368 persons killed or injured in France, or an annual mean of 323. Admitting that the same proportion held good for the population of the globe, we should have 10,000 such accidents per annum! From the comparison of a limited number of cases, M. Boudin finds that the greater number of these accidents occurred during July in England, and during August in France, and that their occurrence was far more frequent between 9 a.m. and 9 p.m. than between 9 p.m. and 9 a.m. It is remarkable how many deaths have occurred, not only on the same day, but at the same hour, at points very distant from each other—*i.e.*, in quite different departments; and the same observation has been made with respect to ships struck by lightning, showing that these storms operate over distances far more extensive than is usually supposed. From the year 1854 the sexes have been distingnished in the official returns, and it results that of 880 persons killed during 1854-63, 637 were males and 243 females—*i.e.*, 27·6 per cent. So also of 146 persons killed in England during 1838·56, 120 were males and 26 only (21·6 per cent.) females; and M. Boudin cites several instances in which females enjoyed a remarkable immunity when the lightning struck assemblages of both sexes. Arago has pointed out that, owing to what he termed the nature of their constitution, some individuals are possessed of greater conductibility than others, and are, consequently, more likely to suffer during thunderstorms, and M. Boudin cites some instances in which persons have been struck more than once. On the other hand, man seems to possess considerable immunity as compared with some of the lower animals, when placed under identical circumstances with them. Examining the returns of deaths according to the different departments in which they occurred, very great differences are observable, the number of victims being thirty-three times greater in the Lozère than in La Manche—the maxima of accidents being, in fact, found in the Alpine and Pyrenean departments and those of the central plateau. Of 55 deaths which took place in 1853 and 1854, not one occurred in the chief town of a department. The exemption of large towns is further seen in the fact that, from 1839 to 1851, no death from this cause took place in Paris, and that (as stated by M. Boudin, but without naming his authority,) of 750,000 deaths occurring in London during thirty years, not one was attributable to lightning. M. Boudin concludes his paper by citing various instances of the "fulguration" of persons by means of the earth when overcharged with electricity, no signs of atmospheric storms existing; by means of highly electricised metallic bodies, especially telegraph wires; and by coming in contact with the bodies of persons recently struck by lightning.

SULPHITES IN THE TREATMENT OF THE CATTLE PLAGUE.

(From a Correspondent.)

So many theories and crotchets on the subject of the Rinderpest have been aired of late, that I may venture, perhaps, to express a little theory, which I should be glad to see put in practice.

The virus or subtle cause of this disease, whatever may be its exact nature—whether it be an animal poison, an organic substance in a state of decomposition, or some very minute microscopical germ of animal or vegetable origin—appears to be analogous to a chemical ferment in its action on the animal fluids.

As all attempts to isolate animal poisons are vain and fruitless in the present state of Medical science, it becomes an important question how far we can hope to prevent, arrest, or impede the morbid processes induced by them by the administration of antiseptic and anti-fermentative agents. Chemists and Physicians are acquainted with numerous bodies possessing these powers; some exert a chemical or corrosive action in the tissues, and are, therefore, inapplicable; but the compounds of sulphurous acid, with alkalies or alkaline earths, possess these properties in an eminent degree, and may be administered with perfect impunity in large doses, from a drachm to an ounce. For the therapeutical value of these salts—the sulphites of soda and magnesia—we are indebted to Dr. Polli, of Milan. The latest observations have certainly cast great doubts upon their efficacy in the treatment of many of the diseases for which he recommended them; but their antiseptic properties—their power to arrest the organic decomposition which naturally ensues after death, and the power of resistance which they confer on living fluid and organic structures against the injurious effects of pus and putrid substances when injected into the veins—have been fully determined by Dr. Polli's experiments. I submit, then, that these substances deserve a trial,—a trial which requires much care and perseverance, however; and I would suggest the following as the course be to pursued:—1st. In animals manifesting symptoms of the infection, it is necessary to apply the remedy *early, to ensure its absorption, and to saturate the system with it.* For these purposes, as much of the sulphite of magnesia or soda should be dissolved in the water supplied to the animal as the fluid will take up. Next a saturated solution of one or other of these salts should be made, and small portions of it—say half an ounce—injected into the areolar tissue through a puncture of the integument. These subcutaneous injections will require to be repeated every two or three hours or oftener, according to the urgent nature of the symptoms. A very little instruction and care would suffice to enable any one to perform these injections. A solution of sulphite of magnesia might also be used as a wash to be frequently applied to the eyes and mucous membranes for the purpose of clearing away the discharges. 2nd. In the case of the animals which have been exposed to contagion, but where no diseased manifestations have yet appeared—that is to say, during the period of incubation, which averages eight to ten days—a prophylactic effect is to be aimed at. The salts might be freely mixed with all liquids supplied to the animals, so that their systems may be "sulphited" before any manifestations of the poison have set in.

The disease no sooner manifests itself than it progresses with terrible rapidity; therefore, whatever be tried, it should be done quickly, and absorption through the subcutaneous tissues is unquestionably more certain and rapid than through the intestinal mucous membrane, the functions of which are altered or paralysed by the diseased action going on in it. The congestion and the amount of mucus upon the surface of the membrane must, one would think, very materially interfere with its physical properties as a moist membrane.

There seems to be a marked tendency to an affection of the mucous membranes generally, particularly the intestinal one, which probably arises from the determination of the poison to, and its elimination through, these channels. The same tendency is often evidenced in cases of putrid affection and disorders depending upon the presence of an animal poison. Now, the compounds of sulphurous acid are of unstable composition; they become eliminated from the system as sulphates. Their action is, therefore, twofold,—primarily, sulphites, they are deoxidisers, and exert anti-catalyic, or anti-fermentative, powers by opposing the decomposition provoked in organic matters by the presence of morbid ferments; and 2ndly, their remote action is eliminative, as they become converted into the purgative salts—sulphates of magnesia and soda.

If the analogous action of chemical and morbid ferments be a correct hypothesis, these agents ought to exert the same influence over one as the other; but it does not follow that we can avert the fatal tendency by arresting the morbid changes in the blood, for the virus would appear to have a special

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affinity for the nervous centres, and the animal may sink under the paralysing or enervating effects of the poison on these structures. We may have to combat these effects, therefore, by the use of diffusible stimuli, such as turpentine, etc.

It is needless to remark that the segregation of all affected animals, their removal to freely ventilated sheds or the open air, the greatest cleanliness, the destruction of all excreta by the use of antiseptic agents, and the early removal of them, as well as of the bodies of dead animals, must be carried out at the same time.

One word in conclusion. It would be well, too, to make the trial of these agents a comparative one by leaving some of the infected animals to the best or worst efforts of nature. Any respectable chemist will supply the sulphites—not sulphates, which are perfectly different substances. They have the merit, too, of being inexpensive remedies; for Liebig and Wöhler informed Dr. Polli that the sulphites of soda could be prepared at a cost not exceeding that of soda itself.

THE MEDICAL TIMES & GAZETTE SPECIAL REPORT ON THE EPIDEMIC OF CHOLERA: WITH A PRACTICAL HISTORY OF THE DISEASE.

Chapter VII.

The French Government on the Present Epidemic.

The French Government has shown a commendable activity in investigating the present choleraic epidemic. A report to the Emperor, which, that our history may be complete in all its parts, we publish in full, conveys some interesting and valuable information. The reporters entirely confirm the view respecting the origin of the malady which we gave in our first chapter; that is to say, they trace the outbreak back to a caravan of pilgrims at Mecca, whence they follow it as an importation to Egypt and the shores of the Mediterranean Sea. It is worthy of notice that this view of the origin of cholera becomes more and more powerfully supported as the course of various epidemics are studied. We have previously shown, on the testimony of a native Hindoo Physician, that cholera is sometimes developed in the caravans of pilgrims to Juggernaut. Since publishing that statement, we discover that the epidemic which broke out in Egypt in the year 1848, and visited us so severely, had also a pilgrim origin. We find that in the middle of July, 1848, there assembled at a place called Tantah, in the Delta, an immense number of pilgrims, amounting, indeed, to about 165,000, from all parts of Egypt and Syria, to celebrate the festival of a Mahomedan saint. Immediately on the dispersion of this assemblage the disease appeared at Alexandria and Cairo, and in the third week of August there were reported about 300 cases daily in Cairo, with 130 in Alexandria. Before the pilgrims dispersed at Tantah there were said to have been upwards of 3000 deaths from the malady.

It is further worthy of notice that in their report MM. Drouyn de Lhuys and Armand Behic lay great stress on another fact, to which we have also previously drawn attention—viz., that of the conveyance of the disease by water. By the agency of the crowded steam-packets which carry the faithful home after the celebration of their pilgrimage, the malady, in the opinion of the reporters, is mainly conveyed.

The last point of interest in the French ministerial paper is that in which a diplomatic sanitary conference is suggested. We have had such conferences on war, trade, and policy; never on the subject of disease. The suggestion is so novel that it is startling; it is grand in conception, and will, we trust, be carried out without delay. Why could not our Government have taken the initiative? Will our Government be first to respond to the idea? These are questions not of an ordinary kind, but momentous. What a development in the arts of peace an European sanitary conference will be, who shall possibly predicate? It will waken up the souls of nations to those truths of science which we and our learned contemporaries have been teaching for years, as unceasingly as powerlessly, to a degree we dare not dream of. Let Medicine hold with all her might to the conference; let English Medicine forget that the suggestion is of foreign growth, and hold to it. By it we of Physic have nothing to lose, and all to gain. It will be the high road to our recognition to place in the State. We shall through it be accepted as kings not less than priests, and our mission, at present too confined to the sick chamber, will extend to the outer world, and be seen as of the best there. We now subjoin the official report to the Emperor Napoleon, drawn up by MM. Drouyn de Lhuys and Armand Behic:—

"Sire,—At the commencement of the last invasion of the East by cholera, your Majesty's Government was pre-occupied with the dangers which the appearance of that scourge threatened to the general health of France. Under the inspiration of this precautionary idea, the immediate despatch to Egypt of a Medical mission was decided upon, not only for the purpose of bringing enlightened assistance to the victims of the epidemic, but also to study the causes, the march, and the character of the malady, in order to arrest its progress as much as possible, and prevent its introduction into the territory of the empire.

"Diplomatic and consular agents have afforded the members of the Medical mission an amount of assistance which has facilitated their task; and, upon its side, your Majesty's Government has not ceased to apply its most serious attention to the examination of the important question to be resolved. We have the honour to submit to the Emperor the reflections this examination has suggested to us.

"To preserve our population and the whole of Europe against the periodical attacks of cholera, it seems that we ought rather to seek to stifle the evil in its birth than to impede it upon the route. It is not sufficient to oppose to it, upon each of the stages it traverses, obstacles which inflict real injury upon commerce, and only offer to the public health guarantees too often powerless. It is, above all, necessary to organise at the point of departure a system of preventive measures concerted with the territorial authorities by means of international arrangements.

"The information gathered from the consular agents, and confirmed by the unanimous reports of the Physicians, manifestly proves that the epidemic has been imported into Egypt by pilgrims returning from Mecca and Djeddah. Thus it is alleged that the cholera exists every year among the caravans of Mussulmans arriving in these holy cities after fatigues and privations of every kind, which render them more liable to malady. This predisposition is singularly favoured by the state in which these multitudes live—camping in the open air, exposed to a torrid heat, and to the influence of the pestilential miasma given forth by heaps of impurity and the putrified remains of animals offered in propitiatory sacrifice. These permanent causes of infection have been still more active this year, by reason of certain facts which may again occur, and which we consider we ought to point out to your Majesty's attention.

"Upon the one hand, the number of pilgrims collected at Mecca for the Kourban-Beiram (feast of sacrifices) was, owing to a particular circumstance of the Mussulman rite, far more considerable than in preceding years. The number of individuals of all ages and both sexes arrived from the various Mahometan countries to go through the consecrated ceremonies was estimated at no less than 200,000, and the quantity of sheep and camels slaughtered, the offal of which was abandoned upon the ground, exceeds a million. It is not astonishing that this agglomeration of human beings, and this

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enormous quantity of animal substances in decomposition, should have developed in exceptional proportions the conditions of insalubrity which the pilgrims habitually encounter.

"Upon the other hand, it is to be remarked that in former times the principal movement of pilgrimage was carried on by land, and that the passage of the desert contributed to improve the hygienic condition of the caravans by isolating and dissipating the morbid elements they carried with them. Now-a-days, on the contrary, thanks to the facility and resources of steam navigation, it is by sea, and in a very short space of time, that these voyages are in great part accomplished, by the aid of packets, upon which are crowded thousands of Mussulmans of every nationality. This accumulation, added to the shortness of the passage, is certainly one of the causes which most contribute to the development of epidemic centres.

"These new circumstances call for a surveillance and control over the operations of embarkation and transport of the pilgrims, which seem to have been hitherto altogether insufficient. It is intelligible of what high importance it is that the sanitary condition on board these packets should not be disguised, either by the commanders of those vessels or by the authorities which pronounce their admission to free *pratique*. We may be allowed to hope that if a system of observation and surveillance had existed at the point of departure, and if exact reports upon cases of illness arising during the passages had attracted the vigilance of the local sanitary authorities in time, they would have been able to extinguish or isolate the centres of infection, the influence of which has successively extended to Syria, to the coasts of Asia Minor, and to a portion of Southern Europe.

"From all the facts we have just mentioned, Sire, we are led to deduce the conclusion that the present time is truly opportune to bring about the meeting at an early date of a diplomatic conference, in which should be represented the Powers interested, like ourselves, in the reforms demanded by the present organisation of the sanitary service in the East, and which, after having studied the questions to which we have the honour to solicit your Majesty's attention, should propose practical remedies. The members of this conference would have especially to examine whether it would not be necessary to establish, at the points of departure and arrival of pilgrims returning from Mecca—that is to say, at Djeddah and Suez—sanitary administrations having an international character, which should secure their independence, and give to their management all possible guarantees of loyal impartiality. We may reckon upon active co-operation upon the part of the Eastern Governments, whose states in the progress of these epidemics are the first to suffer from the ravages of the scourge, and from the interruption of commercial relations.

"If, as we venture to hope, your Majesty deigns to accord assent to the considerations we have the honour to present, the Emperor's Government should hasten to place itself in communication with foreign Cabinets, in order to combine, by common agreement, in a conference, and bring about a generality of measures whose necessity is demonstrated by recent and sorrowful events.

"We have the honour, &c.,
"Drouyn de Lhuys, Minister for Foreign Affairs.
"Armand Behic, Minister of Agriculture, Commerce, and Public Works."

Chapter VIII.

A Proposal from the National Association for the Promotion of Social Science in Respect to Cholera.—The Registration of Disease.

Some weeks ago the Social Science Association called together a large number of men of science and others to hold a conference on cholera. The proceedings were discursive beyond the common order of such improvised meetings, and the resolutions passed gave full occasion for the enemies of the Association to speak of the palaver palavered on that occasion as very small indeed. For all that, the conference was not altogether without its value. It enabled the standing Committee of the Health Department to proceed to action of a practical kind. The Committee, therefore, formed a Special Committee consisting of their own body with the addition of delegates from other public bodies. "They felt that the known existence of a Committee of practical and experienced men, would tend to allay that undue alarm so likely to be excited by the disconnected and unexplained statements which often find currency in times of danger; and that, by collecting facts from all available sources, a mass of evidence might be procured, which would be of the greatest value as a guide in suggesting the adoption of precautionary and preventive measures, should the cholera appear among us.

The Committee thus appointed have prepared the following resolutions. These suggest in the first place the inquiries, and the mode of making them, which, in the judgment of the Committee, ought to be instituted, and they are also suggestive of such practical measures as may be carried out by voluntary exertion, to avert or mitigate the visitation of any epidemic disease:"—

Resolutions of the Committee.

I. That the positive numbers of deaths by miasmatic disease(a) known to be preventible amounted in 1863, according to the Report of the Registrar-General, to 114,538 for all England; and that such amount of preventible disease, especially under a threatened invasion of cholera, and apart from it, demands the most serious public attention.

II. That it is of great importance for the economical and efficient direction of public effort, to ascertain and distinguish, as early and as exactly as practicable, what classes these diseases principally affect; and on what conditions, and on what causes, they chiefly depend.

III. That with this end in view, statistics should be obtained as to the death rates, and the proportions of deaths, from diseases of the miasmatic class, in improved model or other dwellings, in improved common lodging-houses, and in well-managed public institutions—such as district institutions on the half-time system, schools for the reception of destitute children, and well-managed prisons, distinguishing the diseases arising therein from those introduced.

IV. That the chief seats of miasmatic disease should be early ascertained and designated in lists, and marked on maps for the direction of inquiries.

V. That, as the worst places are known to the Union Medical Officers and the Union Relieving Officers, the Boards of Guardians of the Poor-law Unions are the most eligible local authorities to look to on the present occasion for the promotion of important preventive measures, as well as for the earliest information to other bodies charged with the care of the public health, as to the first or beginning cases of the diseases referred to.

Note.—The authority of the municipal corporations extends frequently only over portions of cities, whilst all civic and rural populations are under the jurisdiction of Boards of Guardians, who are charged with the relief of destitution from sickness and disability, orphanage and destitute widowhood occasioned by sickness and premature mortality. The guardians have the charge also of union houses, with fever wards for the reception and treatment of the destitute sick, and have the direction of a service of Medical and Relieving Officers, and although the office of guardian as well as municipal offices may be occupied by the owners of the worst conditioned tenements, yet, as guardians, they are subject to the control and supervision of a central board, independent of local interests, and responsible to Parliament.

VI. That the attention of the President of the Poor-law Board be called to Resolution I., and that it be submitted that he should early direct the attention of Boards of Guardians to the rates of mortality in excess of known standards afforded in the same counties, as shown by the Supplement to the Twenty-fifth Annual Report of the Registrar-General; and that he should direct the Guardians particularly to inquire into and ascertain by their officers the seats of the most rife miasmatic diseases, and to publish them without delay for the information of the ratepayers and others, and that the local authorities should be especially reminded of this fact—that local registrars have in their books records of the places and houses actually visited by cholera, typhus, etc., in previous epidemics.

VII. That it be submitted to the President of the Poor-law Board that, inasmuch as the proposed course of action, by averting or lessening the mortality from miasmatic diseases, will prevent claims for relief on account of widowhood, orphanage, and premature disability, the necessary incidental expenses may be fairly charged on the poor's rates throughout the country.

The following are recommended to Poor-law Guardians and others as the best means of carrying out the foregoing resolutions:—

(*a.*) Poor-law Inspectors should induce the Medical and Relieving Officers to mark on maps of their districts the places they have had occasion to visit for diseases of the miasmatic class.

(*b.*)—Union clerks, as superintendent registrars, or the other officers acting as such, should mark on the same maps the places from whence deaths from diseases of the miasmatic class have been registered.

(*c.*)—The seats of diseases of the miasmatic class should be marked with red ink, and of deaths with crosses in black ink; and the places where cases of cholera have occurred should be marked with blue ink.

(a) The classes of diseases coming under the term of "miasmatic" are cholera, diarrhœa, dysentery, small-pox, measles, scarlatina, diphtheria, quinsy, croup, whooping-cough, typhus, erysipelas, metria, carbuncle, influenza, ague, remittent fever, rheumatism, etc.

(*d.*)—The Medical and relieving officers should be requested to make notes and observations on the conditions of the places affected by miasmatic diseases, and the classes of persons who suffer most from them.

(*e.*)—The courts, alleys, and other places which are undrained, or badly drained, and which have no proper water-closets or self-cleansing house-drains or sewers, and no proper pavement, should be marked on the proposed district map.

(*f.*)—The police, having constantly to traverse all districts, are well acquainted with those which are physically in the worst conditions. Application should therefore be made to the heads of police to request that they will be so good as to direct each policeman to aid the completion of local inquiry by making out descriptive lists of the places characterised by foul smells, by common nuisances, by defects in the external conditions of places, and by overcrowded and badly-conditioned tenements.

(*g.*)—The marks on district maps should be transferred to general maps.

(*h.*)—In the metropolis and in other towns where ordnance surveys have been made, copies of the ordnance maps on the largest scale be used, and, in other cases, tracing of town surveys.

(*i.*)—In aid of such maps, the chief seats of the miasmatic diseases should be accompanied by lists, with observations by the Registrars or other union officers, and a statement of the density of the population.

(*k.*)—That maps and lists constructed and marked in the manner recommended should be published without delay for the use of all concerned in sanitary inspection.

VIII. That it is desirable that local associations should be formed to visit the places pointed out in the maps and lists, and to organise a system of house-to-house visitation to ascertain the conditions which require removal or mitigation.

IX. That special local inquiries be directed to the state of the existing provision for receiving and treating cholera cases in union-houses, Hospitals, houses of refuge, etc., and as to the means provided for the immediate removal, not only of the dead, but of the sick, from rooms which are at once the living and sleeping rooms of the poorest classes to places specially provided for the purpose.

X. That a special fund be raised to defray the expenses of the Committee in printing, correspondence, obtaining and distributing returns, and otherwise, and that a subscription be invited for this purpose.

Note.—The following are among the effects which may be reasonably expected from the proposed local associations and examinations—viz., more accurate information as to the extent and nature of defects of the sources of water-supply of many districts, of such injurious defects as sewer-tainted wells, water kept in uncovered butts and tanks over privies or dung-heaps, and defects in the ordinary qualities, quantities, and methods of the distribution of the water supplied—as means of house and street cleansing, as well as for personal cleansing, for clothes washing—especially for the poorest classes—as also defects of sinks, drains, and means for removing foul or waste matter, the extent of existing defects of house and street drainage, the extent of cesspools and of house drains, and of sewers of decomposing deposit, which are only extended cesspools.

September 19, 1865.

The plan thus proposed by the Committee of the Association, while it is deserving of the most serious attention of the Medical Profession, and especially of those members of the Profession who are engaged in Union practice, is, according to our view, derived from a hard training in such practice, impracticable. There can be no doubt that the only possible plan for obtaining a perfect sanitary registration is to turn the organisation of the Poor-law system to useful account. But how shall this be effected? Not certainly by coupling the Medical officer in scientific work with the relieving officer and the policeman,—a suggestion which shows how little the lay element of sanitary reform understands the position of Medicine—but by intrusting the inquiry in its entirety to the Medical officer of each Union district, who alone can communicate all the facts that come under scientific observation in a scientific, systematic, and reliable form, and by giving him proper remuneration for his scientific services.

The Committee is in fault also for an omission in its plan, and, indeed, gives us the play of "Hamlet" without Hamlet. Of what use are any number of facts when collected unless sent to some central authority for analysis and report? The Committee should suggest a centre—say the Registrar-General's office, or that of the Medical officer of the Privy Council.

At the Dublin meeting of the Social Science Association, one of the members read a paper on the registration of disease, which was published in the volume of *Transactions* of the Society, and which actually embodies in a much simpler and more practical form the whole of the present scheme, maps included; and the Committee in falling back on this project have simply so changed it as to make it useless. Let the members recall the plan for the registration of disease which was before them several years ago; let them carry out that plan now that the need of registration is felt, and they will effect a real service for the country at large. The plan is most simple. Every Practitioner of Medicine is now supplied with a book of registration in which week by week he notes the cases that come under his care for the information of the Board of Guardians. Let, then, this book be modified so that by change of a few words, and the addition of a map, all the diseases, and all the great centres of disease, may be duly entered; week by week let the returns from this book, after they have served their local purpose, be sent to a central department in the metropolis, and there be analysed, as are the returns of the superintendent registrars, and soon there would be received from 3333 stations or observatories of disease in England such an annual report of the actual sanitary condition of this country as has never been produced in any country.

We dwell at some length on this proposal of the Social Science Association from the interest of the questions involved; we also dwell upon it because we feel that the honour and interests of our own Profession are concerned. We might very properly urge that the standing Committee of the Health Department of the Social Science Association, in suggesting the poor-law organization as a means for obtaining a system of disease registration, would have acted but generously, not to say honestly, in stating in a line or so that the same project had years ago been brought before the Association; but on this point we will not dwell. The worst feature of the series of recommendations is that the Medical man is allowed no distinctive character in a purely Medical inquiry, but is actually placed with the relieving officer and the policeman. Perhaps the standing Committee, before it is too late, will allow us to refer the document they have sent us back to them for consideration. We assure them promptly and sincerely their present suggestion will not do. We know the Medical Profession better than does the standing Committee of the Social Science Association, and we can promise the Committee that the Profession will do its duty, if there be an outbreak of cholera in this country, as faithfully as duty can ever be done. The Profession will do the duty without any alliances with lay bodies. Beyond this also every member of the Profession, *if he be treated with the courtesy and respect he rightfully claims*, will work with any earnest men out of his own circle for the common good. But all the associations in the world will not succeed in securing Professional co-operation if they are so reckless as to try to yoke over 3000 men specially educated for Medical observation and research, with the same number of relieving officers or policemen in a purely Medical work. In plain words, the suggestion is a striking, if not a studied insult, and can only be apologised for on the ground of its gothic ignorance. What is meant by a relieving officer having "occasion to visit for diseases of the miasmatic class?" We read the document until we can read no more. Is it a solemn hoax? Any way, it could not be left out of this history; and now our brethren can decide upon it as they please.

Chapter IX.

Further Report on the Present Epidemic—The Epidemic in Malta and Goza—In the East—In Italy—In France.—The Water Supply of Paris and Cholera.—Cholera in Germany—Cholera in England.

The Epidemic in Malta and Goza.

All accounts go to show that Malta continues virtually free of the epidemic. The 4th of October was the first day on which no new attack was reported, and the deaths from preceding attacks were reduced to six. The little island has suffered very severely. The population of the island may be reckoned as 120,000. Out of this population the attacks and deaths have been as follows during August and September:—

Whole population, 120,000.

Population attacked in August . . .	1308
,, ,, *September* . . .	563
Total of attacks	1871
Deaths in August	771
,, ,, *September*	379
Total of deaths	1150

Percentage of deaths, 61·44.

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These statistics do not include the population of the garrisons. Of the military 200 were attacked, and 140, or 70 per cent., died.

In the island of Goza, near Malta, the epidemic appeared in or about the second week of August. It soon spread with great vehemence, and up to the present time, when it is on the decline, it has attacked 476 persons, and destroyed 225, the mortality being at the rate of 47·26 per cent. In addition to the above, we extract from a letter of the special correspondent of the *Times* the following facts. They are important, as proving how absolute is the law that cholera travels only where it is carried. This despatch, written from Valetta, bears date October 5:—

"The expectation expressed in my last communication that we should be soon rid of the fell destroyer that has been among us this summer has been realised, inasmuch as yesterday there was not a single fresh case throughout the whole island. Valetta and its suburbs have been free from cholera for nine days, and only a few insulated cases have occurred, in that period, in some of the poorest villages and the town of Vittoriosa. There is reason to hope, therefore, that clean bills of health will shortly be issued.

The following returns show the course of the disease during the week:—

	Attacks.	Deaths.
September 29	7	4
„ 30	12	5
October 1	9	4
„ 2	7	10
„ 3	7	4
„ 4	None.	6

The total number of cases this week amounts to 42 attacks and 32 deaths, against 85 attacks and 66 deaths for the week preceding.

The accounts from Goza are not so favourable, as will be seen from the subjoined report; but I think, taking all circumstances into consideration, that the speedy departure of the malady may be safely prognosticated from that island also:—

	Attacks.	Deaths.
September 28	11	2
„ 29	1	2
„ 30	4	3
October 1	7	2
„ 2	3	0
„ 3	8	4

With the exception of occasional siroccos, prevalent at this season, the temperature now is very agreeable.

It is a fact worthy of note that while Constantinople, Smyrna, Beyrout, Jaffa, Ancona, Marseilles, Malta, Gibraltar, and other Mediterranean ports in communication with the infected city of Alexandria have all suffered more or less severely from this extraordinary pestilence, Sicily, Greece, and the Barbary States (Tripoli, Tunis, and Morocco), which adopted an opposite course, have hitherto entirely escaped its infliction."

The Epidemic in the East.

All reports agree in stating that the epidemic has ceased in the towns where it first spread. In Constantinople six cases only occurred from the 20th to 27th of September. The epidemic has completely disappeared from the whole Turkish littoral of the Black Sea and the Sea of Marmora. In Smyrna the last evidences of the malady had disappeared on September 21, and the Governor-General had withdrawn the special power given to the Consular Relief Commission. The Commission had consequently lapsed into a private committee for the distribution of the large sum contributed in England, and in Smyrna itself, for the service of the poor.

In Odessa, on September 13, ten persons were attacked with cholera, and four died; on the 14th there were six new cases with one death.

The Epidemic in Italy.

The epidemic is everywhere declining in Italy, and may for the moment be considered as nearly extinct there. The Papal Government has issued, as a precautionary measure, a notice to all travellers who are not provided with official documents showing they have resided the previous fifteen entire days in a place free from Asiatic cholera, that their baggage will be conveyed to the Papa Giulio Palace, outside the Roman Gate called Porta del Popolo, for the purpose of disinfecting the objects contained.

By the interposition of Her Majesty's Consul at Rome (Mr. Joseph Severn), the Papal Minister, Monsignor Sagretti, has conceded that the sojourning cities exempt from cholera (which will insure travellers against their baggage being taken at Rome for disinfection) are Leghorn, Florence, Perugia, or Naples, and any of the intermediate towns free of infection. Monsignor had also made the concession that he would be satisfied with any documents proving the fifteen previous days' residence—even hotel bills—in such cities.

Persons arriving from Ancona are not permitted to enter the Papal States.

At Lucera the disease lingers. There were 8 cases and 4 deaths reported there on the 7th of this month. The sum of all other cases and deaths on Italian soil is 5 cases and 2 deaths in six different localities to October the 9th.

The Epidemic in France.

Towards the close of last week there was a report, which soon gained ground, that the Asiatic scourge had entered Paris, and had, in fact, been there for several days. It was reported that from the 22nd of September to the 1st of October there had been forty cases of the disease, with twelve deaths. Twenty of these cases were inhabitants of Montmartre and Batignolles. They were all removed into Hospital. In addition, twenty-seven cases were reported in private dwellings. In order to prevent alarm, the *Mémorial Diplomatique* published a note putting the public on their guard against exaggerated reports on the subject of the cholera in Paris. It admitted that the malady does certainly exist in the capital, but simply in isolated cases, and having in no wise the epidemical character which marked the two previous invasions of the scourge. "There are," it states, "at most twenty cases of cholera per day in the Hospitals—a number without importance, especially in the present season, when the use of fruit, vegetables, and crudities, with the drought, is sufficient every year to give rise to a certain amount of sporadic cholera. Notwithstanding the above-mentioned causes, statistics show that the mortality has of late been less considerable than in the corresponding period of last year." The *Gazette de France* states that it is on the southern side of Montmartre and of the Batignolles that the cases have principally arisen, and adds:—"Both these districts are unfortunately exceedingly dirty, as well in the interior of the houses as in the streets. Cleansing of an extensive character is required, and in that respect the inhabitants have as much to do as the Prefect of the Seine."

On Saturday and Sunday a considerable number of cases of the malady—over sixty—were reported in the city, and on Friday, the 5th, there were not less than twenty deaths. It seems that the disease was brought into Montmartre from Marseilles by a person suffering from it, who died in Montmartre. On Monday, the 9th, the disease was considered to be on the decline. The places in which it was most rife were in the northern division of the city.

That the epidemic in its true Asiatic type does exist in Paris is proved, we fear, by the steps taken by the Government. For some days past the authorities have been saturating all the foul places with solution of chloride of lime. This was of some significance, but the most important fact is that on Tuesday last a "service Médical" was formally organised under Ministerial direction. Twenty-two soldiers

of the Imperial Guard are reported as being under treatment for cholera at the Military Hospital of the "Gros-Caillon."

Cholera and the Water of Paris.

In connexion with this outbreak of disease in Paris, a distinguished French Physician, Dr. Vacher, has been having a dispute with the municipal authorities respecting the water-supply of the city. Dr. Vacher has been to England lately, and has made himself master of the remarkable series of facts that have accumulated here since the time when Snow first brought out his immortal investigations respecting the propagation of cholera through the medium of water. Returning to Paris, Dr. Vacher applied to the head engineer of the Paris waterworks to be allowed to take samples of the water from reservoirs that he might examine them for organic impurity. The authorities indignantly refused, alleging that in 1832 a report was current amongst the population, during the presence of the choleraic epidemic, that the waters were intentionally poisoned, and much mischief ensued from this preposterous rumour. On receipt of this refusal, Dr. Vacher wrote a letter to the *Temps*, in which he said that he had written courteously to the Administration, and had asked respectfully for what was the right of every person who paid taxes. His desire was, that in Paris there should be issued every month analyses of the water-supply like those for London regularly prepared for several years past by Professor Hofmann. He also quoted from Bouchut to show that at Sèvres diarrhœa frequently become epidemic amongst those who drank the water of the Seine, but immediately stopped in those who substituted for the river-water that from an artesian well. He denied an insinuation that had been thrown out against him by the authorities to the effect that, in his opinion, the few cases of cholera that had occurred in Paris were due to intentional poisoning of the water; but he held that the water was poisoned *by organic matter*. Here the subject rests.

We may add, in support of Dr. Vacher, that the epidemic in Paris of 1832 was evidently spread almost exclusively by means of water. The poorer people, therefore, guided naturally and inevitably by daily observation, attributed—and rightly, too—the malady to poison in the water. The mistake they made was, that in their ignorance as to the possibility of accidental introduction of organic poison, they came to the false conclusion that ordinary poisons had been introduced intentionally, an hypothesis which was favoured by the political excitement of the time.

Before leaving the question of cholera in Paris, we must not omit to mention a noble instance of self-sacrifice on the part of our brother-Professionals in that city. A considerable number of these philanthropists have waited upon the Minister of Public Works, offering their services for any of the towns at the present time infected by the disease. Fortunately the reply was, that such services were not at present needed, but that they would be gratefully accepted if they should be required in the future.

At Marseilles and Nimes the epidemicis disappearing, but at Arles it was on the increase, and was causing many deaths. At Toulon, the malady was fluctuating, but on October 4, out of 26 deaths, 14 only were reported as from cholera. On the same day (October 4) at Marseilles, out of 36 deaths, 11 were from cholera; from the 1st to the 7th, the total deaths from all causes were 264, of which 91 were from cholera, showing a decrease of deaths from cholera for the preceding seven days of 25. Dr. Honnoraty had fallen a victim to the malady, owing to his excessive labours amongst the afflicted poor. His death created the profoundest regret. At Arles, on the 4th, there were 11 deaths, of which 8 were from cholera; and at Nimes, 2 deaths were from cholera. On the 8th, there were only 8 deaths at Marseilles from the epidemic, at Toulon 7, and at La Seyne 2.

The inhabitants of Marseilles have drawn up a petition to the Emperor, requesting that a local sanitary administration may be established in their city in order that it may be protected from the spread of cholera. The petitionists trace the introduction of the present epidemic from Asia, and show that the disease was brought to them by fugitives from Egypt. Marseilles, always hospitable, received these fugitives without exercising sufficient care. They also state that the cholera has thus been introduced into their town seven times. In 1835 it was brought by fugitives from Toulon; in 1837 from Italy; while in 1854-55 it was brought by regiments of soldiers from the north of France, who were embarking for the Crimea.

Cholera in Germany.

Three cases of sporadic cholera are said to have occurred within the past few days in the Hospital of Berlin, and one other case, assumed to be of the genuine Asiatic form, has been reported.

THE CHOLERA IN ENGLAND.

The Registrar-General's return for October 7 gives 83 deaths for the week from diarrhœa in London. A lady, 71 years old, is reported to have died at Wandsworth of cholera after thirty-six hours' illness, and the deaths of four children are also returned under the head cholera. These cases, taken as they are in the isolated form, mean probably nothing more than the ordinary hepatic cholera common to this country at the present season.

At Southampton, a public meeting was held on the 6th to consider the subject of cholera, the Mayor presiding, when the Registrar, Mr. Wakeford, put forward the statistics of diarrhœa and cholera for Southampton in the month of September during the last six years. They run as follows:—

	Diarrhœa.	Cholera.
In the year 1860 . . .	0	0
,, 1861 . . .	20	1
,, 1862 . . .	0	0
,, 1863 . . .	10	0
,, 1864 . . .	17	1
,, 1865 . . .	13	3

There had also been one death in October of the present year from cholera.

Dr. Parkes, who has been appointed by the Privy Council to report upon the existence of the disease in Southampton and upon the health of the neighbourhood, made some excellent suggestions as to the best means of preventing the spread of the epidemic.

The authorities at Southampton are evidently fully prepared to meet every emergency.

Our contemporary, the *British Medical Journal*, reported last Saturday the death of Mr. Daniel McNab, of Epping, in Essex, as having occurred on Tuesday, October 3, from Asiatic cholera. During the last two days rumours have been circulated of several fatal cases near Epping. The first cases are said to have appeared at the village of Thoydon, distant a mile and a-half from Epping, the disease having been brought there by a lady who had just returned from a watering-place, and who died from the malady soon afterwards. It is further alleged that the husband and other members of the family of this lady have succumbed, but we do not at the present moment vouch for the accuracy of these statements.

Another Successful Ovariotomy Case in France.—M. Courty, of Montpellier, whose visit to this country will be in the recollection of many of our readers, has just read at the Academy of Sciences the history of a case of ovariotomy performed by him in July last with complete success, the woman who was the subject of it being a lunatic. M. Courty observes that his own cases, as well as some others which have come to his knowledge, would seem to demonstrate that in the South of France, as well as at Strasburg and in England, ovariotomy is successful in two out of three cases when these are not picked, and in three out of four when they can be selected.

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OPENING OF THE LONDON MEDICAL SCHOOLS.

ST. THOMAS'S HOSPITAL.

The Introductory Address was delivered by William M. Ord, M.B., Dean of the Medical School, and Lecturer on Physiology and Comparative Anatomy. "How best to do the daily work?" this is the great problem of our life,—the problem which must constantly occupy the most earnest attention of men conscious of the true meanings and teachings of religion. For to do the daily work well, for the sake of the work and not of its results, from sense of right and not for man—pleasing is an act of faith, of love, and of conscience. Men are not slow to recognise in their fellows the energy and alacrity in daily duty which have their source in the deeper and nobler feelings,—service not of the letter but of the spirit, not of rule but of interpretation, and henceof necessity progressive. Whence it comes that by its material fruits we can to some extent measure the spirit of our living.

And, seeing that men and things are nowadays estimated, and have power according to their actual worth and benefit to society, seeing that the present high position of the liberal professions is due to the earnestness and sincerity with which they have discharged their functions toward society, it is natural that, standing in the portals of the academic year, we should review our past and its results, and compare our progress with our opportunities. A time of complete rest and cessation from regular duty, coming once in a lifetime, will often bring to earnest men rich fruit of improvement, inasmuch as it will give occasion for careful meditation over the past; so that knowledge being garnered, and marshalled, and thought out into wisdom, the tendencies of our work fully investigated, faults recognised, habits criticised, and fruits unseen in the daily plodding marked and appropriated, we may in greater strength, in wider comprehensiveness, found new purposes of enlightened work. The possibility of carrying out these purposes will be in proportion to the completeness of our temporary separation from work, to our emancipation from the chains of habit.

St. Thomas's Hospital has fallen upon such an opportunity, and we are already able to judge in part of the use made of this opportunity. Those who have seen the plans of the new Hospital will, I think, agree with me that they declare themselves, even on slight examination, to be the offspring of wide care and thought. Those who know something of the history of these plans will know with what care all the good and bad points in the old building have been considered; with what industry comparison and inquiry have been instituted with reference to nearly all important Hospitals at home and abroad; and with what readiness advice and suggestions have been received from all persons whose opinions appeared to be of value.

So far, well. Then, in the filling of the building, will come the consideration of its administration. Here, again, things effete, obsolete, or injurious must be swept away, and the reorganisation will be a task worthy of the energy of the men who have so well discharged the other part of their duties.

To-day, however, we are more particularly concerned with the school, which, using the Hospital for purposes of illustration and practical instruction, and adding also instruction of its own, performs that function of training men for the treatment of the sick outside the Hospital, which is only secondary to the duty of caring for the sick within its walls.

The school has to follow the fortunes of the Hospital, and, at first sight, suffers more by the present eclipse. But if we recognise the fact that the size and importance of a Medical school will depend in great measure upon the size and importance of the Hospital to which it is attached, we shall see that success lies ready for us on condition that we carefully examine and criticise our work and fit it to present requirements. I see around me men who have a clear sight and firm grasp of the widening knowledge of the time—men whose position and attainments add much to the diffidence with which I speak here now; I see also some nearer to myself in years, of well-known promise and sincerity of purpose. In their hands, working in hearty oneness, we may expect to see the school flourishing in the spirit of its former dignity. Our opportunities will be large, and we must use them worthily. Granting that the progress of our Profession has been as great of late years as people are accustomed to assert, I think no one will venture to say that the efficiency and results of clinical teaching have been in proportion to our opportunities. It will be for us so to organise our work that we may turn to good account sources of knowledge and progress now little used or unnoticed. By the recent appointment of Dr. Thudichum, we have received a colleague well known for ability and zeal in the path of scientific research, who may be expected to make fruitful many of the hints and suggestions afforded by the cases under care in the Hospital. The example once set, and the spirit of inquiry aroused, we may hope that the whole mass of our school may be leavened by it, and that St. Thomas's may be able from year to year to make valuable additions to the sum of solid, well-founded, scientific knowledge.

Next, in regarding the school as a place of instruction, we must observe that the scope and objects of teaching are to a great extent regulated by the various examining bodies which hedge the entry to the Profession. And we may regard the manner in which our students have encountered the tests and searchings of such bodies as a measure of our efficiency as teachers, provided that examinations are always conducted so as to estimate thoroughly the fitness of the candidate for the work before him. If examining bodies, giving full weight to the fact that they have to pronounce upon the fitness of candidates for an active Profession, requiring readiness and self-reliance, recognise variety and extent of information as a thing of value only when based upon a thorough knowledge of laws and principles, and the inter-relations of things, they can never go far wrong, even if some of their questions seem to travel far from the track of practical usefulness. It is expected that a candidate's knowledge should be of fair extent; let him by all means, therefore, be questioned on facts, and even on minor facts, but let him be questioned so as to ascertain his comprehension of the relation of these facts to others, of the laws which they illustrate, and of their bearings on practice. Only in this way can you distinguish between the candidate who has been crammed for the particular examination, and the legitimate aspirant who has been educated to play his part well in the world, and to whom the examination is but an initiatory test, and not an end. That this plan is now much adopted must be conceded, yet one sees still examination papers which seem merely intended to test the pupil's memory, and his memory, too, of facts which he will certainly forget as soon as the examination has passed out of sight.

And we ourselves, as teachers, have need of more than mere knowledge and earnestness of purpose. Things must be placed before students in an intelligible and, as far as may be, attractive way, and by encouragement of free questioning we must learn how far we fulfil this, and how we may amend our instruction. This of our individual efforts. In our collective work—our administration—we have probably many things to correct and improve. It would be inappropriate for me to come here and cry "peccavimus" in respect of any particular faults, and I must be understood to speak only of what is from all analogy of things a matter of abstract certainty.

In speaking next to you, gentlemen, who are variously beginning or ending your course of study at this place, I shall try to follow the train of thought which has been suggested by the transitorial state of the Hospital.

I will presume that you come here wishing to do well, and will limit myself to a few remarks on the method of your study:—

Firstly, it will not be enough that you shall be in ward, theatre, or elsewhere, merely attentive listeners and careful note-takers. Your labour will be thrown away if you do not supplement attention by thought. All the information that can be concentrated into lectures and demonstrations will be only an outline of the knowledge which you have to acquire. So, while the ink of your notes is still wet, and the thoughts and ideas suggested by what you have heard are still active and vivid, seek by reading and thinking to fill in and connect the blanks of the outline. By the use of method in the distribution of your time you will find room for all this, and also for necessary relaxation. None of you can disregard your physical constitution; rest from mental toil, and some more or less active exercise of the body, are absolutely essential to your efficiency. Furthermore, your reading and thinking will not suffice to make you men of action, and must never take the place of healthy exercise of the body, of the training of hand and eye in operation, and observation, of the practical part of your work. Honours and prizes, in reading for which men often forget the rest of their duties, will be productive of harm rather than good if they are thus misused. You

must work, not by the standard of your neighbour, to be just so much in advance of him as to entitle you to certain prizes, but by higher standards of future usefulness.

Besides what seems immediately to concern your Profession, you have certain qualities to cultivate; the delicacy of manipulation, and the firm moral courage which, typified by the lady's hand and the lion's heart, are said to be necessary to Surgical success; and the imaginative quality which, typified by the poet's mind, is not less necessary in the diagnosis of disease, the care and management of patients, and in all scientific investigations. Study tenderness and avoid harshness; strive to understand and sympathise with your patients; be generous-minded to your Professional brothers; avoid all conscious lucre-seeking; and remember, finally, always and everywhere, on Whose strength you rest and to Whom you have to render account.

So you may verify for yourselves the stirring words of the great poet of the age, who, answering the dreamers of the golden year, says thus:—

"Old writers pushed the happy season back,—
The more fools they,—we forward; dreamers both;
You most that in an age when every hour
Must sweat her sixty minutes to the death,
Live on, God love us, as if the seedsman, rapt
Upon the teeming harvest, should not dip
His hand into the bag; but well I know
That unto him who works, and feels he works.
This same grand year is ever at the doors."

UNIVERSITY COLLEGE.

Mr. Marshall's address at University College had for its subject the Art of Healing: its Scope, Limits, and Relations with Science.

He began by directing attention to the importance to the student of Medicine and Surgery of being able to distinguish between what belongs to science and what to art in the future exercise of his Profession. Each individual case presents to the Practitioner two primary questions,—one relating to the nature of the disease brought under his notice, and the other relating to its treatment. Other questions likewise arise concerning the duration, result, and causes of the malady, and the mode of preventing its recurrence. Of these questions, some can be solved by science, but two by art alone. Thus, the causes, nature, progress, and issue of a disease come under the domain of pathology, whilst considerations of treatment and prevention appertain to art. By common usage, the terms Medicine and Surgery include both science and art, and this is justified by the mutual co-operation of both the science and art elements. There is, however, a practical distinction between science and art, the former observing facts, and inferring from them principles and laws, or pursuing the method of deduction, whilst art is concerned in the formation of precepts and rules as guides to positive action. In this view, Medicine and Surgery consist of the science of pathology, and of the arts of hygiene and therapeutics. Beyond this, the Physician and Surgeon exercise the function of scientific expositors in questions of social and public interest, as in those arising in the administration of justice, or in the government of the nation.

Referring, however, to his present intention of regarding Medicine and Surgery as, practically, arts dependent upon certain sciences, the lecturer maintained that this view by no means derogated from the high position of these two great subdivisions of the art of healing, for, as he held, an art may, in some points of view, be regarded as even higher than a science; science initiating, but art fulfilling; science being knowledge and art work; science teaching the facts and laws of nature to the merely recipient and reflective mind of man, art requiring him to become himself an active centre of operation in virtue of his intelligence and free will for certain ends and purposes.

The precise place of the Medical and Surgical arts is so special as not to admit of their being classified with other arts; they approach, however, in the hygienic department, more nearly to the art of agriculture; but as curative arts exercised on individual animal organisms, and those human, they occupy a special position, useful and noble from their relieving the sufferings of man.

In the division of his address relating to the limits of the healing art, he pointed out that these were strictly coincident with the duration of the life of the individual being; for it was evident that all curative processes, whether of external or of internal disease, were essentially dependent on the action of the formative force, or energy, resident in the body, or manifested in it from its origin to its death—that mysterious force which, in its early manifestation, is really the germ force, which throughout life is the so-called conservative force of the living frame, and in disease has been named the *vis medicatrix naturæ*. Besides this natural limitation to curative art, there exists, of course, another in the finite but still incalculably numerous means by which we are surrounded for the treatment of disease.

Passing next to the consideration of the relations of the healing art to science, he showed that it was necessary to understand thoroughly, on the one hand, the structure and properties of the living unit man, and, on the other, the qualities of the external agents by which he is surrounded, and the mutual actions and reactions of one of these upon the other. He pointed out not only that the older and simpler ideas of man's body being composed of the materials belonging to external nature, were physically true, but that the advanced and advancing knowledge of physics served not only to confirm those ideas, but to illustrate them still more intimately. Thus, the doctrine of the correlation of forces was shown to demand, in the human body, sympathising or reciprocal actions in our own frames, to account for the kinds and degrees of our sensations. The intrinsic phenomena of the nervous system also must be accompanied by corresponding molecular movements within it. The extreme complexity of the molecular movements of the body, and of those of external nature, and the varied relations between them, render physiology the most difficult of sciences; but, happily, these very relations, daily shown by modern science to be more and more intimate, point out the true method of investigating the phenomena of life. Exact science studies relations capable of measurement, and measures those relations. In the living body it is only its physico- and chemico-vital acts which can be measured; and accordingly, modern physiology, consciously or unconsciously, pursues this method, and presents, as in the experiments of Matteucci, Dubois Reymond, Becquerel, and Helmholtz, the most prolific results.

The science of Pathology must pursue the same path, resting on the same basis of measuring the corresponding commensurable pathological phenomena of living beings—viz., their physico- and chemico-vital actions in disease. Pathology, indeed, the lecturer defined as a conjoint science with physiology, forming but a part of the larger science biology; for, as he said, disease is but a contingent condition of the living frame.

Besides the relations between the physical sciences and those of physiology and pathology, the healing art also seeks the widest knowledge of external preventive and remedial agents in the study of the relations of man with external nature. Hence, from all points of view the student of Medicine and Surgery requires, though not an exhaustive, a most extensive knowledge of science in general.

In the latter portion of his lecture Mr. Marshall showed that, regarding Medicine and Surgery as arts, they were, like all other arts, progressive, and therefore relatively imperfect; that they gave occasion to the exercise of individual aptitudes, producing masters in these arts to whom pupils must have recourse in order to learn the rules and precepts of experience and tradition; and, lastly, that being arts, they must be learnt, not merely from books, but practically at the bedside.

In referring again to the special limitation of the curative art by the persistence of the preservative force of the body, he dwelt on the sacredness of life, the responsibility involved in the Professional care of life and health, and the duty of preserving the one and restoring the other by every means known to his science and art. He indicated also that a more general reliance on the preservative powers of the frame would diminish the tendency to too abundant medication, and observed that the multiplication of remedies had been held to be infallible evidence of the decadence of the Medical art. The Pharmacopœia, he said, must be admitted to be an inheritance from older times, when greater reliance was placed upon numerous compounded drugs, but he believed that the future tendency would be still further to add to the simple remedial agents, whilst diminishing the number of compound formulæ.

With respect to the complex phenomena observed in man and in the outer world, and the complex relations between them, involving so many reciprocal manifestations of a common force, he said that this should suggest humility, and prevent us from adopting too positively particular Medical theories and systems, pointing out that dogmas and fixed methods

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appeared to the philosophical mind like restrictions upon the multifarious processes of nature; and he added that in any case such restrictions were really self placed upon the dogmatist's own mind. To those who attacked the existing general method pursued by the Profession as characterised by a worship of the "idols of the school," he suggested a caution to beware, on the other hand, as Bacon also expresses it, of "the intemperance of systems." He predicted that in its future course pathological science would become more and more exact in proportion as it followed the methods of investigation already pursued by the physiologist; and that in the natural world important remedies would be abundantly found in the future, instancing the introduction of chloroform in our own time, and remarking that it must be remembered that the more prominent and valuable of the older medicines had been introduced at singularly long intervals of time.

In conclusion, after alluding to the special requirements of the Physician and Surgeon, and to the duties of the student and future Practitioner, he pictured the important functions of Medical science and art to the family, to the society, and to the nation at large, and ended by a peroration on the grand and elevated character of the healing art.

REVIEWS.

A Dictionary of Practical Medicine. By JAMES COPLAND, M.D., F.R.S. Abridged by the Author, assisted by JAMES P. COPLAND, M.R.C.S., and M.S.A.; and throughout brought down to the present state of Medical science. London: Longmans. 1866. Pp. 1537.

COPLAND'S "Dictionary of Practical Medicine" was completed in four volumes in 1858. Many of us can recollect very well the issue of the first part, and the weary years which intervened as part after part issued tardily from the press. It was a work of stupendous labour; few men besides the author would have dared single-handed to undertake it; still fewer could have persisted in the task had they commenced it; and we very much question whether any one but Dr. Copland after completing the Dictionary would have been sufficiently enamoured with his occupation to have set to work to abridge the book for the benefit of those with whom its size and price were obstacles to its possession. Abridgment of a work upon practical Medicine, much of which was printed when some of us, whose straggling grey hairs show that we have passed middle age, were but schoolboys, necessarily involves something more than elision. Thus, the present volume professes to "comprise all that has been contributed, deserving preservation, to Medical knowledge since the appearance of the original edition;" and hence we are not surprised to learn that the notices of these contributions have, to no small extent, filled up again the space which had been gained by abridgment. At all events, we have in this abridged edition presented to us no less than 1537 octavo pages, closely printed in a small type. The original work is so well known that we are spared all necessity of criticism either of its plan or execution. We have merely to point out on this occasion the directions in which the large edition has been curtailed, and the manner in which the author has fulfilled his profession of recording in these pages all that is worthy of notice and preservation in the recent literature of Medicine. Has it been abridged judiciously? Has it been brought up to the present date in all material points?

In the first place, we must say that there are certain subjects altogether struck out from this abridged edition. These are the articles on Age, Arts and Employments, Climate, Disease in Relation to General Pathology, Endemic and Epidemic Influences, Infection, Poisons, and Symptomatology. The author felt that they were hardly capable of abridgment. He has also struck out the whole of the Bibliography and references. On the other hand, new articles have been introduced upon Diphtheria, Tumours, and the Pathology of Insanity. In all this it appears to us that the omissions are such as do not affect the practical character of the work.

In bringing the abridged text up to the present standard of knowledge, a more difficult task had to be performed. On the whole, we may say that the result is satisfactory, although, in one or two instances, we cannot but think that the author would have done better by re-writing entire articles than by endeavouring to patch up the old garment by new pieces. We may illustrate our meaning by reference to the article on Fever, which is now left in a condition utterly valueless to the student who shall endeavour to realise at the bedside the varieties separately described by the author. No doubt Dr. Copland has clear ideas upon the subject in his own mind, and can distinguish at the bedside each fever he describes by its specific characters; but as the article stands at present, we defy any student to rise from the descriptions and the classification of Dr. Copland with the feeling that the author has imparted to him any portion of his own diagnostic capabilities. Still, if the reader is willing to skip the greater part of the present article and commence at the Division XXI., on Synochoid and other Continued Fevers, he will find a very fair summary of the modern views upon those fevers which are met with in this country, and which have of recent years received elucidation from the labours of Stewart, Jenner, Murchison, and others. But even here there is some slip-shod writing which we do not like to see—partly, one cannot but feel, the result of the dove-tailing and patching process. Such appears the explanation of a passage like this, where the author is discussing the diagnosis of typhoid fever—"This fever may, however, be mistaken for true typhus, or for common continued fever (synochoid) with enteric complication. Indeed, there can be little or no difference between it and these fevers during life when thus complicated, excepting in the eruption characterising the former, which may be overlooked or which may be mistaken for the eruption occurring in typhus. After death the disease of the aggregated glands of the ileum, of the solitary glands, and of the mesenteric glands, and the alterations in the spleen, cæcum, colon, etc., will *generally* determine the form of the fever."—P. 380.

On the whole, however, we must admit that the task of bringing up the articles to a modern level has been well performed. Thus, in the article on asphyxy we find incorporated the results of the inquiries made by the Committee of the Royal Medical and Chirurgical Society. In the article on gout the chemical researches of Dr. Garrod are noticed; in the article on insanity a *resumé* is given of the pathological appearances in the general paralysis of the insane as described last year by Dr. Sankey; in the article on paralysis we find a discussion of the subject of reflex paralysis and a notice of the recent controversy between Brown-Séquard on the one side, and Dr. Gull on the other; in the article upon rheumatism the blister treatment adopted by Dr. Herbert Davies is described; and, finally, the researches of Dr. Brinton on ulceration of the stomach receive full notice. These are mentioned as examples of the way in which Dr. Copland has, for the most part, accomplished this part of his task. But still there are some unaccountable omissions, while some important improvements in practical Medicine are strangely slurred over. Thus, under the treatment of carbuncle, we are told that "the actual and potential cauteries formerly advised are now rarely employed," and the crucial incision is recommended as the proper means of averting its progress. We think Dr. Copland must have forgotten the admirable address in Surgery delivered a year or two ago by Mr. Augustin Prichard before the British Medical Association, in which the treatment by potassa fusa and iodised collodion was advocated and enforced by arguments showing that while this was the safest method for the patient it was also the most rapid in effecting a cure. Then, again, as respects the prognosis in pericarditis, nothing is said about the comparatively high fatality of those cases which are associated with, or dependent upon, diseased kidneys, and the more favourable aspect in which rheumatic cases are to be viewed, a point many years ago established by the late Dr. John Taylor, whose analysis of his experience in this disease, as published at the time, has scarcely been equalled in logical accuracy by any investigations published since. Again, the subject of laryngoscopy is much too briefly dismissed, less than half a column of letterpress containing all Dr. Copland has to say about its use, unless we include a foot-note, that we would rather the author had omitted, if only in deference to the more liberal spirit which pervades in the present day the Profession in Great Britain. This foot-note, which possibly explains the short account of laryngoscopy which Dr. Copland gives us, runs thus:—"The laryngoscope was many years ago (about twenty) invented by Dr. Babington, but not being a foreign invention, and not having been puffed and paraded, it attracted no attention until the foreign professor introduced it to Medical meetings."—P. 732. There would be no difficulty in showing to Dr. Copland why Dr. Babington's invention took no root, while the practice of laryngoscopy has been popularised in the hands of Czermak. Another remarkable omission is met with where local medication is described under

the treatment of neuralgic affections. No notice whatever is taken of the practice of subcutaneous injection of opium and other anodynes. This is the more remarkable because the use of morphia sprinkled on a blistered surface is mentioned. We think, too, that more might have been said about the use of carbonate of ammonia in scarlet fever than the six or eight short lines in which we are told that it was recommended by Dr. Peart, and is often useful. The strong confirmation which Dr. Peart's experience has received of late years, and especially at the Earlswood Asylum last year, might at least have been alluded to. As it is, ammonia, which almost seems to be a counter poison in scarlatina, stands in Dr. Copland's list of remedies on a level with the ethers, chlorate of potash, camphor, and wine. With all this, however, Dr. Copland finds space for a long account of syphilisation, as practised by Turenne, Sperino, and Boeck. Surely he does not expect that it will ever be had recourse to by English Surgeons? We cannot, for the life of us, make out why over three columns of letterpress have been thrown away upon this subject, while laryngoscopy, which English Physicians are learning to practise every day, is almost entirely shelved by the author.

Our opinion of this abridged edition of the Dictionary may be gathered pretty readily from what has preceded. We think it a work of very unequal excellence. Sometimes, as in the larger edition, the author's dogmatism is painfully exhibited; at other times, and even where an opinion from an accomplished Practitioner like Dr. Copland would have had value, the student is left to flounder amidst a sea of discordant views, both pathological and therapeutical, out of which he must find his way as best he can. Again, there are articles which leave nothing to be desired as brief yet exhaustive essays.

FOREIGN CORRESPONDENCE.

TURKEY.

CONSTANTINOPLE, September 20.

IF any one should still have entertained any doubts about the contagious nature of cholera, these must have been finally dispelled by the circumstances attending the last epidemic here, which I shortly described in a previous letter, and which were almost identical with those observed during the visitation of the same disease at the time of the Crimean war. Then the French troops who came from Algeria, where the disease devastated the country, had scarcely been disembarked at Gallipolis when the cholera broke out amongst the people there. From this place the disease followed the French to Varna, where it decimated the inhabitants, sparing, however, the intermediate centres of population, and more especially Constantinople, with which the French had not had any communication. At a later period a camp was formed on the heights of Maslac, the *échelon* of which was Yeni-keny, in the Bosphorus. This had scarcely been done when cholera appeared at Yeni-keny, but in no other quarter of the metropolis; it was only after some time that the disease invaded Pera, the nearest suburb to Maslac, with which the troops lodged in the camp had had frequent communication. Such observations as these are almost as convincing as physical experiments; they show the connexion between cause and effect as clearly as it can be shown in pure science. That ill-fated ship which brought us cholera this season from Alexandria has added another striking proof for the assertion that cholera is indeed an eminently contagious disease. Not that the simple contact of a choleraic patient would suffice to produce cholera in another; but it is contagious in the way in which yellow fever is so. Both yellow fever and cholera have a great predilection for ships which are stationed in the ports where an epidemic is raging; both diseases have sometimes a long incubation; they often only break out after the vessel has left the infected place, and, the disorder having once been established on board, it clings to the unfortunate ship with the utmost tenacity. In cholera it is chiefly the alvine evacuations which propagate the disease. In this way linen which has been used by choleraic patients, houses which have been inhabited by them, ships where contamination has once taken place, may retain the contagion for a long time, and become the cause of fresh infections. Moreover, we find that the evacuations of persons suffering from the milder forms of the disease, of "cholerine" and choleraic diarrhœa, yet contain the contagion, just as well as the excretions of those who have died of real cholera; and it may therefore be readily conceived that ships, houses, etc., may be contaminated without a single attack of real cholera having as yet taken place within their precincts.

Quarantine has undoubtedly become a most unpopular institution of late. It is said everywhere that it is an impotent measure, and, like the passports of old, only serves to annoy peaceable travellers without doing any good to the community. But these reproaches ought to be made only to the system of quarantine as it is at present carried out. It is obvious that when a whole country has already been invaded, and where constant communication is kept up by railways and steamboats, quarantine could not check the propagation of an epidemic. Nobody would think of shutting up all intercourse between France and England, even if the whole of France were suffering from the epidemic, and England had as yet remained free from it. But the aspect of the case is quite different when the epidemic is confined to one or two small places at the coast, as under such circumstances quarantine, efficiently performed, would most certainly localise the epidemic and prevent its further spreading. Now, it is only by sea that Alexandria may communicate with Constantinople and the coast of Asia Minor; all arrivals are known, and may be easily controlled, and we have the most favourable conditions at this place for carrying out quarantine effectually which can well be imagined. But what was done at a time when we lived in daily receipt of the worst news from Alexandria? The ships coming from that place were subjected to a quarantine of five days, within which was included the time of passage for every vessel which had a Medical officer of health on board. Was it really believed that by such half-measures the introduction of the disease could have been prevented? It is well known that the period of incubation in cholera is much longer than five days, since the researches of Pettenkofer and Faye have shown that incubation generally lasts a week or two, and sometimes as long as three or four weeks; and how can quarantine be expected to prove useful if the minimum duration of the period of incubation is taken as a standard? Another requirement appears to be that those who give false declarations of health should be severely punished. In the case of the *Mukbiri-Surur*, which, as you know, brought the disease to us, the captain declared that there had been no death nor any case of disease amongst the crew during the passage, and upon this declaration the vessel was at once freely admitted; yet on the evening of the same day twelve patients were brought from the same ship to the Marine Hospital, and the Physicians at once perceived that there were eleven cases of "cholerine" and one of algid cholera. The latter ended fatally the same night. The ship's Surgeon was then closely questioned by the Hospital Physicians, and said that two deaths from cholera had taken place on board between the Dardanelles and Constantinople; that there had been no case while the ship was lying in port at Alexandria; but that there had been a good many cases of diarrhœa. Now, can it be said, under such circumstances, that quarantine had had a fair trial?

The following are some of the alterations in the quarantine laws which seem to be necessary if such calamities as that we have just experienced are to be prevented in future:—

1. Quarantine should be performed at a distance from towns, especially from centres of population, and, if at all possible, on islands.

2. Passengers should never be allowed to go through their quarantine on board ships.

3. Spacious and well-insulated lazareths should be established in convenient places.

4. Every lazareth should have an Hospital which is entirely separated from the main building.

5. Medical officers of health, whose number should be proportionate to the importance of the station and to the special circumstances of the case, should watch from day to day over the inhabitants of the lazareth; reliable assistants should remain constantly in the immediate neighbourhood of the persons to be observed, and would thus complete the Medical observations by their reports.

6. If a case of cholera should have occurred on board ship, the passengers should be disembarked and admitted into the lazareths, and those amongst them who suffer from diarrhœa should be transferred into the Hospital. The ship should be subjected to a complete purification, as is done with vessels contaminated by yellow fever. After twenty-five days the passengers may be allowed to go on board again, but the vessel should remain under observation for fifteen days more, during

which time the Medical officers of health should exercise active surveillance over everything that is going on.

7. The linen and clothes which have been used by choleraic patients during their illness, and also the clothes of persons who have suffered from choleraic diarrhœa, should be destroyed; the Hospital where choleraic patients have been admitted should be well disinfected.

8. Every communication between the lazareths and the ships which are in quarantine should be strictly prohibited, and every contravention of the above rules severely punished.

If such regulations were effectually carried out, they would of course occasionally be a great annoyance to travellers; at the same time, I have no doubt that they would prove of incalculable benefit not only to this country, but also to the whole of Europe.

GENERAL CORRESPONDENCE.

IRVINE *v.* WILSON AND ANOTHER.

LETTER FROM MR. J. ARNOLD.

[To the Editor of the Medical Times and Gazette.]

SIR,—Permit me to correct a statement which appeared in the *Medical Times and Gazette* of September 23, under the head of "Irvine *v.* Wilson and Another." My name has been there introduced entirely without my permission. It is asserted that I only charge 2s. 6d. for the introduction of a catheter. This statement is incorrect, as my charge for that operation necessarily depends on the ability of the patient to pay, and on the nature and difficulties of the case. I entirely endorse Mr. Steel's opinion, as published in your last issue—that there were statements made on either side in which I by no means concur.

Being out of town last week, I was unable to reply sooner.

I am, &c.

Liverpool, October 4. J. ARNOLD.

THE OPENING OF THE LEEDS SCHOOL OF MEDICINE.

LETTER FROM MR. JAMES PAGET, F.R.S.

[To the Editor of the Medical Times and Gazette.]

SIR,—I regret to find that your shorthand writer's notes of my address at Leeds are in several respects inaccurate. Some of the errors are in style and composition, such as I may venture to hope that I shall be thought not likely to have committed; but there are two errors of greater gravity which I shall be obliged by your correcting—namely, "depravity of purpose" should be "infirmity of purpose;" and "pictorial habit" should be "scientific habit."

I am, &c. JAMES PAGET.

1, Harwood-place, Hanover-square, W.,
October 7, 1865.

*** Mr. Paget's lecture was printed from shorthand writer's notes taken for this journal by a special reporter at Leeds. The late period of the week at which the report reached us prevented our submitting it to Mr. Paget's revision.

THE LONG ANTERIOR FLAP IN AMPUTATION.

LETTER FROM DR. THOMAS DOWNIE.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the *Medical Times and Gazette* of September 30, 1865, Professor Spence, of Edinburgh, seems to think that Professor Syme has scarcely done justice to the Surgery of Edinburgh, inasmuch as he, Professor Spence, has been operating by the long anterior flaps since the year 1858, and specially mentions Mr. Teale, of Leeds, and Mr. Carden, of Worcester, as having been the originators of these flaps. Now, without disputing their claim, inasmuch as they have published their cases, I may state that I performed an operation by the long thin flap as early as 1854. A workman of the London Works, Renfrew, had the ring and middle fingers of the left hand severely injured by machinery. The bones of the first phalanx were more or less destroyed, and part of the muscles to near the distal portion of second joint. I took a long skin flap from the dorsal part of the fingers, cut the bones of the second phalanx about the middle, and covered the stumps with the flaps taken from the posterior portion of the fingers. The man made a good recovery, and the fingers operated on were nearly as useful to him as before. I have only to add that the operation as I performed it was entirely an experiment on my part, and that had I been in the habit of publishing my cases at the time this case, no doubt, would have been Professional property before now.

I am, &c. THOS. DOWNIE, M.D.

Blantyre, October 7, 1865.

FEES.

[To the Editor of the Medical Times and Gazette.]

SIR,—The letter from "A London Surgeon" in your last Number, on the subject of extra charges for minor Surgical operations and other manipulations, may lead to serious misunderstanding, unless the distinction between Consulting Surgeons and General Practitioners, which the writer himself makes, is clearly kept in view.

The Consulting Surgeon receives his fee of one or more guineas, according to his *status* and the social position of the patient, but is hardly ever required to perform any of the minor operations alluded to, which are usually executed by the ordinary attendant, whose charges, on the other hand, varying from 2s. 6d. to 10s. 6d. (frequently including medicines), are insufficient to remunerate him for the extra time occupied in these operations, or for the outlay for the necessary instruments. Viewed in this light, the Profession generally, and the "London Surgeon" himself, will probably agree that an extra charge may fairly be made by the General Practitioner, and, I believe, generally is made and acceded to without question by the public, who admit its justice.

Of course, it is not meant that stethoscopic examinations, plastering a cut, or similar trivial matters should be made the subject of an extra charge, and there may be some difference of opinion as to where the line should be drawn; but manipulations requiring particular apparatus, and occupying more time than an ordinary visit, demand higher remuneration.

The Manchester Medico-Ethical Society deserve the thanks of the Profession for the tariff of fees they have published, from which, and through the discussion invited in your columns, it is to be hoped some definite system may be agreed upon.

I am, &c.

M.D., M.R.C.S. Eng.

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, October 5, 1865:—

Robert Jolly, Albany-street, Edinburgh; John Norrish, Tavistock-street, Plymouth; Charles John Myers, Talbot-villas, Tottenham; Henry Cripps Rogers, Newport Pagnell, Bucks; Richard Phibbs Irwin, St. Peter's-road, Mile-end.

The following gentleman, also on the same day, passed his First Examination:—

Thomas Edward Bowkett, London Hospital.

At the recent Examination for Prizes in Botany, annually given by the Society of Apothecaries, the successful candidates were:—

1st. Stephen Wootton Bushell, Guy's Hospital, a gold medal; 2nd. Henry Franklin Parsons, St. Mary's Hospital, a silver medal and a book.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Names of Candidates who passed the Examination, October 11, as Pharmaceutical Chemists:—

John Angior, Liverpool; John Averill, Stafford; James Best, London; John Bienvenu, Southampton; Henry Jones, Llanfachraith; William H. Lenton, East Dereham; Thomas Stokoe, London; Cornelius Williams, Pembroke Dock.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BEIGEL, HERMANN, L.R.C.P. Lond., has been elected Assistant Physician to the Metropolitan Free Hospital, Devonshire-square, E.C.

LOMAS, WILLIAM, M.D. St. And., has been elected Assistant-Physician to the Metropolitan Free Hospital, Devonshire-square, E.C.

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NELSON, DAVID, M.D. Edin., has been elected Professor of Medicine in Queen's College, Birmingham.

PARSON, EDWARD, M.D. Lond., has been appointed Physician to the Samaritan Free Hospital for Women and Children.

DEATHS.

ALQUIÉ.—M. Alexis Alquié, who had attained great celebrity at Montpellier as Professor of Clinical Surgery, died last week of apoplexy, aged 53. He was the author of an excellent work on Conservative Surgery.

BAIN, WILLIAM, M.D. Edin., at Cork Garrison, on September 25, late Surgeon H.M. 34th Regt., and Surgeon of the District Military Prison, Cork.

BROOKES, WILLIAM PHILPOT, M.D. St. And., at Oriel-terrace, Weston-super-Mare, on October 2, aged 46.

MCNAB, DANIEL R., M.R.C.S. Eng., at Epping, Essex, on October 3, aged 74.

NICOL, DAVID, L.R.C.P. Lond., at Northampton-terrace, Swansea, on October 5.

PRYTHERCH, FREDERICK H., M.D., at St. Leonard's-on-Sea, on October 4, aged 59, formerly of Carmarthen.

REMAK.—Science in Prussia has lost one of her most eminent votaries in the person of Professor Remak, who died at Kissingen last month in the prime of life. Well known for his researches in microscopic and developmental anatomy, he had of late years devoted himself to the study of electro-therapeutics, endeavouring to establish it on a scientific basis.

ROBERTS, CHARLES, M.D., J.P., at St. Leonards, Upper Deal, Kent, on October 6, aged 44.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bideford Union.—Mr. C. C. Turner has resigned the Buckland Brewer District; area, 12,929; population, 2500; salary, £39 5s. per annum.

Cardigan Union.—Mr. David Mathias has resigned the Workhouse; salary, £10 per annum.

APPOINTMENTS.

Ashbourne Union.—Thos. N. Twigge, M.R.C.S.E., to the Hartington District.

Derby Union.—John Lindley, M.R.C.S.E., L.S.A., to the First District and the Workhouse.

East Retford Union.—John Johnstone, M.D., L.R.C.S., L.M., to the Scrooby District.

Kendal Union.—Hanson Evison, M.R.C.S.E., L.S.A., L.M., to the Burton District.

Liverpool Parish.—Arthur R. Beckett, L.F.P. and S. Glas., L.S.A., L.M. Glas., to the Sixth District; Robert Robertson, M.D. Edin., M.R.C.S. Edin., L.S.A., L.M. Edin., and William Rayner, M.R.C.S.E., L.S.A., to the Workhouse.

North Witchford Union.—Edward S. Wright, M.R.C.S.E., L.S.A., to the Second District.

Norwich Union.—Robert E. Gibson, M.R.C.S.E., L.S.A., to the Workhouse.

THE MANCHESTER SCHOOL OF MEDICINE.—The Winter Session at this school was opened on Monday, October 2, by Dr. J. E. Morgan, the lecturer on pathology and morbid anatomy. We regret that we have only room to insert the concluding passage of his very eloquent address:—Consider for a moment how much this spirit of attentive observation, this more extended knowledge of disease, has effected for suffering humanity. Not many months ago Europe was startled by the announcement that a fatal and desperate malady had burst out with alarming intensity in the city of palaces which girt the banks of the Neva. How were the fears allayed which arose out of that visitation? Not by the daily bulletins of death and disease, not by the unwonted symptoms which attacked the sick, but by that knowledge of the causes on which the affection depended, of its past history, of the conditions which influence its production and diffusion; in a word, of all those points which the laborious researches of many observant Physicians have succeeded in solving, researches which prove that these pestilences are not due to any mysterious or inscrutable laws of development, but to a total disregard of all sanitary requirements. But it is not alone the alarm of a nation which our Profession is called upon to allay, individuals also fall victims to fear. Under your skilful inspection, under your hope-inspiring verdict, the fetters rivetted by the phantom fear fall harmless to the ground. I trust that none of you will ever permit the enticing allurements of worldly interest to draw you aside from the legitimate practice of your art. Before you turn aside, either to the right or to the left, consider duly the position which you occupy. It is in no illiberal spirit that I would urge you to consider whether you have just grounds for forsaking your allegiance to the schools in which you were educated, and to the colleges who tested your acquirements. The question for you to decide is, are you really fettered in your opinions? Are you hampered in the line of practice which you desire to pursue? You cannot assert that you are. Nay, is it not, on the contrary, true that the members of no other Profession are so absolutely independent as ourselves? We are at liberty to follow that line of treatment which we consider best suited for the relief of our patient. The remedies we select, and the quantities in which we prescribe them, are questions left to our own judgment. One check, and one only, the general spirit of our Profession imposes upon us. If we would retain the character of honourable men, we must forbear countenancing secret remedies. There should be no mystery in the healing art. We who practise it have one great object in common—one paramount duty—the relief of suffering. To this object we should cheerfully devote our meagre jottings. Our experience is too narrow to test fully the value of any discoveries we may make; besides, we are biassed in their favour. But let them be confirmed by the general voice of our Profession; then we too shall have added our store to that temple of knowledge which is being piled up, and is assuming year by year more stately and majestic proportions. (Applause.) The Profession you are entering is not wanting in noble examples of devotion to duty. In our large towns especially, the practice of Medicine is often associated with no unreal or imaginary danger. Study the narratives of bygone daring, of deeds chronicled in history and song. Even there you will search in vain for truer heroism, for nobler devotion than Herbert Llewellyn, the Surgeon of the *Alabama*, exhibited in his death. (Applause.) Surely, if any death can add a crowning lustre to a well-spent life, it is such a death as this—a death after which the name still lives—a name which will never be forgotten, but which, in ages to come, will still be found engraved on the retentive tablets of a nation's heart. (Applause.) Dr. Morgan announced that the prizes would not be distributed till a future day.

DISCOVERY OF A PIECE OF FOSSIL IVORY IN A CAVERN IN PERIGORD, BEARING A REPRESENTATION OF A MAMMOTH.—On August 21 last, M. Milne Edwards communicated a letter from M. Lartet to the Academy of Sciences of France, on the discovery (May, 1864,) in the ossiferous deposits of La Madelaine, of fragments of a plate of ivory, upon the surface of which rude lines of the figure of some animal had been cut. The late Dr. Falconer (who was present with MM. Lartet and Christy when the drawing was found) at once recognised the head to be that of an elephant, and, from a number of lines on the neck, that it was intended to represent an elephant with a long mane—*in fact*, the mammoth! As a figure of the interesting relic has not yet been published, it would be unwise to pronounce finally upon its authenticity; but we have the favourable opinion of MM. Lartet, Milne-Edwards, Quatrefages, Desnoyers, and of our own distinguished countryman, the late Dr. Hugh Falconer, and Mr. A. W. Franks, Director of the Society of Antiquaries (who have seen and examined it). The importance of this positive evidence of the contemporaneity of man with the mammoth in the South of France, cannot, we think, be too highly estimated. Numerous carvings on bone and horn, accurately representing the reindeer, musk ox, horse, and other animals, found in these same caverns of Dordogne, afford ample proof of the artistic skill of these ancient people, and of their ability to represent the wild animals with which they were familiar in the chase. It is extremely improbable that they would have drawn an elephant from imagination; how much more improbable that they should, without knowing the mammoth, have depicted not only his general form, but represented him as a hairy beast with a thick mane, as described by M. Adams in 1799, from the specimen found imbedded in ice at the mouth of the Jena, in Siberia, some of the long hairs of which may be seen in the British Museum.—*Geological Magazine*, October, 1865.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A First-Year's Student.—The registration at the College of Surgeons closes on Monday next.

A Parent, Canterbury.—It is indispensable that a preliminary examination should be passed before the Professional studies can be recognised. Under the circumstances mentioned, your son will only lose half a session if he passes a preliminary in December next.

A Metropolitan Teacher.—The result cannot be ascertained until after the registration; it is stated generally that there is a diminution in the number of new entries. The registration by the Council of Education is only for new students.

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Vaccination Certificates.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Is a Surgeon who is not a public vaccinator obliged to deliver certificates of successful vaccination to the Registrar?

I am, &c.

Farnham, October 11. Robert Oke Clark.

*** We think not. The certificate may be given to the parent, who may be directed to forward it to the Registrar.

Irvine *v.* Wilson and Another.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I would feel obliged if you would correct that part of my evidence relating to Mr. Spence and his charges, as published in the case of Irvine *v.* Wilson. The following is the true version of that part of my evidence:—"The lowest charge in such a case as this which I believed Mr. Spence would make for passing a catheter would be two guineas. I believed Mr. Spence would very likely have charged five guineas in such a case as this, owing to the condition the patient was in, as I had known Mr. Spence charge that amount in a similar case." I am, &c.

Liverpool, October 10. Robert Robertson.

The Origin of Nerve-Force.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I perceive, in your impression of the 7th inst., you speak in approbation of an hypothesis started by Dr. Strachan respecting "the origin of nerve force," in which he suggests that the nerve force resembling a galvanic current is generated in the capillary blood-vessels, carried along the nerve tubes, conducted to the ganglionic centre, and returns to the same place from which it set out.

In my work on "Some of the Obscure Forms of Nervous Affections," published in the year 1858, and written during the three previous years, I give, in an Introduction, my ideas of the "generation and distribution of nerve force." These views appear to have been too novel and startling for the Profession at that time, as although the work was very favourably criticised and spoken of by the Medical press, still the ideas on the generation of nerve-force by blood-corpuscles in the capillaries were not acknowledged; and although I have continually, in my writings in the *Electrician* and elsewhere, advocated the same views, I do not think that they are generally known.

I have no wish to detract from the credit due to Dr. Strachan for his observations, of which, by the way, I am ignorant; still, at the same time, I must uphold my right to be the original expounder of the statement that "the nerve-force is generated in the capillary circulation, carried to the nervous centres by the sympathetic system, and affords the primary current upon which, by induction, the motor and sensory nerves derive their secondary currents." The recent investigations of Dr. Beale upon the histology of the nerve-cells, in which he demonstrates the fact of each cell giving off two tubules,—the one from the interior, the other from the exterior of the cell, the latter winding round and round the former—bears out in a remarkable manner my own electrical observations upon "nerve force."

I trust you will allow me the opportunity of substantiating my claim to the priority of observation in regard to this very interesting and important question. I am, &c.

70, Brook-street, October 9. Harry Lobb.

COMMUNICATIONS have been received from—

Dr. T. C. Allbutt; M.D., M.R.C.S. Eng.; Apothecaries' Hall; Messrs. Cassell, Petter, and Galpin; Messrs. Gilbey; Mr. J. Arnold; Mr. John Marshall; Pathological Society; Royal Medical and Chirurgical Society; Dr. Charles West; Western Medical and Surgical Society of London; Mr. Sydney Johnstone; Mr. Harry Lobb; Mr. F. P. Staples; Medical Society of London; Dr. Edward Parson; Dr. Thomas Downie; Dr. J. Vinen; Pharmaceutical Society; T. R.; Mr. R. Oke Clark; Mr. R. Robertson; Medical Registration Office; Dr. Routh; Dr. W. D. Moore; Dr. Fotherby.

BOOKS RECEIVED.

Special Report on the Prevention of Cholera. By the Medical Officer of Health for Glasgow to the Board of Police. August, 1865.

*** Relates, as might be anticipated, to the supply of pure water to the poor population of the city, and the enforcement of measures for promoting cleanliness.

A Glance at the Progress of Medical Science and at some Phases of Medical Faith. By E. Ellis, M.D. London: John Churchill and Sons.

*** A popular lecture, very good in its way, and calculated to explain to the public circumstances in the routine of practice which occasionally puzzle them.

London Vestries and their Sanitary Work: are they willing and able to do it? and may they be trusted in the face of a severe epidemic? By W. Rendle. London: John Churchill and Sons.

*** With regard to the questions which Mr. Rendle propounds, the answer is tolerably clear. The vestries are not to be trusted; and it is to be hoped that one of the first things done when next Parliament meets will be to relieve them of duties which they only make a pretence of performing, and which can only be discharged by such authorities as are alive to the necessity of energetic action, and who will provide ample funds and employ a sufficient staff of qualified officers for the accomplishment of the work.

A Course of Lectures on Hydrophobia: its History, Pathology, and Treatment. By T. C. Shinkwin, M.D. Dublin: Thomas Day.

*** These lectures, compiled from manuscript notes of the late Dr. T. S. Holland, of Cork, contain, in a summarised form, most that is known of this disease.

Headaches: their Causes and their Cure. By Henry G. Wright, M.D. Fourth Edition. London: John Churchill and Sons.

*** We have merely to announce this.

On the Treatment of Enlarged Tonsils at any Period of Life without the Operation of Excision. By Wm. J. Smith, M.B. London: R. Hardwicke.

*** The favourite remedy of the author is cauterisation by potassa fusa.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 7, 1865.

BIRTHS.

Births of Boys, 1042; Girls, 1016; Total, 2058.
Average of 10 corresponding weeks, 1855-64, 1683·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	592	601	1193
Average of the ten years 1855-64	562·3	536·4	1099·2
Average corrected to increased population..	..	..	1209
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	1	3	8	2	6	6	4
North ..	618,210	4	6	12	..	6	12	24
Central ..	378,058	1	4	8	1	3	5	17
East ..	571,158	1	7	11	1	4	17	11
South ..	773,175	..	7	19	1	14	9	27
Total ..	2,803,989	7	27	58	5	33	49	83

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·874 in.
Mean temperature	56·5
Highest point of thermometer	71·7
Lowest point of thermometer	40·3
Mean dew-point temperature	49·9
General direction of wind	Calm & ESE
Whole amount of rain in the week	0·00 in.

ANALYSIS OF THE METROPOLITAN WATERS FOR SEPTEMBER, 1865.

The following is the Return from the Metropolitan Association of Medical Officers of Health of the Quality of the London Waters for the month of September:—

	Total Solid Matter per Imperial Gallon.	Loss by Ignition.(a)	Oxydisable Organic Matter.(b)
Thames Water Companies.	Grains.	Grains.	Grains.
Grand Junction . . .	16·8	0·84	0·48
West Middlesex . . .	16·3	0·82	0·56
Southwark and Vauxhall. .	16·5	0·99	0·56
Chelsea	17·0	0·85	0·42
Lambeth	17·7	1·06	0·56
Other Companies.			
Kent	25·0	1·50	0·24
New River.	15·3	0·61	0·40
East London	19·0	1·52	0·40

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxydisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a tube two feet in length.

APPOINTMENTS FOR THE WEEK.

October 14. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

16. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.

Medical Society of London, 8 p.m. Dr. Murchison, "On Hydatids of the Liver."

17. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.

Pathological Society, 8 p.m. Meeting.

18. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

Hunterian Society, 8 p.m. Dr. Barnes, "Chorea in Pregnancy."

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

20. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

Western Medical and Surgical Society, 8 p.m. Inaugural Meeting, Dr. Morell Mackenzie, "Cases of Spurious Diphtheria."

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HUBBUCK'S PURE OXIDE OF ZINC.

See Pharmaceutical Journal of May 1, 1856.

Sold Wholesale in Stamped Boxes of 14 lbs. each, by the following London Druggists:—

Messrs. Baiss, Brothers, and Co.
,, Barron, Harvey, and Co.
,, Burgoyne and Burbidges.
,, Cox, Gould, and Co.
,, Geo. Curling and Co.

Messrs. Drew, Barron, and Co.
,, Evans, Lescher, and Evans.
,, Samuel Foulger and Sons.
,, Hearon, McCulloch, and Squire.
,, Herrings and Co.

Messrs. Hodgkinson, Luckombe, and King.
,, Hodgkinsons, Tonge, and Stead.
,, Langtons, Scott, and Co.
,, Preston and Sons.
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OIL AND POWDER OF THE SEEDS OF THE ARGEMONE MEXICANA,

Proposed by W. Hamilton, M.B., as a remedy for IRRITATION of the INTESTINAL CANAL and ASIATIC CHOLERA.
Vide Pharmaceutical Journal.

The above preparations may now be obtained from

MORSON & SON, 31, 33, & 124, SOUTHAMPTON-ROW, LONDON, W.C.

PEPSINE, or POUDRE NUTRITIVE.

Prepared by THOMAS MORSON & SON, Pharmaceutical Chemists, 31, 33, and 124, Southampton-row, London, W.C.

Pepsine Wine and Pepsine Porci, in bulk and bottles.

These Preparations, bearing the following Trade-mark, but not otherwise, will be guaranteed to possess the full efficacy of the digestive principle:—

Agents:—Drew, Hayward, & Barron; Gale & Co.; Hodgkinson, Tonge, & Stead; B. Yates & Co.; Westwood & Hopkins.

Pulvis Jacobi ver, Newbery,

FRAS. NEWBERY & SONS, 45, ST. PAUL'S CHURCHYARD.

Prices for Dispensing, 1 oz., 9s.; ¼ oz., 3s. 4d.

A SUPERIOR FORM OF BARON LIEBIG'S FOOD,

SPECIALLY PREPARED BY

SAVORY & MOORE,

Chemists to the Queen, H.R.H. the Prince of Wales, and his Majesty the King of the Belgians.

SAVORY & MOORE'S FOOD FOR INFANTS

TRADE MARK.

This food contains the same ingredients and in the same proportions as recommended by BARON LIEBIG; but, owing to the mode of preparation, NO BOILING or STRAINING is required.—*Lancet, July* 29, 1865.

REPORT UPON SAVORY AND MOORE'S FOOD FOR INFANTS AND INVALIDS, BY DR. HASSALL.

"I have subjected the food prepared by Messrs. Savory and Moore to full examination and analysis, in both its uncooked and cooked conditions, and I find it to be eminently adapted for the food of infants and invalids, being highly nourishing, and, what is of the greatest consequence, of easy digestibility. It is essential that the instructions given for its preparation should be closely followed, the conversion of the starch into dextrine and glucose, whereby the food is rendered so much more digestible, depending upon the action of the diastase contained in the malt flour—one of the constituents of Liebig's food. The activity of this principle is destroyed at a temperature of about 150° Fahrenheit; it is, therefore, very necessary that the heat employed in the preparation of the food should never exceed that degree; indeed, it is best not to allow it to pass beyond 148° Fahrenheit, a temperature amply sufficient to break up the starch corpuscles, as may be readily seen on microscopic examination, and, therefore, to cook the food sufficiently without having recourse to boiling.

"ARTHUR HILL HASSALL, M.D. Lond.,
"Author of 'Food and its Adulteration;' Senior Physician to the Royal Free Hospital."

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ORIGINAL LECTURES.

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS. (a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College and of University College Hospital.

LECTURE X.

DIABETES MELLITUS—GLUCOSURIA—SACCHARINE URINE—ITS NATURE AND RATIONAL TREATMENT.

(Continued from page 414.)

Pathology.

On November 13, 1859, a man was brought to University College Hospital in a state of insensibility, with slow, stertorous respiration, a weak pulse, and contracted pupils. As the patient died without ever regaining consciousness, the only history of the case that could be obtained was that he was seen suddenly to fall down in the street, and when picked up was in a state of complete insensibility. At the autopsy, the only lesion found was a clot encircling the medulla oblongata and extending upwards into the pons Varolii, its situation being apparently such as to have caused considerable pressure on the fourth ventricle and roots of the pneumogastric nerves. The presence of sugar in the urine was sought for, and in this case was demonstrated without the least difficulty. Although no quantitative analysis was made, there can be no doubt that the sugar was abundant, as the urine became quite brown on being boiled with potash, and freely reduced the oxide of copper. The flow of urine must have been also copious, as the bladder was found greatly distended by it after death. The substance of the liver contained a large amount of sugar, and even the brain itself was impregnated with the saccharine matter, for an aqueous decoction yielded all the reactions in a very decided manner. Now, unless we are to suppose that this patient had been previously suffering from diabetes, of which his body presented none of the external signs, one is led to the conclusion that the saccharine urine was the direct result of the pressure of the clot on the fourth ventricle.

Another case of diabetes from external injury to the head may be mentioned, as it, like the one already cited, affords an example of spontaneous cure. The urine of a woman, under the care of Dr. Todd, who had hemiplegia and rigidity of the right side, in consequence of falling down stairs upon her head, when examined on the 20th day after the injury was found to be of a specific gravity of 1021, and to contain a small quantity of sugar, which gradually disappeared as the patient got well.

Several years ago, Dr. Goolden had a case of a similar kind in a railway stoker who was struck on the occiput by the handle of a crane, and remained diabetic during his illness. (b) Some nerve lesions give rise to a diabetes of a still more permanent character, as the following case will show. Dr. Ramsbotham, of Amwell-street, informs me that when on a visit to a Medical friend in Kent a year or two ago, he found him in a fair state of health, with the exception of feeling extreme thirst, and suffering from great languor. Suspecting diabetes, he examined the urine, and found it to be above the average in quantity, of a specific gravity of 1044, and loaded with sugar. The gentleman had never suspected that he was diabetic; it is therefore impossible to say how long this state of matters had existed. The important part in the history of the case is, that four or five years previously he had been thrown from a horse, and in some way or other got his head forcibly bent forwards, and for a length of time afterwards he could not turn it to either side without great pain; at the same time both the senses of smelling and hearing were blunted. The last report Dr. Ramsbotham had of the case was that "the diabetic symptoms were ameliorated, or at any rate, had ceased to be a source of annoyance."

While calling attention to these cases of diabetes, the result of cerebral lesion and disease, I must not omit to mention that an inordinate flow of urine may follow upon concussion of the brain without being associated with the presence of sugar. An interesting case of this kind was observed in M. Moutard-Martin's wards, in which, after a concussion of the brain, followed by hemiplegia, the patient suffered from extraordinary polydipsia. Under the influence of a seton, the cerebral symptoms amended and the polydipsia entirely disappeared. (c)

As cases of polydipsia are not common, and some authors have even entirely doubted their existence, I may mention an interesting case related by Dr. Watson:—A boy, aged 11 years, who was very thin, but not unhealthy looking, was troubled with thirst and frequent micturition, passing daily nine or ten pints (180 to 200 ounces) of pale dilute urine, of a specific gravity of 1002—sometimes, indeed, scarcely heavier than distilled water. Every remedy was tried, but he left the Hospital no better than when he entered it. Even when his drink was limited to a pint and a-half, he still passed ten and a-half pints of urine. (d)

In a case of my own, a man, aged 57, passed, on an average, eight pints (4960 c.c.) of urine of a specific gravity of 1010 in twenty-four hours, the daily average of urea being 70 grammes (1085 grains). Notwithstanding that the patient passed so much urine, he only drank about half that quantity of liquid, and, strange to say, although he had an exceedingly dry skin, he never complained of thirst. The polydipsia had lasted three years, and during that time he lost forty-two pounds in weight. No sugar was ever detected in his urine.

Cerebral disease—not consequent on injury—may also be productive of saccharine urine. Thus, for example, epilepsy is occasionally accompanied by diabetes.

In a case of this kind which occurred in the Hospital for the Epileptic and Paralytic, under the care of Dr. Brown-Séquard, the pons Varolii and calamus scriptorius of the fourth ventricle were found diseased. (e) The man, aged 58, whose urine was of a specific gravity of 1037, and "contained a good deal of sugar." Had increased sexual desire before death.

A short time since I examined the urine in a case of Dr. Hughlings Jackson's, in which, with disease in the near neighbourhood of the apex of the calamus scriptorius, there was for several months sugar in the urine.

M. Luys related to the Paris Anatomical Society a case of diabetes which lasted over three or four years. At the autopsy the anterior wall of the fourth ventricle was found highly vascular and its consistence notably diminished, very slight scraping bringing off a gelatinous pulp of a brownish yellow colour, the ventricle exhibited the colour very remarkably at certain spots. The lesion consisted in the molecular destruction of the histological elements, and their *débris*, loaded with yellowish granulations, gave rise to this peculiar colour. This lesion may be regarded as exactly corresponding to the traumatic one produced by the experimental physiologist which leads to an exaggeration of the glucogenic function of the liver and the consequent passage of sugar into the urine. (f)

In other cases of cerebral disease diabetes also occurs. Thus, Laudet (g) mentions the following four cases in which he observed it. The first is that of a woman, aged 32, who while pregnant was affected with the loss of vision of the left eye, without paralysis. She at the same time suffered from vomiting and headaches, and on one occasion had symptoms of coma accompanied by paralysis of the third and fifth pair of cerebral nerves. These symptoms were accompanied with great thirst and the other signs of diabetes mellitus. Under the administration of iodide of potassium the paralysis and diabetes diminished.

The second was that of a woman, aged 53, suffering from hemiplegia and epilepsy, supposed to have originated in apoplexy. Two years later diabetes appeared, and in one year more also albuminuria.

The third was that of a woman, aged 60, suffering from hemiplegia of the left side. In eight months' time she had great thirst consequent upon an attack of diabetes. This was followed by gangrene of the right foot, from which she died.

The fourth was that of another woman, aged 39, who in the sixth month of gestation became paralysed, with convulsions. Gradually these disappeared, and only slight swimming in the head remained. Six years afterwards she was found to be diabetic. This patient ultimately died of small-pox. (h)

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—ED. *Med. Times and Gaz.*

(b) *Medical Times and Gazette*, May 15, 1858.

(c) *Gazette des Hôp.*, No. 18.

(d) Lect. on the Practice of Physic, vol. ii., p. 611.

(e) Lockhart Clarke in Beale's *Archiv.*, vol. iv., p. 146.

(f) *Bulletin* de la Soc. Anatom., vol. v., p. 219.

(g) Acad. des Sciences, March 2, 1857.

(h) *Gazette Médicale*, March 14, 1857. For some other cases resulting from cerebral lesions and disease, see *Gazette Médicale de Paris*, March 20, 1858.

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Over-mental exertion I have put among the causes of saccharine urine. An interesting example of this kind has recently fallen under my notice in the case of one of our students. During three weeks of mental excitement, sugar was daily detected in his urine. After a fortnight's rest, it entirely disappeared, but recurred a few days after the resumption of the mental labour, again to disappear almost as soon as the labour was discontinued. I have seen again and again mental labour increase the sugar in diabetic patients. In the case of a clergyman, to which I shall subsequently have occasion to refer, on several occasions, I found the daily amount of sugar double itself when he was preparing for his College examinations, and again gradually return to the usual average almost as soon as they were passed, without either medicine or diet being altered.

Irritation of the pneumogastric or of the sympathetic nerves may give rise to diabetes.

Mr. Nyman relates the case of a Professional gentleman who had long suffered from diabetes mellitus. "After we had examined," he says, "the above-named organs (chest, abdomen, and brain), we commenced the dissection of the nervi vagi. On the left nothing abnormal could be found, but on examining the right, we met in the thorax immediately behind the bifurcation of the bronchii a calculous mass (tumour) the size of a hazel-nut, under the entire trunk of the nerve, and appeared to have exercised considerable pressure upon it." He adds that it is the third time that he has met with this morbid condition in persons who have died from diabetes. The urine of this patient contained 6 or 7 per cent. of sugar.(i)

One case is also recorded in which disease of the sympathetic caused diabetes. In a report of the cases occurring in the Royal Infirmary, Edinburgh, under the care of Dr. Duncan, it is noticed that in one case of diabetes there was found, after death, to be an hypertrophy of the lumbar sympathetic.(k)

Saccharine urine may also arise as the result of indirect nerve irritation; thus it is met with in tumours of the abdominal organs and in pregnancy, in which cases the only way to account for it appears to be by the irritation caused by pressure or otherwise to the abdominal sympathetic, perhaps the cœliac plexus or some of its branches.

For further information regarding the effects of nerve lesions and irritation in the production of diabetes, reference must be made to the physiological views previously expressed.

We now come to the consideration of disorders of the digestive function as a cause of diabetes. And, first of all, we must notice those cases which arise apparently from the use of stimulants. It is a well-known fact that cases of diabetes are much more common in Great Britain than on the Continent, and I, like many others, attribute this to the fact of a much greater quantity of alcoholic drinks being used among us than among other European nations. A few years ago (August, 1861), while on a visit to Munich, in the course of conversation, Dr. Pfeüfer, the Professor of Clinical Medicine, told me that he had only had one case of diabetes in the Hospital during the whole six years he had been in Munich; whereas, while Professor in Heidelberg, although the Hospital was much smaller, he had on an average four or five diabetic cases in the course of each year. Now, the only way to account for this difference was that the Munich Hospital draws its supply from a beer (Bavarian) drinking district, while the Heidelberg Hospital obtains its supply from the wine-drinking districts of the Rhine, etc. And, curious enough, it turned out that even the single case of diabetes Pfeüfer had in Munich, he added, came from the Palatinate.

There can be no difficulty in explaining this action of stimulants, for, as said in the physiological part of the lecture, diabetes can be artificially induced in healthy animals by injecting small quantities of alcohol, ether, chloroform, or even ammonia, into the portal circulation.

For example, I injected 10 cubic centimetres of sulphuric ether diluted with 30 cubic centimetres of water into one of the branches of the portal vein(l) of a full-grown Newfoundland dog half an hour after he had been fed. When he rose up after the operation, he appeared intoxicated, and staggered a little as he moved about. This effect, however, soon disappeared, and in a few hours the animal looked as if nothing had been done to him. In two hours after the injection was made, I passed a catheter into his bladder; but did not obtain sufficient urine to enable me to satisfy myself whether it contained sugar. Some hours afterwards, when I had obtained enough urine, I found that it readily reduced the copper in Barreswil's liquid, thus indicating the presence of saccharine matter. To assure myself that this effect was not due to the presence of any other substance, I boiled the urine in order to coagulate the albumen, of which it contained a little, then evaporated it almost to dryness, dissolved the residue in boiling alcohol, and filtered. The filtered liquid was next evaporated to drive off the alcohol, and an aqueous solution made. On testing the latter for sugar with the sulphate of copper solution, its presence was clearly indicated. Although by this method the existence of saccharine matter was rendered almost undeniable, I still wished to convince myself of its presence by some other means. The urine which the dog passed the next day was therefore fermented, and carbonic acid gas and a trace of alcohol was obtained, thus placing beyond a doubt the existence of sugar.

The following case shows how ammonia has the same power as ether in causing the liver to secrete an abnormal amount of saccharine matter:—

Into the portal vein of a good sized dog in full digestion, I injected fifteen drops of liquor ammoniæ diluted with forty cubic centimetres of water. In twenty hours afterwards, on the animal being killed, his bladder was found enormously distended with urine, which not only reduced the copper in the liquid of Barreswil, but fermented rapidly.

These two experiments are selected from a number of others, some of which I had the honour of performing in 1853 at the College of France before a Commission appointed by the Société de Biologie; but as the results then obtained are identical it is unnecessary to cite them. I cannot refrain from mentioning with what pleasure I perused a communication of Bernard's, entitled "On the Influence of Alcohol and Ether on the Secretions of the Digestive Canal, of the Pancreas, and of the Liver," read before the Société de Biologie.(m) M. Bernard, instead of putting the alcohol and ether, as I had done, directly into the portal vein, introduced them, by means of a long œsophagus tube, into the duodenum of dogs, and allowed them to be absorbed through the walls of the intestine, into the portal circulation. The result, as might *à priori* have been anticipated, was identical with what I had previously obtained. Bernard, in fact, found that six centimetres of alcohol mixed with an equal amount of water, was sufficient to excite the liver to secrete a large quantity of sugar, even while the animal was fasting. With ether employed in a similar manner, he obtained no less successful results.

Rosenstein(n) has still further confirmed the value of the physiological data I obtained, by a very complete series of experiments on the influence of different kinds of drink upon the quantity of sugar, salt, and urea, daily eliminated by a diabetic patient. He performed the experiments, he says, with the view of ascertaining if the conclusions I arrived at were equally applicable to the human subject as to the animals operated upon, and he came to the conclusion that they are identical from his having obtained the following results:—1. Coffee, while it diminished the elimination of urea, increased that of the chloride of sodium and sugar. 2. Bavarian beer had a precisely similar effect. 3. The influence of wine was also similar—namely, to decrease the elimination of urea, and augment that of the chloride of sodium and sugar. Lastly, he found that vinegar exerted a similar influence on the elimination of these substances.

If any one doubt the truth of the assertion that stimulants excite diabetes, let him select a case of that form of the disease arising from excessive formation, and after having carefully estimated the daily amount of sugar eliminated by the patient, allow him to drink a few glasses of wine during the next few days, and watch the result. He will soon find that the ingestion of stimulants is followed by an increase of sugar, and if stimulants increase the amount of saccharine matter in the urine of the diabetic, we can easily understand how their excessive use may induce the disease in individuals *predisposed* to it. The effect of stimulants introduced into the portal circulation also explains to us how a disordered digestion is not unfrequently followed by saccharine urine. I may here relate a curious fact in illustration of the latter remark. In 1852, at a time when I was much occupied in

(i) *Dublin Hosp. Gaz.*, from *Swedish Trans.*, July 15, 1857.

(k) Longet, vol. ii., p. 635.

(l) The experiment is very easily performed by using a sharp-pointed syringe, which can be pushed with facility through the coats of one of the large mesenteric veins. Care must be taken not to employ too much of the stimulant, as it is only up to a certain point that it possesses the power of producing artificial diabetes. If too large a quantity be injected, it seems rather to destroy than increase the glucogenic function.

(n) Virchow's *Archiv.*, 1858, p. 461.

(m) *Gazette Médicale de Paris*, May 10, 1856.

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studying the physiology of diabetes, I regularly tested my urine twice a-day, and on one occasion I found it to contain a small quantity of sugar. On the day in question I had partaken freely of asparagus salad; and, thinking that this might perhaps be the cause of the presence of the sugar, I determined to try the effects of a greater quantity. The following day, the sugar having entirely disappeared from the urine, I again partook of the same kind of salad, both in the morning and afternoon. In the evening, on testing the urine, I found very distinct indications of sugar. As the observation was to me one of great interest, I determined to make some further experiments on the subject, in order to discover how many hours this state of saccharine urine would continue. During two days I ate large quantities of asparagus salad, taking care to have it made as stimulating as possible with vinegar and pepper. The result was far beyond my expectations, for instead of the sugar disappearing from the urine in a few hours after I had ceased partaking of the diet in question, it continued to be secreted during several days, until I at last became very much alarmed lest the disease had been permanently induced. On the evening of the fourth day the sugar had almost entirely disappeared, but on the fifth it returned in increased quantity, so much so that a drop of urine falling on the boot left a distinct white spot. I could not account for the recurrence of the disease, as I had been particularly careful in my diet during the two previous days.

I have mentioned this experiment because it appears to me that if a flow of saccharine urine be induced in a healthy person, as I consider myself to be, by disordering the digestion and over-exciting the liver, it is very probable that a cause insignificant in itself, but operating upon a predisposed constitution, may tend to produce the disease. Sugar in the urine has been found after eating cheese and other indigestible substances. It is worthy of remark that Dr. Jessen, of Dorpat, has rendered horses diabetic by feeding them with hay damaged by moisture. M. Léconte has also found sugar in the urine of dogs after he had administered to them the nitrate of uranium. Several other substances have the same effect, and I have no doubt but that a greater number of stimulants will be afterwards found to produce similar results.

(To be continued.)

ORIGINAL COMMUNICATIONS.

SOME REMARKS UPON THE ADDRESS IN MEDICINE,

DELIVERED BY DR. STOKES AT THE LEAMINGTON MEETING OF THE BRITISH MEDICAL ASSOCIATION FOR 1865.

By C. R. BREE, M.D. Ed., F.L.S.,
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THE address on Medicine delivered by Dr. Stokes at the Leamington meeting of the British Medical Association in August, 1865, may, I think, be fairly taken as a manifesto of the opinions held by some of the most eminent Practitioners and writers of the day. It certainly embodies their opinion upon a subject of momentous importance as regards the safety of the public and the honour and reputation of the Medical Profession.

To the name of Dr. Alison—"the great and good man," now no more—may be added those of Watson, Christison, Copland, Aitken, Wood, and other well-known writers on the "Principles and Practice of Medicine."

It may appear, therefore, somewhat presumptuous that one who is, comparatively speaking, unknown as an authority, should step out from the quiet daily routine of his Professional life to join issue with the honoured names I have mentioned. But for the views which I intend to expound in the following pages I shall lay but slight claim to originality.

I shall merely add the experience, close observation, and habitual thought and reflection of thirty-five years upon the nature and treatment of disease, to the practical results which have been worked out by such men as Virchow, Skoda, Hughes Bennett, Todd, and Beale. In fact, I shall bring the results of men distinguished as physiologists against the opinions of those known in scientific Medicine for their classical pictures of disease, their eloquence upon therapeutics in the lecture-room, their great knowledge of toxicology, or their zeal and skill in compiling and arranging the opinions of others into systematic works on the science and practice of Medicine.

But my object in writing the following lines is not that of placing authority against authority: there is a far higher motive to which I can lay claim—that of speaking on behalf of the community. The subject is one which affects the lives of hundreds of human beings every day that passes. It is emphatically a question of life and death. The Medical Profession is divided in opinion upon the type of disease, and upon the nature and treatment of inflammation; and this division is fraught with danger to those who are the subject of either, because it implies a treatment totally different in every part of it. Both cannot be right; yet both systems are practised with the hope of curing disease or alleviating human suffering.

It is thus that the subject I have from a deep sense of duty determined to have thoroughly discussed has assumed a somewhat controversial character. I do not, however, intend in the following pages to introduce this element at all. I will endeavour to deal with the great question in the same philosophical tone as Dr. Stokes adopted in his address. If I do it much less perfectly, I will at least make what I have to say intelligible to all who will give me a short period of attention. The question especially dwelt upon by Dr. Stokes was the cause of the partial or total disuse of blood-letting in the modern treatment of disease, and especially as a remedy for inflammation. This cause Dr. Stokes maintained was a "change in the type of disease." His arguments, however, involved a question of much higher import to the Practitioner in Medicine—viz., whether the formerly approved treatment of inflammation was founded upon a true pathology. Dr. Stokes argued that it was; that our forefathers were right and justified in the use of the lancet, and that its disuse now was owing to a "change in the type of disease." To these opinions I am directly opposed. I maintain that they can neither of them be supported. That the type of local disease at least has not changed, and that blood-letting is not the treatment for inflammation. I think the question can be conveniently discussed upon these broad grounds, because they will permit it to be illustrated in the widest sense, and there can be no possible doubt as to the full meaning of the question raised.

And first as to the change of type in essential, or local, or special disease.

The statements on this head are made in something like the following form:—"We do not meet in the present day with disease of the same sthenic character which we did thirty or thirty-five years ago;" or, "Disease as it affects the human subject is not so acute in these days as it was thirty or thirty-five years ago. The vital force is less, and the constitution unable to bear antiphlogistic or lowering remedies." Now, it is just as well that we should examine carefully into these statements, and endeavour to separate the truth, if they contain any, from the undoubted effect which many things combined have had in producing the impression on men's minds that the whole is true. This remarkable change is described by Dr. Christison as simply "the transition from the sthenic or phlogistic to the asthenic or adynamic character."(a) But we must remember that the type of fever and other essential diseases has been observed to vary with different epidemics ever since the days of Hippocrates, and therefore this definition does not affect the question in dispute. Dr. Watson refers the change to the effect of the cholera poison on the constitution in the year 1833, forgetting that the cholera was partial in its localities, while the absence of acute disease has been observed in districts in which no cholera ever appeared. Some have attributed the change to the better condition of the people, leaving out of sight the fact that the phenomenon in question is observed in all classes, rich and poor alike. About the period when the assumed change took place we have also opinion of the most diverse character. Since 1832 (Christison) and 1833 (Dr. Watson) down to the respected Medical man whom I met in consultation a few days ago in one of the agricultural villages of our county, who informed me that he "had not been able to bleed any of the labouring population in his district for the last three years, because they did not now get a morsel of meat for two or three months together, while in former days they used to have it two or three times a week." But has there been a recognised gradual change of type in disease essential

(a) "The Changes in the Constitution of Fevers and Inflammations." Edin. 1858.

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or local, since 1832-3? If so, why do we find Dr. Watson, the author of the one theory, advising the antiphlogistic treatment of inflammation in 1843, and Dr. Christison, the authority for the other, leeching and antimonialising Dr. Hughes Bennett himself for inflammation in 1859?

In 1837 I was called upon to attend upwards of 50 cases of continued fever in a village in Suffolk. The disease was marked by symptoms of a highly sthenic type from the commencement. There was the bounding pulse, the hot skin, the *delirium ferox*, and contracted pupil, which in those days the authorities of the schools taught were symptoms of inflamed brain, and required depletion for their treatment. Well, all the first cases I saw I bled, and they all died. Other Medical men were called in to treat the disease, and they bled directly they saw their cases, and they died too. In the mean time I changed my tactics, I took no more blood. I gave salines, and used cold lotions, and gave wine and nourishment early; and all these cases recovered. Now, here we have symptoms of a highly sthenic character, and yet the treatment for sthenia was fatal. No cholera had been ever known in the village and neighbourhood; but the influenza which followed the snow and frost of 1836-7 had swept over the land, and if the wave of epidemic influence can so modify the organic constitution as to alter the type of disease to this and a similar visitation in 1833, may that influence, I think, be more fairly attributed than to the partial attack of cholera in 1833 and 1848.

It is remarkable also that the inflammatory symptoms which attended the influenza of 1837 did not give way to bleeding—in fact, all the cases that come under my observation in which bleeding was practised in that epidemic did not do well either at the time or afterwards.

But the epidemics of cholera and influenza passed away; and still the Medical mind did not recognise a change of type in disease, as the works of Copland, Watson, Wood, Christison, and Graves will fully testify. Whence did the first warning sound come? I believe the intimation that bleeding might be injurious even in the treatment of inflammation was first practically brought before the Profession by Dr. Dickson, of Cheltenham, in a work termed the "Fallacies of the Art of Physic," published in 1836. This work was not received well by the Profession. I never read it, and, in fact, have been prejudiced against it from the unfortunate style in which it was written; but it did undoubtedly contain the then startling proposition that acute disease could be more successfully treated by support than depletion. That greatest of all modern Medical heresies, homœopathy, was also about this time making way among the dissenters in Medicine, and, among so much that is false, it contained the one germ of truth—that inflammation could be treated and cured without the loss of blood. From this time down to the present, thinking men have noticed a change, not so much in disease as in the opinions of Medical men. How well do we remember the effect on the Medical world produced by the later productions of the learned translator of Laennec, the editor of the first Medical periodical of its day—Dr. Forbes. But even in the latter days of Forbes it was only here and there that you could find any one who talked about a change of type. It was only when Dr. Todd treated acute disease with a large amount of stimulants, and Dr. Hughes Bennett taught the doctrine that "bleeding was not the treatment for inflammation," that the change in the Medical mind was complete, and we were asked to yield consent to the dogma "that there are waves of time through which the stenic and asthenic character of disease prevail in succession, and that we are at present living in one of its adynamic phases."—(Watson, Prac. of Physic.) In other words, I believe that the doctrine of a change of type in disease has only been quite recently seriously entertained by those who hold it; and that the great majority of Practitioners have been driven to a change in the treatment of acute disease rather from the pressure of startling facts which have come from men of high authority and standing in the Profession than from any settled conviction of their own either as to a change of type or an absence of disease in its sthenic form.

But let me have an answer to the question,—Do the majority of Medical men assent to either or both of the above conditions? Do the majority even of Medical men adopt the non-blood-letting system in the treatment of inflammation?

Within the last week I have been called into consultation in a case of pneumonia in a young person in a country district, who had been treated just as I should have treated the case thirty years ago by leeching, mercury, and antimony.(b) Within the same period of time I asked a student of one of the largest Hospitals in London what opinion he had formed from the practice he had seen upon the treatment of acute disease. Mark his answer,—"Well, I really don't know. I have seen as many cases of erysipelas get well that were bled and purged, etc., as I have of those that were treated with stimulants and support."

Let us turn for a moment to the latest writer on inflammation; an author who may be said to have summed up almost all that we know in Medicine down to the date of his work.

Dr. Aitken ("Science and Practice of Medicine," 3rd ed., p. 156) writes:—"The treatment" of inflammation "embraces, 1. Antiphlogistic regimen; 2. Antiphlogistic remedies, means for reducing the quantity and altering the condition of the blood."

The regimen consists of sparing allowance of non-nutritious diet, etc. The remedies comprehend blood-letting, purgatives, antimonials, mercurials, opium, alkalies, and saline drugs; but "the most important and the most efficient of these remedies is undoubtedly blood-letting."

But Dr. Aitken follows this statement by a caution "that it is not every case which requires or warrants the abstraction of blood. It is a spoliative remedy, powerful for good or evil."

Now, I ask how are we to reconcile the experience of my friend the Hospital pupil, or the very clear statement of Aitken in 1865, with a belief in a "change of the type of disease?"

I can readily understand the inference that the cases of erysipelas which were bled and purged might have got well if treated like those which were supported; and I can also understand how it is possible that all cases of inflammation might do better if treated without bloodletting; but I cannot understand how a change in the type of disease should affect A and not B; neither can I reconcile the fact that we are "passing through the adynamic phase" of the typical wave; or the affirmation by Dr. Stokes that we must, in the words of Allison, "accept the change of type as an ultimate fact in the history of disease" with the principle of treatment laid down by Dr. Aitken and other writers on the theory and practice of our art.

For what does this "change of type" mean? Its believers are not at all equivocal on this point. It means a condition which will not bear the loss of blood or strength in the treatment of essential or local disease. But it implies, as Dr. Bennett has well observed, much more than this—viz., a diminution of vital power and an alteration in the physical condition of the heart. It implies a condition, in fact, which forbids the use of the very treatment recommended by the "authorities" who hold the doctrine!

Now this is an inconsistency incompatible with a true philosophical knowledge of the science of Medicine, and, were it not fraught with danger, might simply be pointed out and left to the just condemnation of every reflecting and thinking member of the Profession.

But it must be remembered that Dr. Hughes Bennett, the Professor of Clinical Medicine in the University of Edinburgh,—a man of deep research, an accomplished pathologist, and a singularly original and acute thinker,—has offered an explanation which dispenses with the theory of a change of type altogether, and yet leaves those who believe it to retain their opinion without affecting his views at all.

Dr. Bennett has propounded a theory of inflammation which stands alone in being consistent with every known fact or event connected with the disease, and against which no objections, or arguments, or facts worth the paper on which they have been written have ever yet been urged. I proceed, therefore to consider, secondly, *The scientific basis upon which the modern analeptic treatment of acute disease is founded, and the influence which its success has had in the formation of a theory of a change of type.* And the first thing I have to remark is to express my regret that a man of Dr. Stokes's position and real eminence among Medical men should, in treating this question upon an occasion like the Leamington meeting, have not only utterly ignored Dr. Bennett's theory of inflammation, but entirely misunderstood the pathological views he holds.

Dr. Stokes says:—"Dr. Bennett traces the changes in practice," . . and his own "success in the treatment which has reduced the mortality of pneumonia from 1 in 3 to 1 in 36 in uncomplicated cases" . . "to be the improvements in

(b) A second case has fallen under my notice since this was written. I did not see it; but it terminated fatally.

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diagnosis, on the one hand, and the adoption of a practice founded on the cellular pathology (of Virchow) on the other."

I will venture to say that no greater mistake as to Dr. Bennett's views than this could possibly be made, as Dr. Stokes will find if he will refer to his lectures published in the *Lancet* for 1863. Dr. Bennett not only ignores the attempt to explain the phenomena of inflammation by the cellular pathology of Virchow, but he brings all the force of his powerful reasoning against it, as any one will well remember who heard him lecture upon the subject in 1859.(c)

Dr. Bennett believes that the essential character of inflammation consists in a molecular exudation from the blood. That this exudation becomes converted into pus-cells by a process of life, and that this product so changed is either coughed up, or again dissolved, absorbed by the blood, and carried out of the system by the urine. And he further contends that the so-called inflammatory fever—the bounding pulse, the hot skin, the high-coloured urine—is produced by the efforts of Nature in getting rid of this exudation. And upon this arises his beautiful theory, that the real mission of the Physician is to assist, not pervert, Nature in her conservative process, and that this object is most readily obtained by an analeptic, and as equally frustrated by an antiphlogistic method. This is simply the real statement of the case. It is very different from the *omnis cellula e cellula* doctrine of Virchow. And it is a sufficient answer to the remarks of Dr. Stokes that, "supposing all that is announced by Dr. Bennett to be established, still up to the present time it would give to the healing art only indirect assistance."

I need not go into the arguments by which Dr. Bennett has, I think, conclusively established the truth of his theory. They are open to the Profession in his own words, and I especially recommend them to the careful study of Dr. Stokes.

Dr. Stokes throws doubt upon the genuine character of Dr. Bennett's cases of pneumonia, and hence has raised an argument against the value of his statistics.

I think this is hardly generous. I know it is most unjust. From November, 1858, to August, in 1859, I had the opportunity of seeing Dr. Bennett's practice in the Royal Infirmary of Edinburgh. Now, the cases which I saw were not "aborted fevers," but genuine cases of inflammation of one or both lungs, sometimes attended with symptoms of a highly sthenic character. But every case treated upon the analeptic system recovered. Since I have been attached to the Hospital at Colchester (six years), I have never, either in public or private consulting practice, advised the loss of blood in any disease. Never, indeed, have I used what is called the antiphlogistic treatment; and I have been guided in this practice not so much from the absence of acute or sthenic symptoms, as because I believe that Dr. Bennett's theory is true. Not that I do not hold that the type of essential disease does not vary, but because I believe the ultimate phenomena of inflammation are the same now as they were a hundred or a thousand years ago.

But Dr. Stokes remarks that the theory of Bennett is a reflection upon the eminent men who taught and practised so differently thirty, forty, or fifty years ago. I never read or heard of an argument more untenable than this. If carried out to its justifiable limits, it would stamp every improvement in science as untrue, because our forefathers, who were men of education and talent, had not been fortunate enough to work it out in their day. No one doubts the ability, the genius, or the indomitable industry of Dr. Armstrong; but we all know full well that in the latter days of his too-short life he regretted that he had used the lancet so freely in the treatment of fever. The discovery of leucocythemia by Dr. Bennett, or the embolic disease of the retinal artery by the ophthalmoscope, is surely no reflection upon those Practitioners who had previously failed to separate the one from ordinary spanæmia or the other from disease of the brain. No educated Medical man in the present day will attempt to support the old doctrine of *dolor., calor., rubior., tumor.*, as a correct definition of inflammation; and yet who would try to detract from the real fame of Cullen or his successors because they acted up to the knowledge of their day? In fact, all progress would be at an end were the argument to prevail that new discoveries were not true, or improvements in practice tenable, because they reflected upon the want of foresight of those really great men who have held and taught opposite doctrines.

I claim, therefore, upon this all-important subject a fair examination of Dr. Bennett's theory of inflammation, for without it the cause of his success in the treatment of pneumonia would be unintelligible, while if regarded in the light of a sound induction, it explains all that would otherwise appear obscure.

One of the great difficulties in forming a correct theory of inflammation arises from the palpable errors of the old pathologists. The barbarous and unmeaning term antiphlogistic is ever before the mind of those who have been taught that inflammation is something which burns and necessarily destroys; and it requires some effort to make students of the Cullen school believe that the effusion of lymph is not an event, instead of the actual phenomenon itself. The altered nutrition, the stasis, the exudation, are phases of one abnormal condition, according to Bennett's theory; while in that of the generally received doctrine as taught in the schools, the two first stand in the relation of cause, the last of effect. The phlogistic theory, if I may use the term in reference to the old doctrine of inflammation, has had its day; it is the remnant of a barbarous and uncultivated age. It has been displaced for ever by the researches of the histologist, the application of chemistry to the analysis of the fluids and solids of the human body, the introduction of the microscope into the closet of the physiologist, and to the united efforts of inquiring and enlightened men towards the establishment of a true pathology and a rational and philosophical treatment of disease.

This is the advancement which I claim for the improved system, which Dr. Stokes believes is explained by a "change in the type of disease." It is the gradual progress of this knowledge, and the well-known effects upon the popular mind of the success of all great movements, which I believe is the foundation of that curious psychological error which has drawn away from the minds of the great mass of working Medical men the true meaning of the changes they see. Accustomed to give wine and beef-tea in a low condition of the system, they put down all such cases as are benefited thereby to an actual asthenic condition; and hence we have doctrines of a change in type in even local diseases, and are assured that we are passing through the adynamic phase of a great wave which at one time gives vital force, at another takes it away. Hence we have learned men writing books and teaching in schools that antiphlogistic measures are to be used in the very diseases which we are told by the same learned men have undergone a change from the sthenic to the asthenic condition. Hence we have students who really do not know whether they are to bleed and purge, or give wine and support in the same disease. And all this is done in the name of Philosophy, who is supposed to be looking down upon our efforts to raise the Science of Medicine—who smiles with approval upon the child of genius, and talent, and industry, and whose great name we invoke when we say that we are endeavouring to diminish human suffering and to smooth the pillow of the dying man.

Colchester.

(c) See lectures in *Lancet*, 1863.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

BRONZING OF THE SKIN FOR SEVEN YEARS—DEATH—AUTOPSY—DISEASE OF THE SUPRA-RENAL CAPSULES.

(Under the care of Dr. GULL.)

The great interest of the following case is the long duration of the disease and the fact that the disease of the supra-renal capsules was predicted five years before death. No doubt whatever was manifested before the autopsy that there would be found a certain kind of disease of the capsules. Whatever relation there may be betwixt bronzing of the skin, or rather the disease of which bronzing of the skin is the most striking feature, and the disease of the capsules, it is a fact that from the existence of the one the other is often correctly predicted.

William J. was admitted under Dr. Gull's care, September 26, for morbus Addisonii.

He was first admitted, under Dr. Gull's care, November 22, 1860. The case was then recognised as one of morbus Addisonii. At that time the patient said that the darkening of the

skin had been noticed *two years* before. For several months before his admission it had not increased. He had lost flesh very much; was extremely feeble; complained of pain in his limbs; at one time had sickness every morning. Sometimes his sight was dim after he first rose. He had had hæmoptysis and cough, with puriform expectoration. The physical signs of phthisis were not decided. The face was "of a brownish tinge," and the lips were of a brownish hue at the point where they touched. The upper extremities were paler. The abdomen was very dark. The legs were less dark than the thighs.

After this he was repeatedly admitted into the Hospital. He had a disease of the left foot, which gave him much pain at the time.

He was admitted for the last time September 3, 1865. He was then very brown; the nipples especially were tinged; also, the lower extremities, and particularly the legs. He was not emaciated.

Autopsy by Dr. Hilton Fagge.—The left lung was healthy, except a slight cretaceous nodule. The right lung at the apex was puckered, and contained chalky grains, scattered throughout its tissue. Lower down in the posterior border of the inferior lobe was some recent tubercle, which showed no tendency to break down.

Supra-renal Capsules.—They were small and contracted. The right was firmly adherent to the liver, seeming about to be imbedded in its tissue. It was everywhere hard, and on section showed a quantity of fine white tissue, as well as calcareous matter. The left was so embedded in fat and attached by fibres passing through the fatty tissue that its outline could not be defined. It also formed a hard mass, and contained calcareous matter, which, however, was mixed with a viscid fluid, contained in the interior of the capsule, and which escaped during removal of the organs.

The bones forming the left ankle joint (the tibia and the astragalus), as well as others of the tarsal bones, were soft, and easily cut by the knife. On the section they presented either a yellow (fatty) or a red appearance. None of the joints themselves were found to be in any way diseased. The ankle joint was healthy.

ST. BARTHOLOMEW'S HOSPITAL.

IMPACTION OF A CALCULUS IN THE ANTERIOR WALL OF THE URETHRA, GIVING RISE TO SYMPTOMS OF STONE IN THE BLADDER—DIFFICULTY IN ITS DETECTION WITH AN ORDINARY SOUND—REMOVAL—GOOD RESULT.

(Under the care of Mr. PAGET.)

[Communicated by Mr. F. HOWARD MARSH.]

A BOY, 4 years old, was sent up from the country with the statement that he had been suffering for many months from all the usual symptoms of stone in the bladder; that he had been repeatedly and carefully sounded, but that no stone could be found.

Upon his admission the bladder was searched by means of an ordinary sound, which passed readily without meeting with any obstruction; nothing, however, was found. The child was now kept in bed, that his symptoms might be closely watched. At the end of a week it was clear that, whatever the case might eventually prove to be, everything pointed strongly to the presence of a stone either in the bladder or in some part of the urethra. He was, therefore, again sounded, and still with a negative result. After the lapse of a few days more, as the symptoms remained urgent, Mr. Paget again sounded the boy, selecting, on this occasion, an instrument more sharply curved than those which had before been used. This was arrested in the membranous portion of the urethra, where it struck calculous matter apparently embedded in the anterior wall of the canal. The nature of the case now became clear. A stone had passed from the bladder into the narrow membranous portion of the urethra, where it had lodged, and subsequently so embedded itself (either in a pouch in the anterior wall, or in the depression of an ulcer which had been caused by its presence) that it left the canal clear, and lay concealed, and not to be detected except by a sound of a particular curve. This was, upon subsequent occasions, shown to be the explanation of the difficulty which had occurred; for it was found that the stone could be readily struck with this same sound, although others of a different curve passed it and went easily into the bladder. The stone was removed through an incision in the perineum, as if for median lithotomy. The child made a good recovery.

SEPARATION BY DIRECT VIOLENCE OF A PORTION OF BONE FROM THE ARCH OF THE PUBES AND ITS IMPACTION IN THE ANTERIOR WALL OF THE URETHRA, GIVING RISE TO RETENTION OF URINE, AND OTHER SYMPTOMS OF STRICTURE.

(Under the care of Mr. PAGET.)

R. D., a middle-aged man, while at work in digging the foundation of a house fifteen months ago, was partially buried beneath a mass of falling earth, which struck him on the pelvis and front of the thighs. Retention of urine followed the accident, and had, along with other symptoms of stricture, troubled him from time to time up to the date of his admission. He presented himself at the Hospital for advice respecting a "stricture" from which he had been told he was suffering. On attempting to introduce a No. 6 catheter, Mr. Paget found this was arrested in its passage under the pubic arch by a mass apparently of calculous material lying in the anterior wall of the urethra, and partly projecting into the canal. A few days subsequently the substance was removed through an opening in the perineum made upon a staff which had been passed down to the seat of obstruction. Upon examination the mass proved to be a portion of bone about two-thirds of an inch long and one-third wide, which had become covered with a thick layer of phosphatic deposit, especially on that side which it presented to the urine flowing through the urethra. It was found that no stricture existed. The wound in the perineum soon closed, and the man was discharged apparently cured. As he has not since attended, I am unable to state what was the permanent condition of the urethra.

IMPACTION OF A STONE OF LARGE SIZE IN THE FOSSA NAVICULARIS, PRODUCING SEVERE SYMPTOMS OF ONLY FOUR DAYS' DURATION—REMOVAL.

(Under the care of Mr. PAGET.)

A patient, married, and about 35 years old, recently applied to Mr. Paget on account of pain and swelling of the glans penis, and difficulty of micturition. His symptoms were of four days' duration only, and till within that time he had been conscious of no trouble of any kind in his urethra, or of any symptoms of stone either in the kidneys or the bladder. He was an active person, in the habit of taking strong exercise at cricket and in other ways. Upon examination, it was found that there was a calculus, apparently of considerable size, lying immediately behind the meatus urinarius. This was at once removed. It consisted of a uric acid nucleus thickly coated with phosphates; it was almond-shaped, and measured ten lines in its long, and four in its transverse diameter. When told to what his symptoms had been due, and asked whether he could form an idea as to the time the stone had been lodged in the urethra, the patient persisted in his statement that he had suffered no inconvenience of any kind until within the previous four days. He added that five years before, he fell astride upon a gate over which he was climbing, and bruised the scrotum and body of the penis so severely that he was obliged to lie in bed for a few days, but he had no reason to connect that accident with his present trouble. The case seemed an extraordinary one, whatever explanation of it was attempted. It seemed very strange that so large a body could have been long lodged in the urethra without the patient's knowledge, or without producing urgent symptoms; yet probably this had really occurred, for the patient had felt no recent symptoms, either of the presence of a stone in the bladder, or of its passage down the urethra; on section, the deposit of phosphates was found to be much the thickest on that side of the stone which had been most exposed to the urine; the stone lay deeply embedded in a hollow in the urethral wall, which could hardly have been formed in four days; and it was smeared over with very fetid, cheesy, follicular secretion which had evidently been long retained. The incision of the glans, which it was necessary to make for the removal of the stone, quickly healed, and the patient had no farther trouble.

Mr. Syme has reported a case(a) very similar to this, the brief particulars being that a boy, 18 years old, was struck on the pelvis by a heavy piece of iron machinery. Extravasation of urine and extensive sloughing of the perineum followed, with the separation of a piece of bone at the end of a month. The patient came under Mr. Syme's treatment eight months after the accident, suffering from symptoms of obstruction in the urethra and a perineal fistula, through which the greater

(a) Syme's "Surgery," 1848, p. 66.

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portion of the urine was discharged. It was discovered that there was a tight stricture in the bulbous portion of the urethra, and immediately behind it a large cavity, surrounded with walls of cartilaginous hardness, and containing two portions of exfoliated bone, which together measured two inches in length and one in breadth. These were removed through a free incision made upon a staff on the left side of the perineum. The patient did well.

BIRMINGHAM GENERAL HOSPITAL.

CASES OF PEMPHIGUS URTICARIA AND SHINGLES.

(Under the care of JAS. RUSSELL, M.D.)

THE following case of pemphigus is added as a supplement to other examples of the same disease, published in this Journal on October 29, 1064. Before stating it, however, I would mention the following illustration of vaso-motor neurosis as an addition to the remarks upon that subject which preceded the cases in question:—

A. B., aged 40, has lately begun to suffer from return of epileptic fits, by which she was first temporarily attacked when 19 years of age (four years after the establishment of menstruation). The fits occur chiefly at her menstrual periods, which have been very irregular, the discharge being profuse. Between these severe fits she has suffered, at times daily, from small fits, consisting of very brief unconsciousness, dilated pupils, *pallor*, and general rigidity. Lately, however, on visiting her, I found that these small fits had become infrequent, but that they were replaced by peculiar attacks of *flushes*, described by herself, and amply verified by the observation of a friend who resides with her. In the attack the face and neck become suffused with a deep blush, and subjective elevation of temperature occurs; the suffusion will even reach the fingers. The attacks are of short duration, but of very frequent occurrence, and are attended with a feeling of oppression or suffocation. I was present when one of these attacks occurred: the vascular turgescence of the face and neck was very marked, but passed rapidly away. I could not feel any elevation of temperature in the turgid part. I question if the pupils were at all affected; they were small, she being near the window, but readily dilated when the eyes were closed.

I would note, in passing, the palpable difference as regards the vascular phenomena between these attacks of flushing and the pallor which characterised the small fit; this difference indicates a corresponding distinction between the states of the vaso-motor apparatus in the two cases.

The vascular phenomena in this patient recalled to my mind the description I heard from Dr. Richardson of the effect of nitrite of amyl at the meeting of the British Association at Bath. When inhaled, this agent produced at first rapid elevation of the pulse, violent cardiac pulsation, laboured breathing, and intense injection of the face and eyes, the injection extending over the scalp and down the neck and back. Together with these phenomena there were present both objective and subjective elevation of temperature in the suffused parts. The correctness of these observations was verified, so far as regards the vascular phenomena, by many trials made by members of the Section. This marked effect of the agent upon the capillary system Dr. Richardson was disposed to attribute to reflex action, consequent upon an impression made by the nitrite upon the mucous membrane with which it came in contact, especially upon that of the lungs when inhaled, since he thought that the effect was too rapid to admit of its being produced through the instrumentality of the blood.

The following case of pemphigus, like one of those which I formerly detailed, exhibits very prominently an important pathological element in the case, viz., a disordered condition of the nervous system preceding the outbreak of the eruption—a disorder which, from the nature of its cause, we may be sure was characterised by depressed power, or, to adopt a term lately applied to such a condition, by paresis.

A passage from Dr. H. Jones's work ("Functional Nervous Disorders"), which I read since the publication of my last cases, confirms the probability of the neurotic origin of many of these affections. In speaking of cerebral paresis as produced by heat, Dr. Jones quotes from Sir Ranald Martin the effects of sun-stroke, and notices among the sequelæ, distressing formication, sometimes accompanied by a peculiar and general eruption and desquamation of the skin. Dr. Jones adds:—"The occurrence of eruption in connexion with, and apparently as the result of, cutaneous dysæsthesia is of much interest, and probably may be explained as the result of vaso-motor nerves becoming implicated in the morbid action. It will be remembered that one of the results of division of the sympathetic nerve in some animals is cutaneous eruption. Romberg describes in the same way the development of prurigo from pruritus, or lichenoid eruption from a mere nerve affection. The action of summer heat in promoting the occurrence of lichen urticatus is familiar to many of us."—P. 117.

The present case occurred among the out-patients of the Hospital, and was under the care of Dr. Anderson, who was kind enough to procure for me the particulars:—

E. T., aged 66, widow, washerwoman. Five weeks ago she was seized with burning heat and itching of both heels on each side of the tendo-Achillis. For some days previously she had suffered from headache, to which she is subject; but she does not recollect that she was otherwise in bad health. It appeared, however, that she had been living very hardly for two months, having had little food besides bread and tea; and further, that she had suffered great anxiety from not having heard of her son, who had enlisted. Pain, heat, redness, and itching continued in the part affected for about two days, when there appeared a crop of vesicles about the size of a large pea. The eruption was not followed by relief, owing to the fact that she continued at her employment. When she came to the Hospital the characteristic appearance of the eruption had ceased to exist, but there was considerable inflammation of the skin, which quickly yielded to rest and palliative treatment.

To this case I would add a few particulars of a case of urticaria which I have attended, the exciting cause of which appears to be connected with the state of pregnancy, the vaso-motor excitement being reflected from the uterus. It need scarcely be noticed that the state of utero-gestation is a not infrequent cause of various nervous disorders, among which chorea has been specially observed. In some of these cases, as Dr. Jones has remarked (p. 255), "the morbid impression made upon the encephalon is of a more directly irritating character." In a case of chorea under these circumstances under my care in the Hospital, though the disease was not unilateral, the left side was more affected than the right, and the arms than the legs. The chorea commenced about the third month of gestation, and, though relieved by belladonna, was not cured till the patient had been confined, an event which occurred prematurely. She was a primapara.

A. B., aged 34, suffered after her first pregnancy, six years ago, from very troublesome urticaria. She is now pregnant for the second time. On attaining the fifth month of gestation the eruption again made its appearance, and has continued for nearly a month with very troublesome severity. All parts of the body and limbs are affected, but especially the hips and umbilical region of the abdomen. The eruption occurs in separate and distinct attacks, affecting first one part of the limbs or trunk, then another, quite indiscriminately, and each attack lasts about half an hour, and then the eruption leaves that spot, but may reappear in another and quite remote part.

The first symptom of the paroxysm is intense tingling without any objective phenomena. At one of my visits she pointed to a spot first beginning to suffer. I could distinguish nothing, though I fancied I felt a little irregularity in the cutaneous tissue. After about ten minutes small white elevations appear, generally provoked by free application of the nails, though also appearing quite independently of any outward irritation, but after a somewhat longer interval. With many attacks a copious discharge of limpid urine takes place, as she asserts, with uniform relief to the itching. No alteration in her diet has been attended with any benefit, nor did medicine afford her more than temporary ease. It is to be specially noted, as connected with the neurotic origin of this and similar affections, that she is of a very irritable temperament, and that, like the last patient, she has been subjected to long-continued anxiety resulting from family troubles.

SHINGLES.

Since the preceding cases were prepared for publication, the following case has presented itself among my out-door patients. It affords an instance of another cutaneous malady in which local disorder of innervation has long been recognised as being largely concerned. The neurotic origin of the eruption is clearly indicated in the patient's history—by the protracted nervous prodomata, and by the very severe nervous sequel, whilst the congestive blush remaining in the skin, so singular in its persistence, in its unchanging character, and in its precise limitation, proves that the nervous disorder still involves the cutaneous vessels.

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I would call attention to the presence in this case, also, of causes having a direct tendency to depress the power of the nervous centres.

Shingles followed by Troublesome Nervous Sequelæ.

W. W., aged 49. He was attacked last March with pleurisy, from which his recovery was protracted. During the whole of last year he has suffered from great anxiety and distress: his wife was ill at the same time with himself, and died in May. He has never since had her out of his mind, and constantly dreams about her. He now sheds tears in referring to the subject.

He was attacked with shingles in the beginning of November. The eruption was preceded for fully a week by a severe pain in the region of the right scapula, and in the interscapular region. He had also some pain in the front of the chest. Each of these parts became the site of the subsequent eruption. He describes the pain as sharp and burning, as though a hot plate were laid upon the painful part. With the appearance of the eruption the pain left. The eruption lasted fully a month, and with its disappearance the pain returned, but with greater severity than before, still, however, occupying the same situation. The pain has kept him awake many nights. He describes it as of a burning character, occurring in sudden twitches at short intervals of about five minutes. When most severe, it darted through the shoulder, down the back of the upper arm, and the inside of the forearm into all the fingers. He was at one time quite unable to write; his hand shook, and the attempt to use the arm increased his suffering.

With the return of the pain, on the disappearance of the eruption, the scapular region of the skin became red, and this redness has continued ever since, without having undergone any variation.

He has applied at the Hospital on account of this pain, and at his visit was groaning with it. Over the region of the right scapula is a space of bright red congestion of about the extent of the open hand; it consists of a large number of isolated red patches, of perfectly irregular size and shape, but each patch limited by a sharply-defined border. When pressed by the finger, the redness returns immediately that the pressure is removed. The skin is quite free from thickening. The injected part presents marked elevation of temperature to the hand laid upon it. The patient has rather an injected face; his pupils are small and irritable. The impulse of his heart is very feeble, and the first sound is markedly dull.

Another case of shingles has just presented itself in a very cachectic boy, the subject of confirmed epilepsy.

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Medical Times and Gazette.

SATURDAY, OCTOBER 21.

PROFESSIONAL CHARGES.

As usual at this time of the year, one of our numbers has been, to a great extent, devoted to reporting the proceedings of the British Medical Association; and, as also usual at this time of the year, we feel compelled to ask, What does the British Medical Association do for the Profession? though we own that we ask the question with some fear and trembling, for we shall probably, as a reply, be accused of jealousy, narrow-mindedness, and ignorance. We shall be told of some few things that the Association has done in the some twenty or more years of its existence, and of more things that it has tried to do or thought of doing, and we shall be told also that it is a great, good, and glorious institution. We acknowledge that the Association is very large, and ought to be powerful; that, at a considerable expense to its members, it insures them a very pleasant, and by no means uninstructive, three or four days' holiday in each year, and gives to the Profession at the same time three or four admirable and valuable addresses, and a few excellent papers; and we will not say a word about its *Journal*. The Association has by a large majority affirmed that its *Journal* is an admirable journal, that it cannot do without it, and that it is well worth all that it costs. If the members of the Association do really think their *Journal* worth some two thousand and odd guineas a-year, that is their affair, and—*de gustibus non est disputandum*. This is all, or nearly all, that the Association does. We had forgotten that it has also succeeded in edacing, in we know not how many years, two essays worthy of its Hastings gold medal. Is the work done worthy, in quantity, of such a body? or even in kind? If it has really the vitality and power to which it lays claim, should it not be able to take up with effect some of the many questions of internal rule and polity which are so constantly disturbing us, and concerning which we are so sadly without authoritative precept or guide?

We do not mean to suggest that even the British Medical Association can assume to itself the power to lay down *laws* for the whole Profession on any subject whatever; but that there are many matters frequently causing annoyance, trouble, or scandal within the Profession, and shaming it before the public, concerning which a clear and well-considered utterance from such a body as the Association would have considerable weight and value. With its numbers and organisation, could it not, for instance, without much difficulty, frame some general rules for the conduct of members of the Profession towards each other and towards their patients?—a code of ethics which, though without the force of laws, would be of great value as a guide and standard? Or take another subject,—one which has been very lately prominently forced upon our notice—Professional charges. Might not the Association very usefully and profitably devote some attention and consideration to this matter? No one can have read the case of Irvine *v.* Wilson without wishing that there existed some acknowledged scale of Professional charges, without feeling how invaluable such a standard of reference would be. Is there any insurmountable obstacle to the framing of such a standard if such a large and well-organised body as the British Medical Association would take the matter in hand, and devote time and labour to it? We cannot think so, and we think that by such work, well done, the Association would earn the gratitude and respect of the whole Profession. Of course the task would be neither very easy nor very light, and it would not be possible to draw up a scale of fees which could be invariably, and under all circumstances applicable; no Procrustean scale could be invented. The position of the Practitioner, that of the patient, special relations between the two, special characters of the illness, and so on, must often act as disturbing forces of varying power and action, but still a scale might be framed which would be of great value as a standard and guide of some weight and authority. All men young in practice would, we should think, find it of great use, and probably there is scarcely one among us who would not be very glad at times to be able to refer to such a standard either as a guide or as a support. The Manchester Medico-Ethical Association published a short time ago a "Tariff of Medical Fees for Manchester and its Suburbs," which appears to have been drawn up with much judgment and consideration; it is highly creditable to that body to have grappled with the subject, and the result is an excellent example to the larger association of useful work well done.

Such a scale of Professional charges is most needed for the general Practitioner, but something of the kind would be useful to "Consultants" also. The general rise in prices for house rent, provisions, etc., seriously affects those whose income is

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made up from fees of a fixed amount; and the long distances that have to be travelled from patient to patient in this overgrown and ever-spreading London make the time-honoured fee of one guinea very often a most inadequate remuneration, while mileage is, we suspect, but rarely paid for in London itself. For operations by Consulting Surgeons it would be difficult to average any "tariff" of fees, as the honorarium must vary greatly with the Professional standing and eminence of the operator, but perhaps some sort of a minimum might be agreed upon.

But it is especially for the General Practitioner that a "tariff" is needed. It should undoubtedly be based upon remuneration for time and skill; but the supplying of medicines should also be taken into consideration, for the requisite machinery for making these up and sending them to patients certainly entails not a slight expense on the Practitioner, though the actual cost of drugs may be small. We shall not enter upon the consideration of items, but it appears to us most unjust to suppose that a General Practitioner is not to make a special charge for minor operations, such as the passing of a catheter—a delicate and often difficult matter,—or any other operation making an additional demand upon his time and resources. And it is to be remembered that in these days the General Practitioner is, as a rule, much more fully and highly educated than formerly, and that he now constantly undertakes, single-handed, cases which the Apothecary of old would not have thought of managing without the frequent aid and advice of a Physician or Surgeon. He is, therefore, justly entitled to a different rate of remuneration. This consideration also points to the justice of increasing very often the honorarium of the Physician and Surgeon; for it follows that a much larger proportion of the cases he is called in to are cases of exceptional severity or difficulty, making a larger than ordinary demand upon his time, knowledge, and skill. To some minds it will seem, no doubt, impossible, or at the least sacrilegious, to alter the guinea fee, and we should, perhaps, have agreed with them had the golden guinea of olden time remained itself eternal and immutable; but as it has changed into one pound one shilling, and has further contracted an ugly habit of, at times, dropping its shilling, we cannot regard it as sacred and secured against further change.

We will not now enter more largely on this question, but will content ourselves with thus pointing to a pressing necessity, and with suggesting to the British Medical Association that there is here an opportunity for it to do really good work. And we will repeat what we said when publishing the letter of "A London Surgeon," that we shall be glad to aid in the work by opening our columns to communications on the subject.

DOCTRINES OF MODERN CHEMISTRY.

No. II.

Proportional Numbers.—A proportional number may be found for every substance capable of combining by expressing the ratio in which it does so with standard substance, or with some other whose proportional number has been already determined. There is, however, one circumstance in particular which complicates this proceeding,—*bodies may combine with each other in more than one proportion.* For instance, hydrogen and oxygen will combine in two proportions, so also will carbon and oxygen, while nitrogen and oxygen will even combine in five. However, as enunciated in Dalton's law, the several proportions in which any given elements unite with each other are *multiples or submultiples of each other.* So that although the same body combines with another in different proportions it is quite unnecessary to give it several proportional numbers, for when a number is found expressing one of these proportions the others can always be represented as multiples or submultiples of it. Still, there remains the difficulty to be gotten over,—*which* combination of two elements shall be chosen to furnish the data for determining their proportional numbers.

It is merely the greater convenience of the numbers which result from the choice made that determines which combination it shall be. Let us take, to illustrate this, the determination of what proportional number should be selected for nitrogen, that of hydrogen being unity. We shall see that the number 4·67, as determined by the decomposition of ammonia into 1 part of hydrogen and 4·67 parts of nitrogen, and the one hitherto used by us, is not the best that can be chosen.

If a number of substances of definite nature, containing nitrogen combined with one or more other elements, are examined, it will be found that 4·67 parts of nitrogen are, far more often than not, in union with such parts of the other elements as must be expressed by one, two, or more *thirds* of their proportional numbers; for example, of the proportional number of oxygen, 8; of that of hydrogen, 1; of that of chlorine, 35·5; and so on. Thus, in sal ammoniac we find combined with 4·67 parts of nitrogen 11·83 (that is, one-third of 35·5) parts of chlorine, and 1·33 (that is, four-thirds of 1) part of hydrogen; in nitric acid we find 4·67 parts of nitrogen are in combination with 16 (or twice 8) parts of oxygen, it is true, but with only ·33 (that is, one-third of 1) part of hydrogen; in all the combinations of nitrogen with oxygen alone, except in anhydrous nitrous acid, 4·67 parts of nitrogen are in combination with thirds of 8 parts of oxygen, as in nitrous oxide one-third, nitric oxide two-thirds, peroxide of nitrogen four-thirds, and anhydrous nitric acid five-thirds; and lastly, taking a binary and a quaternary combination of nitrogen with carbon, in cyanogen 4·67 parts of nitrogen are in combination with 4 (that is, four-thirds of 3) parts of carbon; and in urea 4·67 parts of nitrogen are in combination with 2 (that is, two-thirds of three) parts of carbon, with ·67 (that is, two-thirds of 1) part of hydrogen; and with 2·67 (that is, one-third of 8) parts of oxygen. Now, it is evident that if three times 4·67—that is, 14—were taken, instead of 4·67, for the proportional number of nitrogen, all these *thirds* would disappear, or become as many units; while this number is quite as convenient for representing the chemical composition of ammonia and of anhydrous nitrous acid as 4·67; ammonia, for instance, being described as formed of once 14 of nitrogen to thrice 1 of hydrogen, instead of as formed of once 4·67 of nitrogen to once 1 of hydrogen. Instead of the chemical composition of sal ammoniac being expressed, as in the previous part of this article, it will then be stated as once 14 of nitrogen, four times 1 of hydrogen, and once 35·5 of chlorine, and similarly with the other substances formerly mentioned. On the grounds, therefore, of simplicity in numerical representation, the number 14 is decidedly preferable to 4·67 for the combining proportion of nitrogen. Having in this way determined the most useful combining number for every element, we get in the whole of them a series which gives *one* of the proportions in which each element unites with some *other*, the others being always, by the law of multiple proportions, some simple multiples or submultiples of this, and, therefore, unnecessary to represent.

We hope we have not tired our readers with these arithmetical considerations, for such they are, and nothing more. The combining proportions of bodies may be expressed in an infinite number of ways, and the object is only to select the simplest. The numbers familiar to our readers—oxygen 8, hydrogen 1, nitrogen 14, carbon 6, etc.,—admit of but little improvement on this score. And the subject of proportional numbers, after treatment much as that it has here received from us, is, in reality, an exhausted one. With the balance in his hand, and elementary rules of number in his head, the chemist may give to every substance a proportional number, and evince great skill in doing so, but that is all. Technical details become everything; philosophy nothing. To argue as to whether the proportional number of carbon is 3, or 6, or

12, or whether that of oxygen is 4, or 8, or 16, is to debate about *fractions* and *integers*, about *least common measures* and *simple multiples*.

Theory of Atomicity.—It has, however, been found that not only do bodies combine in definite proportions by weight, but that in certain of these proportions they also manifest many analogies in their other chemical and physical properties. This remarkable relation may be expressed in the form of a law—the *atomic theory* of Dalton, divested of hypothesis, and somewhat modified. It is that all bodies have natural weights associated with their other properties; in other words, that every form of matter when taken in certain proportion by weight to another is strikingly related to it in its chemical, thermical, electrical, and other properties.

The consequence of this theory being true is that, one body being taken in any fixed quantity as standard, a series of numbers may be found for all other bodies, to express that in their ratio to unity and to each other, quantities of the bodies they severally belong to, have many properties definitely related to those of the standard substance, and to those of each other. As one of these properties is that of chemical combination, this series of numbers expressing the general natural relations of bodies will also express that of their combining quantities; so that it, and any correct one of combining-proportion numbers will be found to be either identical or so simply related that the one is but a multiple of the other, and therefore easily convertible into it. Of course, since the series of combining-proportion numbers has been selected from many others equally accurate, on motives of accidental value, while that of the other numbers is one derived entirely from the evidence of facts,(a) the former should be converted into the latter, if necessary, as the series of *atomic-proportion* numbers is also one of *combining-proportion* numbers. After studying the *natural proportionality* relations, or, as they are universally called in the language of Dalton, the "atomic" relations of, let us say, nitrogen and hydrogen, we shall find it not merely a matter of choice or convenience whether their "atomic" ratio is treated as 14 to 1 or as 4·67 to 1, but one of chemical philosophy.

In fact, the series of *combining-proportion* numbers must be merged in that of the *atomic-proportion* numbers, and this being the case we might have made less demands upon our readers' time and attention when treating of series of the former kind. But in consequence of the series of proportional numbers used in the old system being unsuited to represent true atomic proportions, though correctly representing combining proportions, some writers admit two series of numbers, one of combining-proportions merely, and another of atomic proportions. This is not only confusing, but wholly unnecessary, for the latter series is also one of combining-proportion numbers, just as much as it is of all the other properties of bodies governed by the theory of atomicity, and is as satisfactory a series of this kind as any other that can be chosen.(b) There is no plea, therefore, for any other being retained in use beyond that of fancy or custom.

(To be continued.)

(a) That is, as to the ratios they express: the choice of the standard to which they refer is arbitrary, as in all other series.

(b) It is true that in the case of two or three elements their atomic-proportion numbers may not give with that of any other element the proportion in which they combine, but some simple multiple or sub-multiple instead; but this is really nothing, for any combining-proportion number will require to be multiplied or divided to express some of the proportions in which its elements combine with others. However, if there are any such known at all, their number is certainly very small. Prof. Allen Miller enumerates nine of them—viz., phosphorus, arsenic, antimony, bismuth, boron, silicon, aluminium, zirconium, and tantalum; but none of these, except, perhaps, the little-known ones, zirconium and tantalum, are really such. For instance, to take one of many similar combinations of phosphorus, in the acid phosphate of soda (or sodium, as we now say) we have 31 parts of phosphorus combined with 23 parts of sodium, and these are their atomic-proportion numbers. Precisely similar remarks may be made concerning arsenic and antimony, while in the *white bismuth* of pharmacy and in several other bodies we find that the atomic-proportion number of bismuth is also its combining-proportion number; in hydrated boracic acid, nitride of boron, and other bodies, the same is true of boron; and in many bodies, the same also of aluminium and of silicon.

THE WEEK.

LORD PALMERSTON.

The death of the great statesman who has so long ruled the policy of England will be felt as a calamity by all classes. Whatever opinion is entertained as to the political principles of his Government, or the political character of some of his colleagues, everywhere and by every one the Prime Minister has been regarded with a warmer feeling even than admiration and esteem. The country was proud of the veteran who at four-score years could rule her own turbulent House of Commons; whose voice was heard with authority in all the conclaves of the civilised world; who would ride to cover fifteen miles on a frosty morning; or propose the bride's health at a wedding breakfast in a speech full of the gallantry, sparkle, and wit of five-and-twenty. We all felt that he was a fine specimen of an Englishman, and that whilst we could show such men our race at least had not degenerated. His high courage, his scorn of meanness and hatred of tyranny, his unflagging good-humour, his fidelity to his colleagues, his perfect self-command, his wonderful tact and his sterling common-sense, with his fine health, his powers of physical endurance, his extraordinary vitality, his exuberant animal spirits, and his ever ready humour made together a representative man such as only the highest races can produce. His loss will be deplored by our Profession equally with the rest of the public. However Professional interests may have suffered at the hands of some of his colleagues, we think we only do him justice by believing that his own feeling on matters relating to our Profession was not reflected in the policy of those who served under him. His health had been visibly declining for many months. During the last session of Parliament he was frequently absent from his place through attacks of gout. His fatal illness was not of long duration. He took cold some days ago, and was seriously ill, but he appeared to be steadily improving up to Tuesday, October 17. On the evening of that day a sudden alteration for the worse took place, and he expired at Brocket Hall, on the morning of Wednesday, the 18th, at a quarter before eleven. He was attended by the President of the College of Physicians, Dr. Protheroe Smith, and Dr. Drage, of Hatfield.

THE PATHOLOGICAL SOCIETY.

The first meeting of the Pathological Society for the Session 1865-66 was held last Tuesday evening, under the presidency of Dr. Peacock. A full report will be found in to-day's impression. This was the largest meeting we have seen for at least five years, with one exception. On that occasion the numbers were swollen simply because there was opposition to the election of the candidate for the presidency proposed by the Council. We may, however, fairly attribute the rather uncomfortable crowding of the rooms of the Society on Tuesday to zeal for pathology. The Society has been gradually increasing in numbers, and if we may judge by the first meeting, there will be much work done this session. Not only was the attendance large, but the specimens were of great interest. The President referred with pardonable pride to the high estimation in which the *Transactions* are held on the Continent. There can be little doubt but that these volumes contain as much honest useful work as any books ever issued from the Medical press. If any one has any good specimen, he cannot find a better means of making it known to the Profession, and a better chance of obtaining valuable information about it, than by exhibiting i at this Society. Or if he wishes to put on record the results of hard work, he will not find a better place than the *Transactions*. Nor is this all. We rarely see as we do at these meetings so many working men of scientific eminence together. We could not advise any Medical stranger of a better way of seeing many of the men who actually do the real hard scien-

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tific work of the Profession than by attending a few of these meetings. It would not glut a certain kind of sensational curiosity so much, perhaps, as seeing some rash and desperate operation, but it would really be more profitable.

It would be almost ungracious not to observe how much the Society is indebted to its succession of able Presidents and Hon. Secretaries. The Council has paid a just tribute to Mr. Arnott, a former President, by electing him an honorary member. We can bear witness to his kind firmness, the excellent way in which he conducted the affairs of the Society. Now that he has retired from London it must be a satisfaction to him to think that the work he did so well is still bearing fruit.

The younger members of the Profession cannot better employ an evening once a fortnight than by attending these meetings. It is not only that they may show specimens and take part in the discussions, but it will tend to take away any narrowness which close work alone might, perhaps, engender in the most honest worker.

AN ALLEGED DOUBLE-HEADED MONSTER.

In the *Times'* report of the police cases in Worship-street, there has appeared on more than one occasion within the last month a list of subscriptions made on behalf of a Mrs. Barlow, who had been fortunate or unfortunate enough to produce a child with two heads. Dr. Ritchie informs us that, moved by curiosity to see this bicephalic monster, he succeeded in finding out its mother, when to his no small disappointment the case resolved itself into one of encephalocele. The tumour is somewhat larger than a child's head at birth, and seems to spring from, or immediately beneath the smaller fontanelle. It is soft, and very partially covered with light hair. It appeared to have a small pedicle; but as the mother would not allow it to be touched, the size of the pedicle could not be carefully ascertained. The child is several weeks old, and seems to thrive. If the encephalocele be pressed convulsions are induced. The father of the child insists that the tumour formed by the protruded brain is in reality a second head. He allows that it has no mouth, but distinctly traces in it the form of an ear.

A RECENT INQUEST AT LEEDS.

A case has recently been investigated at Leeds, which is of considerable interest to the Profession, inasmuch as it demonstrates the peculiar dangers which may surround a Practitioner of Medicine,—even whilst he is obeying the dictates of the most disinterested benevolence and humanity. Dr. Mayne, a well-known Practitioner of Leeds, had befriended a young woman who resided with him as servant, and who possessed a great natural talent for singing, but whose health unfitted her for manual labour, by providing her with the necessary means for obtaining a good musical education. In order to insure himself from pecuniary loss in case of her death, he had effected a policy on her life for £200—a sum much less than he had expended on her. In case of her success in her profession, she had engaged to repay her benefactor the money he had advanced. Whilst visiting her friends at some distance from Leeds the young woman was taken seriously ill with vomiting and purging. The next day Dr. Mayne was telegraphed for. On his arrival he found her very ill, and she desired to be taken home. She was accordingly removed to Leeds, where she was visited and prescribed for by Dr. Mayne and Dr. Hobson. However, she died, her disease being apparently a form of bilious cholera. It will scarcely be believed that a rumour that the young woman had been poisoned spread through the town, and the result was a coroner's inquest. Of course, the verdict—death from natural causes—was a triumphant acquittal of Dr. Mayne, and the only practical effect of the inquiry was the bringing to light a course of benevolent action on his part which has now-a-days but few parallels. We most warmly congratulate Dr. Mayne on the complete answer which the inquest afforded to the sinister allegations which had been made in reference to his conduct. But even such a triumphal refutation was a poor reward for the unmerited annoyance and mental irritation which he must have endured.

THE GREENWICH HOSPITAL INJUSTICE.

The *Army and Navy Gazette* of October 14 has the following paragraph:—

"Inspector-General of Hospitals and Fleets Edward Hilditch, M.D., who was appointed to the Royal Hospital at Greenwich in the month of June, 1861, has been superannuated, and we understand that at present there is no intention to fill up the vacancy caused by his retirement. The bill which was passed through Parliament last Session *provides for the appointment of a certain number of Medical officers* to the new establishment in the event of their services being required; but as the different wards are now comparatively empty, there is no intention, we believe, on the part of the Lords of the Admiralty to avail themselves of the powers."

The bill makes no such provision; but a state paper presented to Parliament by the Junior Lord of the Admiralty, Mr. Childers, foreshadowing the bill, expressly promised to the naval Medical corps that an additional Inspector and Deputy Inspector-General of Hospitals and Fleets should be appointed. It will also be remembered that in the debate in the House of Commons on June 8, 1865, Lord C. Paget argued that, as Medical officers were not to be deprived of the appointments they at that time held, they lost nothing by the Greenwich Hospital scheme, and that, therefore, they could not fairly hope to derive benefit from it. By reason of these promises, out-service pensions were refused to the corps; and to withhold the promotions now due is the latest and the most glaring instance of the *mala fides* charged against the Admiralty. Assuming that a little delay may be excusable in making the new appointments, there can be no excuse for not immediately filling up the vacancy created by the retirement of Dr. Hilditch. But we hold that the whole of the appointments should be at once made, in the interest of the public service, as an encouragement to the whole corps of Medical officers. For what, we may ask, would be said if the Admiralty made it a rule of practice not to promote any officer to the rank of post-captain in the Navy for whom there was no immediate employment? If we are not very much misinformed, one-half the post-captains now on the official list of the Navy would be amply sufficient for the requirements of active service. Thus, promotion is very properly given in the executive branch as a reward for meritorious service, irrespective of employment subsequently, but refused to the Medical branch unless there be an *absolute* necessity for the services of the officer to be promoted. Can the Admiralty be surprised that candidates do not come forward for Assistant-Surgeoncies?

FROM ABROAD.—THE CHOLERA IN PARIS—FAMILY TREATMENT OF THE INSANE.

There can be no doubt that the cholera has prevailed, and still prevails, in an epidemic form, and is even on the increase, in Paris, although the exact extent in which this is the case cannot be ascertained, owing to the obstinacy with which the Government refuses to publish authentic statements. This has caused great irritation in the Profession, not only from the short-sightedness of the policy which it betrays and the exaggerations it may give rise to, but as preventing them properly advising their patients who are either in or are absent from Paris, and who would naturally be guided in their procedures by a faithful report of the exact condition of the different localities. The highest number of admissions into the various Hospitals in a day hitherto met with amounts to 137 cases; but while the cases at the Lariboisière are diminishing in number, those of the Hôtel-Dieu and other Hospitals, and in private practice,

are on the increase. Altogether, it is the opinion at Paris that this epidemic is of a milder character than the earlier ones, bearing most resemblance to that of 1853-54. M. Guerin has recently pressed upon the French Academies the subject of the premonitory diarrhœa, the importance of which he believes is very insufficiently acknowledged by the public and the Profession in France. He dwells at great length upon the great significance attached to it in England, and the preventive measures its recognition has given rise to there. Some persons, however, are of opinion that anything like a house-to-house visitation in Paris would give rise to a general panic, and that seems to be the opinion of the Government, judging by its silence. M. Gibert, without denying the truth of M. Guerin's statements, maintains that there is often an entire absence of preliminary diarrhœa, a fact which he has frequently had the opportunity of verifying at the St. Louis and elsewhere. When it is present, however, he adds, the state of the tongue presents an easy and infallible means of distinguishing it from ordinary bilious or inflammatory diarrhœa, so frequently met with at this season of the year. While in these last forms of diarrhœa the tongue is red, dry, and pointed, it is always found to be in premonitory diarrhœa broad, moist, white, and covered with a mucous paste.

M. Brierre de Boismont recently read at the Academy of Medicine a paper on what he terms the family treatment (*vie de famille*) of the insane; and although he describes in it only what is daily practised in our best private asylums, yet any observations appertaining to the matter from so distinguished and experienced a Physician must be well worthy of notice. He commenced this plan of managing the insane in 1838, and, struck with its success, he has practised it on a much larger scale during the last eighteen years, his three establishments containing 160 patients. Patients who exhibit very different symptoms may, under this family system of treatment, be assembled together with great advantage; such as those suffering from quiet mania, melancholia, hypochondriasm, monomania, dementia, imbecility, and the early stage of general paralysis. Not only does it establish harmony amidst these various patients, but it frequently arrests for years the progress of chronic disease, the asylum losing also much of its repulsive appearance and approaching the character of a private house. The epoch at which it may be commenced varies, some patients being suitable for it from the first, while others have to wait until the acute symptoms have diminished. It must not be expected that the insane themselves will always receive this amelioration with thankfulness, and readily reconcile themselves to this life in common. Some entirely dislike it, and, painfully affected by all attempts at distraction, seek only for solitude, while others of a jealous or selfish disposition cannot bear that the other patients should receive the same amount of attention with themselves. Others, again, as a consequence of the nature of their delusions, require to be treated with a certain degree of severity and engaged in some system of work. Apart from such exceptions, it may be affirmed that this method is an evident means of amelioration, and that in a great number of cases its adoption is crowned with success. The incessant operation of gentle reasoning, counsels, exhortations, encouragements, and even reprimands in the end produces a favourable impression upon the sick mind, and bit by bit the ice melts away.

But to ensure success there must be present the extremest patience, a spirit of justice and firmness, great equality of temper, complete moderation of feeling, and an inexhaustible fund of kindness. The trial is, in fact, a most painful one; for the same complaints, the same sufferings, and the same questions must be continually listened to without impatience. They are endlessly reproduced for whole hours or whole days, intermingled with disagreeable observations, ill-natured sayings, and injurious reflections, often accompanied even with lies, slander, and calumny. This enumeration sufficiently indicates the difficulties of the task, and the temper of men being ill calculated to bend itself to these exigencies, the devotion of women must be appealed to to suitably fulfil such a mission. It is in an asylum, indeed, that woman can render such immense services, some of which, indeed, she alone is competent to. For the application of this portion of moral treatment, however, no very superior qualities are required. An honest and charitable heart will secure success.

M. Brierre insists much on one practical point—viz., that direct reasoning or sentimental emotion will rarely vanquish at the commencement the tenacity of the insane; while "family life," by its own influence and by the counsels which spring from the occasion, exercises over them a softening and diverting action, which in the long run, and sometimes even speedily, shakes the scaffolding of their delusive conceptions. When the disease has lost somewhat of its intensity, the language of reason may be resorted to, and with the greater success, as the continuous presence of the patient allows of the favourable moment being chosen when such language may be understood and may give a better direction to the ideas. M. Brierre also exposes the fallacy of the opinion of those who suppose that this system of treatment could be carried on at the patient's home. The delay in separating him from this is a fertile source of incurability.

THE MEDICAL TIMES & GAZETTE
SPECIAL REPORT
ON THE
EPIDEMIC OF CHOLERA:
WITH A PRACTICAL HISTORY OF THE DISEASE.

Chapter X.

A Choleraic Outbreak at Epping, in Essex.

In our last chapter we were only able to allude, and that in doubtful terms, to an outbreak of disease of the choleraic type near to Epping, in Essex. Epping and its neighbourhood is so well known to every one in connexion with its forest, and has been so long famous amongst metropolitans for its salubrity, that the sudden occurrence of epidemic disease in or near to it created a more than usual impression. We regret to state that the impression was too well grounded, and that, in fact, a singular and very fatal choleraic malady has been presented in and near to Epping.

That nothing might be wanting to make the history of this local outbreak complete, we place before our readers the following facts; they are the results of direct personal inquiry. They may therefore be accepted by the scientific as reliable history for the present and the future:—

The malady first appeared in the house of a farmer by the name of Groombridge, who lived at the village of Thoydon Bois, about two miles from Epping. The first sufferer was Mr. Groombridge himself; his earliest symptoms were not developed at Thoydon, but at Weymouth, whither he had gone for a change. His symptoms at Weymouth were those of diarrhœa, with pain. They occurred severely on Sunday, September 24; but they had been present in a mild form for two or three days previously. He had treated himself, as it would seem successfully, with half-teaspoonful doses of cayenne. He came home comparatively well, and asked for no Medical aid. Mrs. Groombridge had accompanied her husband to Weymouth, and they had, in fact, visited several other watering places, but Weymouth last. On Monday, September 25, they both returned to Thoydon, by way of Southampton, and on the journey home Mrs. Groombridge complained of faintness, followed by slight diarrhœa and a peculiar pain at the stomach, which was increased by motion, and which she attributed to the shaking of the train. On Tuesday, September 26, the Messrs. McNab were called to see Mrs. Groom-

bridge. The symptoms were so slight that it was considered necessary only to give a little rhubarb. On Wednesday, September 27, she was better; but on Thursday, the 28th, the symptoms increased, and rice-water evacuations suddenly commenced, with vomiting. The vomiting was persistent, the extremities were at some times firm, moist, and cool, or actually cold, and at other times soft and natural, or flabby to the touch. She was treated with small doses of calomel and opium —two grains of calomel with half a grain of opium; to which was added an effervescing ammonia saline. The calomel and opium was rejected by the stomach, but the saline was retained and eagerly craved for by the sufferer. The calomel produced dark, slimy evacuations from the bowels, and gave great relief. On Friday, September 29, she was better in the forenoon, lulled, and comfortable; but in the evening a change occurred, and the symptoms became very serious. She slept well, however, during the night, and on Saturday, the 30th, relapsed again. Two grains of calomel were given every three hours, and the effervescing mixture was continued.

While Mrs. Groombridge was in this position, on Saturday, September 30, her daughter, a little girl, 7 years of age, was seized suddenly with the choleraic malady about twelve minutes past ten o'clock in the morning. The first symptoms were those of vomiting and purging, and at twelve o'clock (noon) the evacuations were of the rice-water character, but not frequent. The limbs were soon stony cold, but were not clammy, and the abdomen was burning hot. The face was collapsed, the eyeballs shrunken, the vomiting incessant. Death occurred at eight minutes past seven in the evening—rather less than nine hours after the commencement of the attack.

On this same day, September 30, one of the servants of Mr. Groombridge, a farm lad, who lived on the premises, suffered from choleraic symptoms; but, after a severe struggle, recovered. Since then this lad has suffered from typhoid fever, but again has recovered.

On Sunday evening Mr. Clegg, of Epping, was called in to see Mrs. Groombridge, and the attendance of the Messrs. McNab ceased. We regret, however, to have to record, in the order of the events, that the elder of these gentlemen succumbed to the malady.

In the course of the illness of Mrs. Groombridge and her daughter, Mr. McNab and Mr. Duncan McNab had been personally unremitting in their attendance. They neither of them suffered during this time; and Mr. Duncan M'Nab has not suffered at all. On Sunday, October 1, Mr. M'Nab, senior, was quite well, and at noon of that day he last attended the Groombridge family. On Monday, October 2, he took a long round of patients, and was particularly cheerful. In the afternoon he dined at 6 p.m. At or about 7 p.m. he retired to his study, and fell asleep in his arm-chair. At 8 p m., when called for tea, it was found he had gone up-stairs, and was sleeping on a sofa. He slept until a little before 9, when he woke up and immediately vomited. The housekeeper, who called him, remarked that the chair and sofa on which he reclined gave out a peculiar odour, as of must, which had not been noticed before. Mr. M'Nab, jun., was at once sent for; and on his arrival he found that the patient himself had prepared a mixture of chalk and opium, which was taken, but at once rejected. At eight minutes past nine he was vomiting constantly, and passing rice-water evacuations by the bowels. Cramps soon followed, and much prostration. Attempts were made again to administer remedies to him; but everything was vomited as soon as taken. Mr. Duncan M'Nab then left for a brief interval to fetch some new remedies. On his return, the patient was cold and the skin clammy; the tongue shrunken, white, and also cold. It was peculiarly noticeable that early in the attack the chin of the patient was extremely cold—it was like ice; then the nose and forehead followed in the same way. There were no local spasms, but a kind of general spasm of the whole muscular organism, which absorbed, as it were, the local manifestation of muscular contraction. The chief fluid that could be tolerated was wine, and this was given freely; but, as the sufferer himself said, it did him no good. He died in the early part of the morning of Tuesday, October 3, within ten hours of the period of attack.

The symptoms were so urgent that no internal remedy was retained. Externally heat was applied, and, it seemed, with relief. The extremities were never extremely cold; but the veins presented a peculiar dark, congested, and prominent appearance as if the blood had coagulated in them during life.

Let us hesitate here for a moment to say one gentle word respecting this excellent man, Mr. Daniel McNab, who thus fell. He was a fine specimen of a true-hearted English Medical Practitioner, a hard-working Practitioner of the good old country school. In youth he could hunt with the best, and could practise Physic none the less satisfactorily. In manner sociable, in action courteous, in business punctual, in deed honourable, he won his way with all who knew him, and gained reliance where less gifted men only gain acquaintance. This influence extended not amongst patients alone, but amongst the members of his own Profession, many of whom in early life, acting under him as their master, have been followers of his teaching and successful largely by his example. He had a deep love of science, and was profoundly interested in the recent advances of Medicine; but his great friend, counsellor, and philosophical guide was the mystic fascinator, Emanuel Swedenborg, whom let any one follow and he must obey.

The last glance at the life-history of Mr. McNab is singularly and solemnly beautiful. We can conjure up easily the busy country Doctor, starting in the heyday of youth, toiling from morning till night, leaving no work undone, and going home to sleep his six or eight hours in one short bar, and then up again at work until position is secured and his name well known for miles around. We can see him in his prime, with pupils and assistants around him, he the centre of an active circle, keeping up the work by example, and sharing with the others in labour; and we can follow him gradually down the decline, still active, but feeling that night work must be given up and the heavier duties. All this is common experience; but when we have arrived at this point of decline in the life of Mr. McNab, we behold rising before us a new picture. He has retired from work, and indulges, as he ought, after a passage of threescore years and fourteen, in learned leisure. But even that leisure is so toned that it enables him to live still for work and duty. If wanted, though on his part it be a break on his well-earned rest, he is always ready; and so it happens that on September 30, 1865, a little child with contagious disease must be visited by him. He gives up his ease to be her succour—takes from her the death arrow, and follows her, still in the path of duty, to the earth.

The historian may use romance for his effect, or dig up in old legend the roll of brave deeds on land and water—on battle-field and peace-field alike—but he shall not find a nobler picture than the picture of this well-worn and yet hearty soldier of the Esculapian brotherhood, going out, with white locks and gentle heart, to see that suffering child. He knew that in the act there was not a picking of what the world calls fame and glory; but there was a duty to be done, though death should seal it. It is in deeds like these that Medicine shines forth so divinely. It was a holy death this of our brother—a death to be envied, not mourned over; and the sneering world, taking courage from it, may gain faith that the profession of Physic is not quite lost yet. "Can a man do more than die for his friend?"

To return to our narrative. On the same day that Mr. McNab was seized—Monday, October 2,—there was a con-

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tinuance of the malady in the infected house at Thoydon. This time Miss Kate, another daughter of Mr. Groombridge, and the housemaid were seized with choleraic symptoms, but both recovered, although the attacks were severe; these symptoms lasted from two to three days. The treatment pursued in these cases by Mr. Clegg, who attended them, consisted in giving ten minims of dilute sulphuric acid, ten minims of chloric ether, and five minims of opium, in water, in repeated doses. Both these cases, after the choleraic symptoms had subsided, suffered from consecutive typhoid fever, but recovered.

There was no further appearance of cholera until Friday, October 6, when Mr. Groombridge, one of his labouring men, by the name of Riley, Mrs. Alice Parsell—the mother of Mrs. Groombridge—and Master Charles Groombridge, were seized with choleraic disorder. Mr. Groombridge died in about ten hours, and Riley also sank on the following day—Saturday; Mrs. Parsell recovered from cholera, but suffered from subsequent fever, and died from asthenia on Friday, the 14th. Master Charles rallied on Saturday, had relapse on Sunday, again rallied, and has quite recovered. All these cases were treated during the choleraic symptoms with the sulphuric acid, chloric ether, and opium.

The man Riley, who, as we have said, died on Saturday, was seized with the symptoms on the Groombridge premises. He then went to his own cottage, where he died, when his body was laid out by a woman named Saville, who had also nursed him for a short time. Mrs. Saville was next seized with the disease, her symptoms coming on very suddenly upon the Saturday, the 7th, at noon. When she was first taken she could not hear her husband speak; the rice-water purging was quickly developed, the vomiting was incessant, but the deafness after a time left her. The cramps in this case also were general. Under the influence of four-grain doses of calomel every three hours, the rice-water character of the evacuations passed away, and the matters from the bowels were dark and fæculent. The hands and arms turned blue, and the surface of the skin was shrunken, with the skin shrivelled on the bones and tendons. She was better in the evening, and in the night had only two motions, both dark and offensive. Unfortunately, she got up from bed twice, and, after the second, became faint, and began to sink. She died suddenly at half-past eleven on Sunday, the 8th. In the opinion of Mr. McNab, who attended her, the death was from syncope. The patient had little sickness; she retained effervescing ammonia mixture well.

On the following day, Monday, Mrs. Groombridge, after hearing of the death of her husband, became prostrate from mental shock, refused food, and died on the 9th, Tuesday. In her case, the second attack was not choleraic in character. She told Mr. Clegg, who attended her, that she had nothing to live for, and sank from exhaustion. At the same time she exhibited symptoms of the typhoid character.

In this narrative are recorded all the facts connected with this singular and fatal outbreak. Up to late on Wednesday night, October 18, when one of ourselves was at Epping, no fresh cases had occurred.

On Sunday the 15th, Monday the 16th, and Tuesday the 17th, Mr. Clegg's assistant visited the whole of the districts immediately contiguous to Mr. Groombridge's house—viz., Coppice-row, Thoydon, Blue-common, and Ivy Chimnies; in no house had any choleraic case been presented.

We have not time this week to write any comment on this outbreak, but we may state in brief that beyond dispute there was an immediate connexion in the lone house of Mr. Groombridge—for it is placed on a hill half a mile from any other dwelling—between the cesspool and the well from which the family derived their water. The report of the plumber who made the examination has been laid before us, and from it we learn that the first appearance of earth discoloured by drain matter was two feet six inches from the surface in angle with the pump. At three feet nine inches this disappeared. Outside, on digging below the pipes leading from the water-closet and the eye-hole of the sink—through which the choleraic injections had passed—a leakage was found which extended under the foundations of the building and entered the well; the sewage matter was distinctly traceable on the outside of the well, corresponding with the leakage in the drain. After removing the whole of the water from the well and cleaning it out, it was also found that water was coming in through an opening where one brick was left out, about five feet from the bottom of the well on the side next the pond and farmyard. This proved to be a drain, which could be seen along for four yards or more, and from which the entire supply of the well proceeded. The pipes from the water-closet were all imperfect.

By the exertions of Mr. Clegg, the magistrates have supplied the inhabitants with pure water, and disinfectants have been freely used, but the whole of the surrounding drainage is in an infamous condition. The bedding, clothing, etc., of all the sufferers, under the care of Mr. Clegg, has been entirely destroyed by fire.

Chapter XI.

The Progress of the Present Epidemic, continued.

In Italy.

The Prefect of Ancona, the Count of Torre, receives great credit from all his countrymen for the zeal and courage with which he discharged his duties during the existence of the epidemic in his town. In recognition of these services, and possibly as a rebuke to cowardly Prefects in general, he has been appointed Prefect of Turin. In Naples a few cases are reported: there were two cases on the 14th, one of which ended fatally. At San Giovanni a Teduccio, close to Naples, there were on the same day 14 cases and 4 deaths. At Barletta, on the Adriatic side, there were on the 13th 21 cases and 13 deaths; at Brindisi, 11 cases and 7 deaths; and at Bitetto, 10 cases and 6 deaths. There were besides at that date 31 cases and 44 deaths collectively in 17 different places.

In Spain.

The epidemic has reached Madrid. It broke out suddenly and vehemently about October 2, and on the 6th, 7th, and 8th, not less than 1500 persons were said to have fallen victims to it. On the last of these days, Sunday, the 8th, 600 fatal cases are actually stated to have occurred, including Don Juan Pacheco, recently Spanish minister at the Papal Court. The malady declined somewhat between the 8th and the 11th, but on the 12th, 540 cases, of which 175 proved fatal, were reported. On the 13th, there were 215 cases. The telegraphic reports on the 15th were to the effect that the disease was subsiding, but extreme panic prevailed, the elections were stopped, and 60,000 persons had run away from the city. On the 16th there were 174 cases, 53 fatal. The convents are specially visited. In the Teresa convent 12 nuns have died and many others are affected. The sisters are nearly helpless.

In Portugal.

Cases of cholera have occurred at the town of Elvas, in Portugal. The Portuguese Government at Lisbon are taking active measures to prevent the spread of the epidemic, and a sanitary commission has been established.

In France.

On the whole, the epidemic appears to be subsiding in Paris. The last *Gazette des Hôpitaux* reports that the lowering of the temperature which took place on Wednesday, Thursday, and Friday, October 4, 5, and 6, notably diminished the number of deaths from cholera. But the thermometer having risen again during Saturday, there was a slight increase. The malady is still chiefly concentrated in the 17th and 18th arrondissements. In the central quarters, 43 invalids from the 1st, 4th, and 5th arrondissements were taken to the Hôtel-Dieu.

On the whole, the epidemic has attacked, since its first appearance in Paris, about 300 persons, not more than 150 of whom have succumbed. This is considered an insignificant proportion in a population of nearly two millions of inhabitants. From the present symptoms it may be conjectured that the malady will not reach the same intensity as even in 1854, when far fewer victims were carried off than in 1849 and 1832.

The sanitary returns from the South of France continue to be favourable. At Marseilles, on the 8th, there were 20 deaths, 8 from cholera; at Toulon, on the same day, 18 deaths, 7 from the epidemic; at Arles, 10 deaths, 7 from cholera; at Aix, no new case had been declared; and at Nimes, on the 7th, only one had been registered. The subscription opened at Marseilles in favour of the families attacked has reached the sum of 103,826f. There is no truth in the report that cholera had broken out at Nice. From Italy, the largest item in the cholera returns last received is 8 cases and 4 deaths, at Lucera, on the 7th. The sum total of all other cases is 5, including 2 deaths.

The authorities of Paris have been reticent in respect to cholera, and we doubt if any reliable statistics have been collected. It is estimated roughly that, from September 22 to October 14, there had been 570 cases and 143 deaths. The *Temps*, a pretty reliable authority, says the deaths from the 11th to the 14th in the department of the Seine were as follows:—

On October 11	218
„ 12	180
„ 13	212
„ 14	200

A writer in the *Debats* congratulates his readers on the present aspect of affairs, and compares this epidemic with those that occurred before. The argument is not very scientific, but it is far more sensible than the writings in the English journals on the same subject. The writer, in speaking of the mortality from cholera, adds:—

"Thirty-three years ago the cholera made its first serious appearance in France. It returned in 1849, 1853, and 1865, and the fact must be remarked that the mortality, which was considerable in 1832, less in 1849, and not at all serious in 1853, appears likely to be insignificant in 1865. Being armed with every precaution, let us meet the danger without fear. The persons who will fall victims to the cholera will be less in number than those who lose their lives by other accidents which are familiar to us because they form part of our daily life. The casualties resulting from horses and carriages may be calculated annually at an average of $\frac{3}{4}$ for each thousand individuals; those arising from other violent deaths, such as drowning, murder, suicide, fire, etc., amount to one in a thousand. We will not mention the deaths caused by railway accidents, and still less those resulting from preventible maladies, such as colds and typhus fever, which is still more grave, but to which no attention is paid. We will confine ourselves to the accidents in the class of which we place the too much feared cholera. Out of the 1,800,000 inhabitants of Paris there is a mortality of $1\frac{3}{4}$ per thousand from ordinary casualties arising from horses, carriages, murders, suicides, and fires. The annual number of accidental deaths for the total population of Paris is therefore 3150. Let us now see how many are to be placed to the charge of the cholera. That scourge made its appearance in Paris about a month ago, and, according to positive information, down to the 11th 380 persons were attacked, of whom 190 have died. If we divide those 190 deceases among the 1,800,000 inhabitants of Paris, we shall find that the phantom to which our fear is giving such terrible proportions has made only four victims for every 9000 inhabitants! And what were the persons who have fallen? Poor people, already condemned by fatigue, misery, and hunger to a premature end. But it is not yet over, may add timid objectors. That is true; but, as a general rule, when an epidemic hesitates and is long in declaring itself it is never very intense. Take, for example, Marseilles, the city so predisposed to scourges of that kind that in the middle ages the plague had become almost epidemical. The cholera there is finished, or almost so. What has been the mortality? About 1700—that is to say, a little more than four deaths to each 1000 inhabitants. We ask whether, in presence of those authentic figures, the Parisian population has any need to fear an atmospheric accident, the consequences of which are less than the least of the casualties with which we are familiar?"

English correspondents in Paris writing to their journals seem inclined to treat the epidemic as a good subject for a joke; at all events, if this is not the fact, then the correspondents are themselves jokes, and miserable jokes too. We find one of these swift-plumed travellers actually daring to state, for instance, as a proof of the "influence of the nerves on cholera," that in 1832 one Professor Recamier, to cure a patient in the last stage of collapse, sagaciously and suddenly snatched off the bed-clothes, and commenced flogging the patient with all the strength he possessed. The spectators, for an instant electrified, were naturally enraged. The dying man, by one expiring effort, started from his bed, threw himself on the Doctor, who ran off hotly pursued along passages and corridors by the cholera patient, till both reached the top of the Hospital stairs, when the breathless professor stopped, and looking at the ghastly pursuer, coolly asked, "And how do you feel?" "Feel!" said the astonished patient, "feel, indeed! why," after a pause, "I have no more cramps!" "I believe you, but after this fine race you require rest. Some cups of *tisane* and *vogue la galère!*" The pseudo moribund was saved.

A liquor called "chartreuse" is now being sold in Paris in enormous quantities as a sure preventative against cholera.

According to one of the authorities quoted above, the *Temps*, the first appearance of cholera near to Paris was at a suburb in the north-west quarter, on high ground. The first fatal case occurred on September 18 at a village called Puteaux, on the banks of the Seine, where dye works occupy a large number of workmen, and where the sanitary arrangements are entirely disgraceful. On the 20th there were 3 deaths; 8 on the 22nd; 9 on the 23rd.

On the 24th there were 5 deaths at Sevres, 7 in Paris, 1 at Puteaux. On the 25th, 1 at Courbevoie, 1 at Aubervilliers, 15 in Paris. On the 27th and 28th, 19 fatal cases for the whole of the department of the Seine; on the 29th, 16; on the 30th, 22, several of them being almost immediately fatal.

On October 1, there was 1 death at Puteaux, 4 at Batignolles, 6 in the remaining parts of Paris.

On October 2, there were 10 deaths at Puteaux, and 10 at Batignolles.

On October 3 and 4, there were 54 deaths for the whole of the department of the Seine.

On October 5, there were 80 deaths.

The following list of fatal cholera cases includes Paris and the whole of the department of the Seine:—

	Deaths.
October 6	75
„ 7	81
„ 8	105
„ 9	158
„ 10	169
„ 11	170
„ 12	210
„ 13	180
„ 14	212
„ 15	200

The *Temps* is clearly anxious to make the best of the case, and urges that the Medical men have returned as cases of cholera many cases that do not belong to that category. It also suggests that the epidemic, not being marked by great mortality, is rather a pseudo than an actual outbreak of the Asiatic plague.

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CHOLERA IN ENGLAND.

The evidence is satisfactory so far that the epidemic is not spreading in this country. The Registrar-General, in his return for Saturday, October 14, reports that the mortality from diarrhœa, which was maintained with hardly any fluctuation during the six weeks subsequent to Saturday, August 26, and which averaged 87 weekly during that period, showed last week a very decided decrease, the deaths from that complaint having been only 54. There were two deaths referred to "cholera" or "choleraic diarrhœa." One of these occurred to a child; the other was registered as follows:—"At 42, Jamaica-street, Mile-end Old Town, on October 8, a watchman in the docks, aged 75 years, choleraic diarrhœa."

The annual rate of mortality last week was 22 per 1000 in London, 27 in Edinburgh, and 23 in Dublin; 36 in Liverpool, 33 in Manchester, 31 in Salford, 25 in Birmingham, 34 in Leeds, 21 in Bristol, 27 in Hull, and 33 in Glasgow. The rate in Vienna was 28 per 1000 during the week ending the 30th ult., when the temperature was 3·9° Fahrenheit lower than in the same week in London, where the rate was 21 per 1000.

Regarding Southampton, the Registrar says:—Among the population of this borough (estimated to the middle of the present year at 53,001) 40 deaths were registered during the week ending last Saturday; of these 9 were referred to cholera. The annual rate of mortality during the week was 39 per 1000 persons living.

As bearing on the subject of cholera, Dr. Letheby, in his report on the health of the city of London during the quarter ending September 29, states that of the 587 deaths which took place in the city, 241 occurred in the eastern division, 148 in the western, and 198 in the central. These are in the annual proportions of 23·3 per 1000 of the inhabitants of the eastern union, 22·1 of the western, and a little more than 17 of the central, the general average for the whole of the city being 20·5. In the course of the last ten years the death rate in the summer quarter has been at an annual rate of 21·2 per 1000 of the city population, while in the districts comprising the chief towns of England it is about 22·5 per 1000, and in all England it is just 20 per 1000. This indicates a satisfactory state of the public health; and the same indication is also furnished by the sickness returns from the Medical officers of the city unions. Dr. Letheby next traces the course of the present epidemic of cholera, and argues that there are not the same threatenings as were offered in the preceding epidemics. His argument runs as follows:—

"In the great epidemics of 1831-32, and 1848-49, there were three facts which came prominently before us. 1. There was an unusual outbreak of the disease in India, where it showed itself in an epidemic form; and this lasted for a year or two before its appearance in Europe. 2. The course of the disease was always from India, in a north-westerly direction, through Russia, and by the Baltic into one or more of our Eastern ports. 3. At the time of its appearance among us there was a large amount of zymotic disease, especially diarrhœa and dysentery. At present, however, there are none of these significant forewarnings of an approaching epidemic. Again, in both of the former visitations of the disease, the course of it has been from the north-western provinces of India, through Persia, and along the western shores of the Caspian Sea to Astrachan, where it has rested for some time. It has then traversed Russia by the Volga and its tributaries, and has reached Moscow in September. Here it has again halted for the winter, and in the following spring it has moved forward in a north-westerly direction, and has arrived at St. Petersburg in the months of June or July. It has then branched off in two directions—north-westerly through Finland, and by the Gulf of Bothnia into the north of Sweden, where it has soon exhausted itself, and south-westerly by the Baltic into Sweden, Prussia, and Denmark, and so across the German Ocean into one or more of the ports on the eastern coast of England. On the present occasion, however, the course of the epidemic has been confined almost entirely to the eastern shores of the Mediterranean; and it appears to have acquired its virulence among the pilgrims who were assembled at Mecca and upon Mount Ararat, to celebrate the Mussulman festival of Kourban-Bairam, or the Festival of Sacrifice. Some of the devotees had journeyed from India, and had brought with them the germs of the disease. Indeed, it is said that in one of the ships, while off Mocalla, on the Arabian coast, as many as eighty of the pilgrims died of cholera. It was thus carried to the Holy Places; and it would seem from official reports that not less than 40,000 persons died from it—private accounts say 100,000, but this is perhaps an exaggeration. There is no doubt, however, that the disease was severely fatal, and that it assumed an epidemic character; for soon after the pilgrims began to disperse it appeared at Alexandria, which is only separated from the northern extremity of the Red Sea by the narrow Isthmus of Suez; indeed, it is possible that it may have crossed the Red Sea at Mecca, and have gone down the Nile by its western branch; for contemporaneously with its appearance at Alexandria early in June, it showed itself at Rosetta and the neighbouring villages of Tanta and Zagarig. At Alexandria, the outbreak was in the poorest and filthiest portion of the city—namely, in the north-western suburbs, near to the railway station, where there is a mixed population of Arabs, Turks, and Greeks; and it seems that the city was in a fit condition to welcome the pestilence."

REVIEWS.

A Manual of Qualitative Analysis. By Robert Galloway, F.C.S. Fourth Edition. London: John Churchill and Sons. 1864.

A Course of Practical Chemistry. By William Odling, M.B., F.R.S. Second Edition. London: Longman, Green, and Co. 1865.

Practical Chemistry. By Stevenson Macadam, F.R.S.E., F.C.S. London and Edinburgh: William and Robert Chambers. 1865.

Nothing shows more decisively the importance of chemistry to other pursuits than the richness of our literature in excellent works on chemical analysis, most of them passing rapidly through new editions. And of the persons for the use of whom these works are designed, those of the Medical Profession form the majority. By the art of analysis the student of Medicine makes himself familiar with many of the vast number of chemical phenomena, and thus aids himself in acquiring some knowledge of this difficult subject. By it he learns how to examine the parts of the body with the view of ascertaining the changes in composition undergone by its parts, in order that he may inquire into pathological and physiological problems, and guide himself in the diagnosis and treatment of disease. By it he becomes able to determine the presence or absence of many poisons when previous administration may be suspected; and by it he can also test the purity and quality of many medicines and articles of food. Every assistance in acquiring this art is, therefore, of the greatest value to him. In the methods of chemical analysis there is room for much economy of time and simplification, but as expositions of these methods for the use of learners, we think the works we already have leave little further to be desired. We here notice three of these works.

Mr. Galloway's work is now in its fourth edition, and covers pp. 331. The enlargement is caused by the introduction of a series of chapters on the qualitative analysis of many organic substances. Thus we have given us the means of detecting the elements of organic bodies, the properties of the proximate components of animal and vegetable structures, including the more important vegetable and animal alkaloids, and methods of analysing qualitatively the urine, blood, and other animal fluids. One other valuable addition to this admirable work we must notice is the description of *photo-chemical* methods of analysis which have taken their origin from the researches of Bunsen and Kirchoff, and been largely developed by Merz and others. They furnish elegant tests of the greatest deli-

cacy for many substances, and require essentially only a Bunsen's gas burner, a little platinum wire, and a few squares of blue, green, violet, and red window glass. We press them on the attention of those of our readers as yet unacquainted with them.

Dr. Odling in the new edition of his work has also greatly enlarged and improved it. It is a somewhat smaller volume than the above, and one arranged specially for the use of Medical students. The introductory section on chemical reactions calls especially for the highest praise as a clear and simple account of them according to the greatly improved philosophy of modern chemistry, in developing and enunciating which Dr. Odling has stood so prominently forward. A section on manipulation has also been introduced in this edition, fully illustrated with excellent woodcuts, and one of the best short articles we have read on this subject. The chapters on analytical, toxicological, and animal chemistry have received many additions and improvements. Besides the illustrations referred to of chemical apparatus, several others of microscopical preparations are also inserted. The old atomic weights are still used in the work; but with this exception modern formulæ are employed (with the old formulæ added when necessary), and many of the recent improvements in nomenclature. As an appendix, there are several tables illustrative of unitary formulæ and classification. They possess much philosophical interest, but are too abstruse and too foreign to the purpose of the book to be counted among its improvements. But this in no way detracts from the value of it as a work on practical chemistry, which in its present form supplies every want of the junior Medical student in an admirable manner.

Dr. Macadam, lecturer on chemistry in the Medical school, Surgeons' Hall, has written a little work on practical chemistry for "Chambers's Educational Course," which, as an introduction, seems likely to be largely used. Unlike the works we have just noticed, to compete with which it makes no pretensions, it does not teach the detection of bodies in presence of others, but only the means of recognising simple substances. It seems free from any important defects, but is of too limited scope to be of much service to the Medical student.

The three books we have now reviewed are examples of works on qualitative analysis, in which the student is taught the properties of bodies by having to employ them to discover the presence or absence of the bodies to which they appertain, a plan having much to recommend it. In other works, such as those of Will, Bowman, and Fresenius, the student is taught to use the properties of bodies for their detection only when he has become acquainted with them, a plan which, though not without recommendation, makes a much greater tax on the memory than the other, and one, therefore, which is less suited for adoption by the already overtasked Medical student.

On the Treatment of Enlarged Tonsils at any Period of Life Without the Operation of Excision. By Wm. J. Smith, M.B. (Lond.), Surgeon to the Islington Dispensary. London: Hardwicke. 1865. Pp. 55.

We are happy to direct attention to Mr. Smith's book, which is devoted to the advocacy of the treatment of enlarged tonsils by the agency of potassa fusa. The first part of the treatise is occupied by a brief discussion of the pathology of chronically enlarged tonsils, and then he proceeds to point out the superior advantages of the caustic over the knife where the removal of the exuberant mass is advisable. At first he tells us that he was diffident in the employment of the potassa fusa on account of its deliquescent qualities, but experience has taught him that with the exercise of ordinary caution its use is perfectly safe. He now employs, in applying the caustic, a holder made by Mr. Krohne, but as this is not likely to be always available, we prefer describing the simpler method which Mr. Smith first adopted:—

"A cylindrical piece of potassa fusa, about a-half or three-quarters of an inch in length, was covered with lint, except on one side, and fixed in a caustic-holder, the lint being kept applied to the caustic by means of a piece of thread. Whilst the tongue was kept *in situ* by a depressor held in my left hand, the free part of the caustic thus prepared was rubbed, by means of my right, over the surface of the tonsil. To avoid the possible danger of some of the caustic running into the larynx, I at first cauterised the upper part of the tonsil only; but I soon thereby learned that my fears respecting the caustic's tendency to spread had been exaggerated, its action being so quick and powerful that it is expended on the parts with which it first comes into contact, and burns from the point of application as from a centre, not only on the surface, but deeply; in other words, the great power of the caustic renders its application safe; for, instead of running over the parts, it at once acts upon them and is exhausted. The lint surrounding the potash was intended to serve the same purpose by absorbing some of the liquefied caustic, but it was further useful in protecting the uvula and guarding it from cauterisation."—P. 24.

Notes for Students in Chemistry; being a Syllabus of Chemistry. By Albert J. Bernays, Prof. Chem. St. Thomas's Hospital. Fourth edition. London: John Churchill and Sons. 1865.

The appearance of another edition of this little work shows the demand which exists for it. It must be useful to the student attending a course of lectures. However, we feel that the greatest use to a student of notes on his subject of study is *the taking them himself*, since the act of doing so necessitates his attention to the subject, the clearing up for himself much that might otherwise be but vaguely comprehended, and the development in him of a certain degree of useful analytical power. The other uses of notes Professor Bernays' little book must very efficiently serve.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Tome troisième. Ape—Atm. Paris: Baillière et Fils. 1865. Pp. 821.

It can scarcely be expected that, having given our opinion upon the general plan and execution of this work, we should review at any length the several volumes as they come out. With respect to the third volume, now before us, we have, therefore, merely to say that it maintains the high character which its two predecessors had established. The longest articles are those upon Arsenic, which is considered in its chemical, therapeutical, and Medico-legal aspects, upon Arteries, regarded anatomically and Surgically, upon the Articulations and their diseases, and upon Asthma. The article upon the last-mentioned disease is a treatise in itself. Again, however, let us say that the cheapness of these volumes, combined with the complete manner in which each subject is discussed, should place them upon the shelves of every Practitioner.

GENERAL CORRESPONDENCE.

CASE OF CHRONIC RHEUMATISM WITH PURPURA.

Letter from Dr. R. Wilbraham Falconer.

[To the Editor of the Medical Times and Gazette.]

Sir,—The patient, about 55 years of age, had been the subject of many severe attacts of rheumatism, spreading over two years, and last December, to use his own words, "was utterly smashed and sinking from sheer exhaustion." In the spring of the present year his condition was materially improved, but, to have recourse to his own account of his illness, he "fell back weaker than ever," but happily, the fearful pains did not, nor ever have, materially returned; but there were swollen joints, and discoloured limbs, and fearful nausea, which made the sight of food intolerable. This was the condition of the patient in April last. Early in the present month he came under my care, at which time there was great debility and much emaciation. The complexion muddy; tongue, fauces, and gums pale—the latter somewhat spongy; bowels costive; appetite variable; nausea and vomiting recurring at intervals of a day or two. The finger-joints presented marks of rheumatic arthritis. The right knee was somewhat enlarged; the left much swollen by synovial effusion, and more or less painful. In the neighbourhood of both ankles there were large splotches of a purple or port-wine colour, smaller splotches on the inner side of the joints of the great toe. Near to, and continuous in, some parts with the discoloured surface around the ankles were brownish coloured patches, which had been previously of a dark purple colour. On inquiry as to the first appearance of these splotches, the patient stated that, on going to bed after having sat for some time by the fireside, he found the skin around the right ankle presenting the appearance of having been bruised, and attributed the discolouration to the heat of the fire. As far as I can remember, the skin around the left

ankle became discoloured in an equally short time. On further inquiry, it was found that some time before the occurrence of these splotches small purple spots had appeared on the thighs, body, and arms, traces of which were still visible; and there were some which still retained a purplish hue.

From the account of the patient, the appearance of the spots, and of the discoloured surface around the ankles, the presence of purpura is as clearly indicated as the condition of the finger-joints, knees, and ankles proves the past and present existence of rheumatic arthritis.

I have been induced to forward the account of this case—not the only one of the kind, however, which I have seen during the last eight months—because I am inclined to think it may probably elucidate the true character of the case which was under Dr. Ogle at St. George's Hospital, and is printed in the *Medical Times and Gazette* of September 9, at p. 283, of which no explanation was suggested. I am, &c.

R. Wilbraham Falconer, M.D.

Bath, September 25, 1865.

CHOLERA.

Letter from Dr. H. Ussher.

[To the Editor of the Medical Times and Gazette.]

Sir,—I send a few particulars of a case returned as cholera, 36 hours, noticed briefly in your columns as hepatic cholera. The subject of the notice was 71 years of age, active, although debilitated; she had two escapes this year from death by violent epistaxis, and on the last occasion lost a large quantity of blood, preferring the use of local remedies to plugging, which was very effective with the first bleeding.

Now, with reference to the attack that caused her death, I have to notice that she was at the Dispensary on the morning of October 3 (Tuesday), complaining of slight diarrhœa, which she was subject to. I gave her a mixture containing dilute sulphuric acid and tincture of opium, with tinct. of ginger. She then attended at a wedding in the church, and appears to have been tolerably well until the evening, when diarrhœa and vomiting set in without any cessation. She had in the evening a pill of acetate of lead and opium hourly, and a powder of carbonate of bismuth, to check the vomiting. The vomit was perfectly black.

On Wednesday morning I found her able to recognise me, but voiceless, her extremities cold, the hands perfectly blue. She had passed a sleepless night, was violently cramped in the belly, and body generally; she could take no food, and could hardly swallow medicine. I now gave her a strong dose of brandy, which, though retained, produced no reaction, and at mid-day she had half a drachm of chlorodyne (Collis Browne's) with aromatic spirit of ammonia; but this was soon vomited. Her condition was now absolutely hopeless, and the diarrhœa and vomiting continued incessantly. She was alive in the evening, but could see no one. Early next morning I went to see her, and arrived at the house just as she expired. The smell of the evacuation was horribly cadaveric, and produced emesis with me as soon as I left, and the nurse, who had been subjected to it all night, got bad diarrhœa.

It is rather a significant fact that when a former epidemic of cholera visited Wandsworth, the house where this patient lived furnished the first and fatal case—the drainage is abominable, and there is the additional disadvantage of a large gas meter in the rear of the dwelling, and a creek from the Thames is close at hand, and receives a considerable amount of sewage which is disturbed by the incoming tide. The river Wandle, once a purifier and the habitat of many a goodly trout and jack, is now polluted by the paper mills; and the other occupiers of the stream keep the water within strict bounds, as the bed of the river is oftener dry than full.

I am, &c. H. Ussher, M.B.

Wandsworth Provident Dispensary, Oct. 15.

International Medical Congress.—At the rising of the French Medical Congress just over at Bordeaux, it was determined to hold the next at Strasbourg, and also to use every endeavour to organise an International Medical Congress to be held in Paris in 1867, the year of the forthcoming International Exhibition.

The Paris Faculty of Medicine.—M. Denonvilliers, formerly Professor of Surgical Pathology, has been transferred to the Chair of Operative Surgery vacated by M. Malgaigne on the score of ill-health. The Chair of Surgical Pathology has not as yet been filled up.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, October 17.

Dr. Peacock, President.

The President, on taking the chair, said he could not express a better wish for the Society than that the Session which was about to commence might prove equally successful with those which had preceded it. He thought the long list of specimens for exhibition on that occasion afforded every prospect that it would prove so. The *Transactions* had not been distributed to the members, but some copies had been laid before the Council, and he felt satisfied, by the very cursory observation which he had been able to make of this volume, that it would be found fully equal to its predecessors, and evinced equal ability and care on the part of the secretaries, who prepared it. While in Germany, during the autumn, he had heard very gratifying testimony to the value attached to the *Transactions* in that country from Professor Virchow, of Berlin. He then drew the attention of the members of the Society to the rules at the back of the card, and especially to the first and second rules, which render it obligatory that notice of specimens to be exhibited should be given to the secretary before the day of meeting, and that the reports of communications should be sent in immediately after they have been made.

The President then exhibited a specimen of

MALFORMATION OF THE HEART,

which occurred in the practice of Mr. Roper, of Islington, in a boy 7 years of age, who had always been cyanotic and liable to syncopic attacks, and who died suddenly. The specimen was an example of the most common form of malformation, in which the orifice of the pulmonary artery is contracted, and the septum of the ventricles deficient; but it was remarkable for the degree to which the orifice of the aorta was displaced, that vessel arising entirely from the right ventricle, through the circumstance that the foramen ovale was entirely closed. The vessels had been cut off too near the heart to show the ductus arteriosus, so that the condition of the duct could not be ascertained.

Mr. Shaw then brought forward the case of a patient who was the subject of

CONGENITAL DISLOCATION AT THE HIP-JOINTS.

The patient was also in attendance in the waiting-room. She was a healthy girl ten years of age. Her mother said that the delivery had been natural, and the child was never known to have been affected until she was put on her feet. It was only two years ago that disease of both hips had been suspected, and but one year that dislocation had been diagnosed. The position of the bones was nearly the same as in dislocation on the dorsum ilii from violence, but the elevation was greater, and the bones were placed considerably backwards. There was considerable sinking in of the loins and projection backwards of the hips.

Mr. Spencer Wells exhibited two

FIBROUS TUMOURS OF THE ROUND LIGAMENT OF THE UTERUS.

One of them he removed more than a year ago from a lady nearly forty years of age. It was the size of a large orange; simply fibrous in structure. Having been covered by a thick layer of fat, great doubt had been expressed by various Surgeons as to its nature. One had ordered a truss, believing it to be an irreducible hernia; some thought it malignant, others glandular, and strong opinions were given that it could not be removed without opening the peritoneal cavity. But as it was painless, freely moveable, had been of very slow growth, and the neighbouring parts and glands were healthy, he (Mr. Wells) removed it, and had no difficulty in doing so without exposing the peritoneum. It occupied the right inguinal canal, and was simply an excessive growth of the fibrous tissue of the round ligament. The patient had remained perfectly well. The second tumour was much larger than the first, being about the size and shape of a small cocoa-nut. The patient was nearly fifty years of age. In every respect it resembled the other tumour; it had been easily removed and the patient quickly recovered. Mr. Wells said that he brought these specimens before the Society because he had not been able to find any description of such tumours in any Surgical work which he had been able to consult. He had been told that Scarpa had described them; but on referring

to his "Opuscoli di Chirurgia" he could only find a description of the much more common condition known as hydrocele of the round ligament. He had not seen any other examples himself; but if attention were directed to the subject other Surgeons possibly might show that it was not a very rare form of disease.

Dr. GIBB exhibited

TWO TUMOURS REMOVED FROM THE LARYNX IN A CASE OF APHONIA OF SIX YEARS, FOLLOWED BY IMMEDIATE SPEECH.

The patient was a single lady, of 38, who had had a bad throat for six years, the voice being reduced to a croupy whisper. During the first three years she had coughed up pieces of "flesh," one of which was an inch long and the shape of a shrimp. For the greater part of the time she could not lie down at night, from supposed cardiac disease with dyspnœa, and her complexion was very florid. On examination with the laryngoscope in April last, a long, fleshy, somewhat bulbous growth was seen to occupy the greater part of the sub-glottic space, springing from the anterior part of the larynx, below the origin of the true vocal cords, and quite immoveable. The larynx in other respects was comparatively healthy, but there was much irritability and spasm of its proper muscles. After six weeks' preparation, Dr. Gibb snared a growth in the loop of wire of his laryngeal écraseur, cut its pedicle, and withdrew it firmly held by a piece of uncut mucous membrane in the retracted loop, in a similar manner to the outer coat of an artery after ligature. He now found a second and larger growth, which had formed the bed of that already removed, and this was snared six days later in a similar manner to the first, the tumour being likewise withdrawn in the retracted wire loop of the écraseur. The voice was immediately restored, for the mechanical obstruction was got rid of. In a few days the little wound cicatrised, no obstruction was visible, the trachea was soon quite normal, and the patient left for the North, cured. The composition of the tumours was wholly epithelial cells, and to the naked eye resembled a congeries of small cysts; they were of the size of small beans. The tumours were exhibited with the wires attached to the mucous membrane, and Dr. Gibb remarked that when the loop of wire was not violently or spasmodically drawn home, the growths invariably were withdrawn with the instrument itself. This case made, he believed, his fifteenth or sixteenth in which he had now successfully abstracted growths from the larynx by means of wire loops, and this in their entirety, not in fragments. The shape and position of the tumours in the present instance were well illustrated by a large diagram.

Dr. BEIGEL showed several

PREPARATIONS OF HEALTHY TEETH.

There were seven preparations illustrating several methods of preparation, and showing the different structures of the teeth.

Dr. MURCHISON showed specimens illustrative of the

PATHOLOGY OF THE CATTLE PLAGUE.

He brought forward these specimens chiefly in consequence of the statement recently made that the cattle plague was the pathological equivalent of the typhoid fever of man. In the course of the last autumn he had dissected twenty-seven cattle, and had found essentially the same appearances in all, the differences being those due to different stages only. Speaking generally and briefly, the disease was a catarrhal or croupal inflammation of all the mucous membranes, including even the genito-urinary. The chief point, however, on which he now wished to speak was the condition of the intestines. The mucous membrane was intensely red, and was covered with a gelatinous or puriform mucus, and in extreme cases even with actual lymph. On the condition of Peyer's patches Dr. Murchison dwelt at length, and showed specimens, for the sake of comparison and contrast, of healthy intestines as well as of intestines taken from diseased cattle. He also exhibited portions of intestine from patients who had died on the tenth and twenty-sixth days of typhoid fever. Now, the appearances in these patches in the diseased animals were not like what is seen in typhoid, and, indeed, were exactly the opposite. Peyer's patches gradually disappeared, so that on passing the finger over the mucous membrane they could not be felt, and in some cases the most careful naked eye examination failed to detect them; whereas, in the healthy animal they were raised at least the sixth of an inch above the general surface. In the early stage the glands became full of a puriform fluid, which was easily squeezed out, and the escape of which caused collapse of the glands. The condition of the solitary glands at first sight might seem to be that of enteric fever, but on examination they were found to consist of a thick external cyst, and were full of cheesy material, totally unlike that of typhoid fever of man. Moreover, this condition of the glands was constantly met with in healthy oxen. In not one of the twenty-seven cases dissected had there been any submucous deposit or ulceration. The spleen and mesenteric glands were healthy, and in this respect the disease differed from both enteric fever and typhus. In the fourth stomach there was seen catarrhal inflammation, minute erosions, and patches of extreme congestion or ecchymoses, and here and there sloughing of the mucous membrane. Dr. Murchison concluded by saying that Dr. Smart, of Edinburgh, Dr. Aldis and Mr. Burge, of London, had found similar appearances in the cases they had dissected, and had arrived at the same conclusions. Dr. Murchison had had the assistance of several Physicians—among others, of Dr. A. P. Stewart—and all agreed that the disease had no relation whatever to typhoid fever.

PREPARATIONS AND SPECIMENS ILLUSTRATIVE OF THE PATHOLOGY OF THE CATTLE PLAGUE.

Dr. CRISP exhibited thirty wax preparations, as well as the morbid parts in spirits, to show the various phases of cattle plague, and to illustrate his conclusions respecting the nature of the disease. The preparations, Dr. Crisp thought, all tended to show the exanthematous nature of the affection; among them were examples of ecchymosis of the endocardium, and extravasation of blood under this membrane; exanthematous spots in the cæcum and bladder; the congested state of the ileo-cæcal valve; old ulcers in the large intestine; and tubercular elevations unconnected with disease. The conclusions were as follows:—1. That the so-called "cattle plague" or typhoid fever bears but slight resemblance, either in its symptoms or morbid appearances, to the typhus or typhoid fever of man. 2. That, looking to the symptoms and pathological changes, and especially to the rapid recovery in many cases, the malady bears a greater resemblance to some exanthematous diseases in the human subject, affecting, in ruminants, chiefly the mucous membranes. 3. That the specific poison of this disease alters the condition of the blood, and affects especially certain parts of the nervous system, paralysing the digestive organs, and thus sapping the foundations of life. 4. That the disease is attended, in most cases, with a specific eruption, or exanthematous blush, affecting more or less all the mucous membranes of the body. 5. That an animal may be suffering from this disease in its first stage without the possibility of detecting it, and in this way the plague may be disseminated in our fairs and markets to a fearful extent. 6. That there is no sufficient proof that the meat of bulls, cows, oxen, and calves, in the first stage of the disease, is injurious to human beings that partake of it. 7. That the poison of the cattle plague (with the exception of a papular eruption on the skin) produces no injurious effects when introduced into the human system. 8. That the best means of eradicating the disease is to prevent all movements of cattle and sheep for a month or six weeks (except under special circumstances), and by the establishment of dead meat markets in all our cities and towns. Dr. Crisp continued: I can fully confirm the statement made by Dr. Murchison as to the diminished size of the aggregate glands, or crypts; but my explanation is different to that made by him. We know but little respecting the use of these glands; but the disease appears to throw some physiological light upon the subject, for here the process of digestion is arrested, and the glands therefore were scarcely perceptible. The term "ulceration" is not warranted, I think, for ulceration seldom occurs in this disease, and when ulcers are met with they are often of old standing. The red patches are not confined to the fourth stomach; they are even present, in many cases, in the bladder, as the preparations showed. They are probably formed first by slight effusion of serum under the cuticle, then, by the detachment of the cuticle, exposing the red membrane underneath. I have never seen the spleen or liver in an abnormal condition in this disease—another fact, as regards the former organ, that militates strongly against the typhoid nature of the affection. There is a point of great practical importance as regards the pathology of the disease—viz., the rapid disengagement of gas in many parts soon after death, or even during life, rendering the fat over the kidneys and under the skin "boggy" and resonant when struck with the hand, but this is not peculiar to cattle plague. I have met with it in many species of ruminants, especially in sheep that

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are "blown," as it is called, after gorging themselves with clover, coleworts, or other green food. As regards my conclusion respecting the innocuous nature of the cattle-plague poison, I have eaten a part of the heart from which this preparation was taken, and which shows extravasation of blood under the endocardium, and I have partaken of other parts of diseased oxen. I tried these experiments upon myself before subjecting the lower animals to them. I fed a hedgehog on the worst parts of the intestines of animals dying of cattle plague, and five days since the said animal brought forth four young ones, which are all doing well. I have, moreover, met with a great many men with cuts and scratches on their hands daily engaged in flaying diseased cattle, who have received no injury with the exception of a papulous eruption on the skin.

The PRESIDENT remarked, in reference to Dr. Murchison's communication, that it showed the condition of the aggregate glands of the intestines in the ox that had died of the cattle plague to be quite physiological, the glands being distinct in the healthy animal, and indistinct in the diseased. This corresponded with their condition in the human subject after death from diseases in which the glands were not involved. Some years ago he carefully examined these conditions in a large number of subjects who died of diseases of an acute and chronic character, exclusive of typhoid fever, typhus, etc., in which the glands are found to be diseased, and he arrived at the conclusion that the distinctness of the glands bore a direct relation to the shortness of the period which had elapsed between the actual health and the death of the individual, the glands being distinct when persons were killed or died after short periods of illness, and especially in young subjects, and very imperfectly marked when persons had been ill for longer periods, and especially in the middle-aged or aged. This corresponded also with the appearance of the mucous glands in cases of cholera. When the patient was rapidly cut off, as after six or eight hours' illness, and especially in young persons, the glands, especially the solitary, were very distinct. On the other hand, when patients died at later periods, as after an illness of six or eight days, and especially if they were middle-aged or aged persons, the glands could often scarcely be detected.

Dr. SCHULHOF said that on the Continent the pathological appearances of the cattle plague were well known, and that he never heard until recently that it had been considered to be related to typhoid. As to the plan of stopping the spread of the disease by killing the diseased animals, he remarked that the plan might be useful in the Steppes, but in England it could do no good.

INFLAMMATION OF THE EPIGLOTTIS.

Dr. CRISP exhibited the tongue and larynx in wax and in spirits of a boy, eight years of age, who was indisposed for two or three days, when symptoms slightly resembling those of croup made their appearance, and he died rather suddenly. The epiglottis and parts about its base, were found red and swollen, and with this exception the organs of the body were healthy. The case occurred in the practice of Mr. Hopewell, of Chelsea, with whom Dr. Crisp examined the body.

Dr GREENHOW then showed a specimen of

MILLSTONE-MAKERS' PHTHISIS.

The lungs were from a stone-worker, who had formerly been a French millstone maker, and latterly a stonemason. The apices of both lungs were dense, hard, and of a coal-black colour; the bronchial tubes in the consolidated parts were dilated and rigid. The remaining portions of both lungs were denser than normal, and in parts almost black, but for the most part crepitant. Scattered here and there, in the crepitant portions of the lungs, were small, well-defined, hard nodules, on section of a pale colour, which were evidently the products of chronic inflammatory exudation. In the lower lobe of the left lung there was one irregular cavity about two inches in its longest diameter, but there were no other cavities, and nothing bearing any resemblance to true tubercle. The bronchial glands were somewhat enlarged, hard, and black throughout. Some slight recent pericarditis excepted, the other organs were all healthy. Under the microscope the dense portions of black lung in the apices were seen to consist of elastic fibrous tissue, abundantly intermixed with granular exudation cells and black pigment, the latter being arranged partly in the form of small roundish nodules, partly in that of fine granules. Sections of the lungs at the junction of the condensed and crepitant portions, showed thickening of the walls of the air-cells, with a deposit of black pigment in their substance. Small portions of the dense black part of the lungs having been thoroughly incinerated, and subsequently boiled in hydrochloric acid, left a siliceous residue which, under the microscope, consisted of minute, angular-looking particles, which did not polarise light, but were dissipated on exposure to the fumes of hydrofluoric acid.

Dr. BUCHANAN exhibited

TWO SPECIMENS OF THE VOMIT OF YELLOW FEVER.

One was quite black, and had, when first vomited, presented the appearance of grains of black matter suspended in a fluid which itself had little or no colour. Microscopically this black vomit consisted of blood corpuscles, some unaltered, but mostly aggregated into yellow masses or else disintegrated, and of epithelium of the squamous, columnar, and spheroidal varieties. On filtration the liquid part was nearly colourless, and gave no reaction of bile. This specimen was part of a large quantity vomited by a woman on the third day of yellow fever; she died the same night. The other specimen was vomited by her husband on the day of his death, the second or third day of his attack. It resembled beef-tea grounds, and was of scanty amount. Microscopically it had much the same elements as the other specimens, but much less blood, and a large quantity of torula. Dr. Buchanan expressed his regret that he could not show the Society any of the post-mortem appearances of yellow fever, on account of the repugnance of the people to allow any autopsy to be made. But he might add that the disease at Swansea had been typical yellow fever of considerable fatality among those whom it attacked.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 5.

Dr. BARNES, President.

Dr. BATHURST WOODMAN showed a

DERMOID CYST,

removed after death. It was attached to the right ovary, apparently in the situation of the pons ovarium. The ovary itself was converted into an enormous polycystic tumour, larger than the gravid uterus, filled with colloid matter, in which a few cells, many nuclei, granular matter, and exudation corpuscles in great abundance were found. There were no evidences of malignancy. Ovariotomy would have been performed by Mr. Couper, but, apparently from the bursting of one or two of the cysts, peritonitis set in, and killed her before the operation could be done. Her age was 47, a married woman, living separate from her husband. Two attempts had been made at tapping some weeks before death, but the colloid matter would not run through the trocar. The dermoid cyst had been turned inside out, displaying two rudimentary teeth and hairs growing from the inside. The contents were hair and sebaceous material.

Mr. WAITS recited a case of

HYDROENCEPHALOCELE

of great size in which tapping was practised, the child living about four months.

Dr. AVELING exhibited a

DOUBLE-CURVED HYSTEROTOME

which he had invented some time since, but which he had now discarded. (*a*) Because incisions could only be made by it in a lateral direction. (*b*) Because the two blades did not cut to an equal depth, the yielding structures being deeply incised and the denser ones remaining merely scarified. He also showed the Single Straight Hysterotome which he now uses. By pressing a handle the blade is projected so as to enable the operator to make an incision increasing in depth from the internal os to the external. Dr. Aveling also exhibited a Spring Tent, which he uses after the operation to keep the uterine canal open.

The PRESIDENT thought Dr. Aveling's hysterotome an improvement upon Professor Simpson's, as the hinge of the blade was at the end of the instrument instead of in the middle. He would, however, ask Dr. Aveling whether there would not be some difficulty in passing the uterine portion of the instrument through a strictured os?

Dr. AVELING stated that he never used the slightest force in introducing the hysterotome, but, when necessary, always first passed a small tangle tent, which in a few hours temporarily dilated the canal.

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Mr. Ellis gave the particulars of a case of

MONSTROSITY

occurring in two children (twins), in both of whom the nose was represented by a short trunk. In one the eyes were totally absent, but in the other they were present.

Mr. Truman read a report of a

FATAL CASE OF TUBAL EXTRA-UTERINE FŒTATION,

to which was added the microscopical examination by Dr. Braxton Hicks. Death took place from sudden rupture of the tube at the end of the third month of pregnancy.

Mr. Roper remarked that in the two cases of tubal pregnancy which had occurred in his practice, complete rupture of the cyst took place at the seventh or eighth week of pregnancy, and death rapidly followed from hæmorrhage into the peritoneal cavity. Coincident with the first symptoms in each case, there were symptoms of menstruation. He believed that when the ovum was in the free part of the tube (not that part which passes through the uterine wall), rupture, partial or entire, might be expected at the seventh or eighth week of pregnancy, as at this period the ovum became so large that the tube would not allow of further distension without giving way; it was, therefore, at this period that we might look for the first symptoms of the accident. Diagnosis of the nature of the case would be importantly confirmed by noting the time at which the first symptoms happen (whether at a catamenial period), and the actual existence of a menstrual discharge. The uterus being unoccupied, the discharge might be regarded as truly menstrual, coming from the lining membrane of the uterus; and the increased functional activity of the reproductive organs at this particular period, the additional afflux of blood, and the turgescence of the vessels concerned in nourishing the ovum, were coincident circumstances likely to determine or hasten rupture.

The President called attention to the fact that previously to the rupture of the cyst—that is, previously to the shock and collapse which mark the epoch of rupture—it was usual to observe a discharge of blood per vaginum. The hæmorrhage he believed was commonly produced in this way:—The ovum growing at about two or three months, the period when chorion is rapidly forming placenta, the rate of growth of the villi greatly exceeds that of the sac. The Fallopian tube is unfitted to harbour the ovum; it cannot keep pace with the shooting out of villi. These become detached, and hæmorrhage results. Then, under combined distension from growing ovum and hæmorrhage, rupture takes place. It was by a perfectly analogous process, in his (Dr. Barnes's) opinion, that hæmorrhage took place in placenta prævia. Here is an *error loci*, as in tubal pregnancy: the ovum grows in the wrong place. The cervical zone is not well adapted to grow with the growth of the ovum. Hence a time arrives, about the fifth or sixth month generally, when the shooting villi get detached from the uterine wall, and hæmorrhage results. This explanation, the President observed, differed entirely from the theory generally received, which attributed the hæmorrhage to the lower segment of the uterus growing away in some manner from the ovum. The cases of tubal gestation and placenta prævia were strictly analogous in this respect. Both were examples of ectopic gestation; the ovum growing in a structure not fitted to grow in proportion with it.

Dr. Playfair asked whether Dr. Barnes thought that, either with the assistance of the symptom he had pointed out, or by any other means, he considered it possible to arrive at the diagnosis of a tubular fœtation before rupture had occurred. There could be no doubt that the question of diagnosis was one of extreme importance, because if the existence of a Fallopian pregnancy could be ascertained with a tolerable degree of certainty, it might perhaps be possible to adopt some method of treatment which would save the patient from the almost certainly fatal result following rupture. Thus, for example, it might be worthy of consideration whether the operation of gastrotomy and the ligature and removal of the Fallopian tube and its contents might not be successfully resorted to. The risk from such an operation would be infinitely less than that which follows the rupture of the cyst. At present the difficulties of diagnosis are undoubtedly almost insuperable; but Dr. Barnes' interesting observation seemed to indicate a means by which they might in time be lessened or overcome.

Dr. Braxton Hicks thought the collection of the histories and of the post-mortem examinations of such cases very valuable, inasmuch as it would help to guide us as to the possibility of operative interference, even if the diagnosis could be clearly made out. From what he had seen he thought in the majority of these cases there would co-exist circumstances, such as adhesions, etc., which would entirely prevent our getting below the sac, so as to tie it. Even many of the cases of tubular fœtation were caused by curving of the tube by old contractions or other causes, rendering any chance of benefit hopeless.

Dr. Playfair said that he believed, as a rule, extensive adhesions would not be found in cases of tubular fœtation before rupture had taken place. After the fœtus had escaped into the cavity of the abdomen, if the patient survived the shock of the rupture, an adventitious cyst was formed round it, which was usually extensively adherent to the surrounding parts; and it would doubtless be very difficult to remove this *en masse* by gastrotomy; although Mr. Spencer Wells, in a previous discussion on the subject, had suggested the possibility of this being done. But in a tubular fœtation before rupture he (Dr. Playfair) apprehended no such difficulty would be met with.

Dr. Graily Hewitt observed that the diagnosis of cases of the kind now under consideration was, and he believed always would be, very difficult; and he feared that but little reliance could be placed on the circumstance adverted to by the President—viz., the occurrence of hæmorrhage as a precursor of rupture, inasmuch as it was well known that in cases of extra-uterine pregnancy hæmorrhage from the uterus was not unfrequent, and that at periods some time antecedent to the rupture. With reference to the time at which rupture occurred in cases of Fallopian pregnancy, there was a very important fact to be borne in mind—viz., that, as Kussmaul had pointed out, many cases of supposed Fallopian pregnancy were really cases of bicorned uterus; and the difference in the result between such a case and one of Fallopian pregnancy with a normal uterus was necessarily very great. In the one case, rupture at a comparatively early period usually occurred; whereas, in the other the pregnancy might proceed normally.

Dr. Ritchie made some remarks on the interesting question of the period at which rupture of the sac usually occurs in tubal pregnancy. He referred to two cases which had been observed by a French accoucheur, where there was some reason to believe that the fœtus, after nine months of intra-tubal life, had been extracted by the natural maternal passages. He surmised that perhaps those cases were to be explained in the manner just referred to by Dr. Graily Hewitt: that they were perhaps instances of double uterus, where the entrance to the second horn or loculus had been mistaken for the uterine orifice of the Fallopian tube.

The President observed that the question now started—whether gastrotomy might not be performed before rupture of the sac—must greatly depend upon means of diagnosis. He did not think that the preliminary hæmorrhage to which he had called attention, even aided by other indications, could ever raise more than a strong presumption: the evidence could hardly be great enough to justify the operation. Again, rupture commonly took place not later than three months. He had performed post-mortem examinations in two such cases. In both there was great difficulty in discovering and isolating the parts concerned. In the living subject the task would often be impossible.

ANTEFLEXION OF THE GRAVID UTERUS.

Dr. Graily Hewitt related the particulars of a case now under his care, in which anteflexion of the uterus, which existed before pregnancy and which had been nearly cured, was found to be present at the fourth month of pregnancy, and to such an extent as to interfere with the rising of the uterus out of the pelvic cavity into the abdomen. He was called to see her at that time, and found the os high up in the vagina, and the body of the uterus tilted forwards and pressing deeply on the bladder; the soft parts were greatly swollen, micturition exceedingly frequent, and acute pain was present. The patient was ordered to lie in bed, and in three days the uterus was liberated from the pelvis, and the symptoms became relieved. Dr. Graily Hewitt believed that anteflexion of the gravid uterus was very rare, and he had not met with any description of it. In this case the patient had been previously treated by him for anteflexion, and this gave him at once a clue to the nature of the affection.

The Zoological Gardens.—Two of the remarkably fine bulls and one of the cows presented by King Victor Emanuel to the Zoological Gardens, fell victims to the cattle plague on Wednesday last. A cow and calf still remain.

MEDICAL NEWS.

THE QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the University, held in Dublin Castle on Wednesday, the 11th inst., the following Medical and Surgical degrees, etc., were conferred by the Lord Chancellor of Ireland, Vice-Chancellor of the University. The prizes were presented to the successful candidates by His Excellency the Lord-Lieutenant:—

The Degree of M.D.

First Class.—None.

Second Class.—Reuben Bolton, John James Charles, Isaiah De Zouch.

Third Class.—None.

Unclassed.—William Alexander, Daniel Ambrose, John Bligh, Henry John Brown, Cornelius F. Buckley, Joseph Wallace Chesnut, Henry Comerford, William Alister Catherwood, Alexander Filson, B.A., Joseph Augustine Fitzpatrick, Thomas C. Gilmore, Patrick Heas, Emerson Henry, John Sinclair Holden, Oscar D. Honiball, Ulick Albert Jennings, William B. Johnstone, Mark Long, James Macartney, Henry J. Madden, Edward M'Crystal, Samuel D. Millar, John Henry Newman, Charles O'Hara, B.A., William John Rankin, Jas. Joseph Louis Ratton, Daniel O'Connell Raye, David S. H. Smith.

The Degree of M.CH.

John Bligh, Reuben Bolton, John James Charles, Henry Comerford, Francis Duffy, M.D., Joseph Augustine Fitzpatrick, Richard Malcolm Graham, M.D., Patrick Heas, Emerson Henry, Oscar D. Honiball, Ulick Albert Jennings, H. M'Noughten Jones, M.D., William Henry Jones, M.D., Robert Dwyer Joyce, M.D., Patrick F. M'Gloin, M.D., Alex. Hay Hill M'Murtry, M.D., Samuel D. Millar, Micl. O'Kennedy Morris, M.D., Thomas Ffrench Mullen, M.D., John Henry Newman, Patrick O'Keeffe, M.D., Stephen O'Sullivan, M.D., Patrick John Shannon, M.D., George Sigerson, M.D.

The following gentlemen have passed the first University Examination in Medicine:—

Third Class.—Thomas Ryan.

Unclassed.—Daniel Ambrose, Edward Anderson, John Albert Anderson, Henry Baldwin, Reuben Bolton, John Walton Browne, B.A., Michael J. Burke, B.A., William J. Campbell, William Alister Catherwood, John James Charles, William Collins, Patrick J. Cremen, Isaiah De Zouche, James Reid Dickson, Alexander Filson, B.A., James W. Fisher, Jos. Augustine Fitzpatrick, James Frazer, Matthew Moriarty Gallway, George John Gibson, Thomas C. Gilmore, John Sinclair Holden, Oscar D. Honiball, Matthew Horgan, Richard Howard, John Jefferson, William B. Johnstone, Samuel Killen, Thomas Kingston, James Macartney, John Macaulay, William Henry Macnamara, Frederick M'Clement, Edward M'Crystal, Henry J. Madden, Samuel Dundee Millar, Roeslewin Morgan, Hickman Morgan, Edwin F. Nelson, John O'Connor, William Arthur O'Connor, Jeremiah J. O'Grady, Samuel Parke, Josias W. Patrick, John Henry Pemberthy, Robert V. Power, B.A., William John Rankin, James J. L. Ratton, James Hutton Ritchie, John Roche, Daniel O'Connell Raye, William Sharpe, David Stuart H. Smith, Wm. Thornley Stoker, Edmond Townsend, B.A., William Henry Warren, George Wood, William Wylie.

ROYAL COLLEGE OF SURGEONS.—The following members of the College, having been elected Fellows at previous meetings of the Council, were admitted as such on the 12th inst.:—

William Parker Hoare, Dartford, diploma of membership dated April 9, 1836; Alexander Charles McLeod, the Queen's Indian Army, November 13, 1840; James Oldham, Brighton, December 10, 1841; and Joseph Bainbridge Fife, Newcastle-on-Tyne, June 25, 1842.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, October 12, 1865:—

James Mare Taylor, Hanley, Staffordshire; Moses Lyons, Birmingham; William Hixon Arrowsmith, Coleshill, Warwickshire; Sydenham John Knott, St. Mary's Hospital; Thos. James Webster, Conway, North Wales.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BRADLEY, SAMUEL M., M.R.C.S. Eng., has been elected Surgeon to the Ardwick and Ancoats Dispensary, Manchester.

BRANSON, H. J., M.R.C.S. Eng., has been appointed Resident Surgeon to the Birmingham Lying-in Hospital and Dispensary for Diseases of Women and Children.

BUDDS, W. T., L.A.H. Dub., has been appointed Resident Medical Officer to the Cork Fever Hospital.

COOK, WILLIAM H., M.D. Edin., has been elected Medical Officer to Hampstead Parish and to the Workhouse.

DIXON, WILLIAM H., M.D. Edin., has been elected House-Surgeon to the Sunderland and Bishopwearmouth Infirmary and Dispensary.

DREWRY, GEORGE O., M.D. St. And., has been appointed Physician to the City Dispensary, Queen-street, Cheapside.

HAMILTON, WILLIAM, M.D. Edin., has been elected Medical Officer for the Workhouse of the Glin Union, Co. Limerick.

HAYWOOD, WILLIAM H., M.R.C.S. Eng., has been appointed Medical Officer of Health for Oldbury, Worcestershire.

HODGSON, J., F.R.C.S. Eng., has been appointed Consulting Surgeon to the General Hospital, Birmingham.

JEAFFRESON, C., M.R.C.S. Eng., has been appointed Medical Tutor at Sydenham College, Birmingham.

MCCARRON, JOHN, L.F.P.S. Glasg., has been elected Vice-President of the Glasgow Faculty of Medicine.

MCCLEAN, FRANCIS, jun., L.F.P.S. Glasg., has been elected Dental Surgeon to the City of Dublin Hospital.

MOORE, MILNER M., M.R.C.S. Eng., has been appointed Medical Officer to the Devonshire Hospital at Buxton.

RAYNER, WILLIAM, M.R.C.S. Eng., has been appointed Resident Surgical Officer to the Liverpool Workhouse Infirmary.

ROBERTSON, ROBERT, M.D. Edin., has been appointed Resident Medical Officer to the Workhouse, Infirmary, and Fever Hospital, Liverpool.

THOMSON, H., M.D., has been elected President of the Glasgow Faculty of Medicine.

DEATHS.

HEELIS, EDWARD, M.R.C.S. Eng., late Surgeon to the Government Civil Hospital, Hong-kong, at Limehouse, E., on October 10.

IRVINE, SAMUEL, M.D. Edin., Deputy Inspector-General R.N., at 11, High-street, Portsmouth, on October 14, aged 71.

LAWLESS, ROBERT WM., L.K.C.P.I., Assistant-Surgeon 23rd Regiment, at the Sanatorium, Parasnauth, Bengal, on August 18, aged 23.

LEREBOULLET.—Natural Science has sustained a severe loss in the person of Professor Lereboullet, who has just died of apoplexy, aged 61. He was Dean of the Faculty of Sciences, and Director of the Museum of Natural History at Strasbourg, and the author of some highly-esteemed works.

MASKELL, C., Surgeon, at Adderbury, Oxfordshire, on September 23, aged 33.

SPENDER, JOHN C., M.R.C.S. Eng., at Bathwick-hill, Bath, on October 5, aged 64.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Lexden and Winstree Union.—Mr. Charles P. Mingaye has resigned the Seventh District; area, 5760; population, 2596; salary, £43 per annum.

Manchester Township.—Mr. Alfred Philipps has resigned the office of Assistant Medical Officer for the Bridge-street Workhouse; salary, £100 per annum.

Pontefract Union.—Mr. John H. Braim has resigned the Second District; area, 8271; population, 5240; salary, £35 per annum.

APPOINTMENTS.

Axbridge Union.—Jonathan C. Williams, M.R.C.S.E., to the Eleventh District.

Lewisham Union.—David King, M.D. Aberdeen, M.R.C.S.E., L.S.A., L.M., to the Eltham and Mottingham District.

Liverpool Union.—James Anderson, M.R.C.S. Eng., has been appointed Medical Officer and Public Vaccinator for the District of Everton, in the Parish of West Derby.

Oswestry Incorporation.—Robt. Blaikie, M.R.C.S.E., L.S.A., L.M. Dublin, to the Oswestry District and the Workhouse.

Plympton St. Mary Union.—William M. Holmes, M.D. Edin., to the Second District.

West Bromwich Union.—Henry Sutcliffe, M.R.C.S.E., L.S.A., to the South East District.

A LANGUISHING SERVICE.—We hear that another naval Assistant-Surgeon has just resigned his commission.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the Naval Medical Compassionate Fund, held at the Admiralty on October 10, Dr. J. W. Johnston, Inspector-General, in the chair, the sum of £85 was distributed among the various claimants. During the last five years upwards of £1400 has been awarded to the necessitous families of deceased members.

MEDICAL STUDENTS.—From a return just made for the information of the Inspector of Anatomy, it appears that there are no less than 1014 gentlemen pursuing their Professional studies at the eleven metropolitan Hospitals, exclusive of those studying for the Dental Profession; of the former number 321 have commenced this Session. The number of students at the different Hospitals varies very much; one school has a class of 249, whereas another has only 30, the number of new entries at the former amounting to 80, and at the latter to 9 only. It is stated that about 20 students are pursuing their studies for the diploma of Dental Surgeon.

LEEDS INFIRMARY.—PRESENTATION TO MR. JESSOP.—After having filled the office of House-Surgeon to the Infirmary for upwards of five years, Mr. Jessop recently resigned that position, preparatory to entering upon private practice, with the respect and esteem of all who had the opportunity of observing his career. The old and present students of the Infirmary, being anxious to present to him some token of their esteem and of their obligation to him for the kindness and assistance he was always ready to render, thought the most acceptable article would be a microscope, which would be of use to Mr. Jessop in his Medical studies. A very valuable instrument, manufactured by Messrs. Smith, Beck, and Becks,

of London, the eminent makers, was accordingly purchased, and has been presented to Mr. Jessop during the last few days, the gift being equally honourable both to that gentleman and to the donors.—*Leeds Mercury.*

UNIVERSITY OF CAMBRIDGE.—C. W. P. Overend, from the Liverpool Institute, has just been elected to a Natural Science scholarship, of the value of £40 per annum, at Sidney College. Examinations for natural science and other scholarships at this College take place annually in October. They are open to all students who have not entered at the University. There are also similar scholarships at Downing College. Information respecting them may be obtained from the tutors of the respective colleges.

THE CATTLE PLAGUE.—In a Report to the magistrates of Edinburgh on the cattle plague, Dr. Smart asserts that the "staring hide" and "arched back" so frequently mentioned as distinctive features of this disease, while characteristic of the advanced forms of pleuro-pneumonia, are not at all marks of the Rinderpest. There is no cough or lung symptom in the pure and uncomplicated examples of the disease.

THE DINORNIS.—Mr. G. D. Lockhart's ship *Ravenscraig*, Captain D. B. Inglis, of London, just arrived from New Zealand, reports having brought home a curious relic of the ancient ornithology of those islands in the form of an egg of the Moa, or Dinornis, of New Zealand. The egg is alleged to have been discovered under somewhat singular circumstances. While some labourers were marking out a site to build upon in the Wairakie district, a pick struck upon a cave. On opening it, it was found to contain the skeleton of a Maori in a crouching position, holding with both hands the egg, and in such a manner as if death came upon the unfortunate native while in the act of partaking of the contents of the egg. Although the shell is slightly broken, the gigantic proportions of the egg yet remain perfect. It measures about nine inches in length, and seven inches in diameter.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—At the ordinary quarterly Court of Governors of St. George's Hospital, on Friday, the 13th inst., the prizes and honorary certificates for the past session were distributed to the successful competitors by the Chairman. The following is a list of the students to whom they were awarded:—The "Lewis Powell" prize in Clinical Medicine, Mr. W. Leigh; the "Brodie" prize in Clinical Surgery, Mr. Watson; the "Thompson" medal, Mr. Heywood Smith; the "Henry Charles Johnson" memorial prize in Anatomy, Mr. E. C. Ring; honorary certificates in Practical Anatomy were also awarded to Messrs. Cant and G. A. Kenyon. The prizes for general proficiency in all the subjects of each year of study were obtained in the third year by Mr. Underhill, in the second year by Mr. Cant, and in the first year by Mr. Pode. Honorary Certificates were awarded in the third year to Mr. Watson, in the second year to Messrs. Ring and Tindale, in the first year to Messrs. Brett, Laking, and Lovegrove. Certificates of having passed the examination satisfactorily were also awarded in the third year to Messrs. Barratt and Ridout, in the second year to Messrs. Davson and F. W. Jackson, in the first year to Messrs. Cox, E. Jackson, J. E. Kenyon, McConnell, and Stanley Stevens. It is hoped that ultimately all students will present themselves for these examinations at the close of each year of study, in order that the teachers may be able to estimate their respective progress.

THE GENERAL DIFFUSION OF COPPER IN NATURE.—Under this title Dr. Ulex gives an account of some investigations which have recently been made in the Hamburgh Zoological Garden. Several of the carnivora having died after feeding upon the same horse, they were supposed to have been poisoned by its flesh. Strychnine, phosphorus, and arsenic were searched for in vain; but in all the animals small quantities of copper were found. This was the case also with the horse which had furnished them with food, and it was concluded that this metal had induced the poisoning. Upon examining the flesh of another freshly-slaughtered and healthy horse, however, copper was also found in it; and a chemical investigation was forthwith set on foot, and this metal was found in the mammalia from man downwards—birds, amphibia, crustacea, insects, etc., to the lowest members of the animal kingdom—in fact, wherever it was sought for, in the most different animals coming from the most different countries. The wide-spread existence of this copper in the vegetable kingdom as well as in sea-water has been demonstrated by various chemists. It may be even detected in minute quantities in an article usually regarded as of great chemical purity, the Swedish filtering-paper, and in wood charcoal. Both these substances were employed in the above-mentioned researches, but in too small quantities to furnish any of the copper discovered. The fact of the remarkable diffusion of copper throughout the three kingdoms of nature is at all events well deserving greater attention on the part of the physiologist and Medical jurist.—*Allge. Wien. Zeit.*, 34.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—INTRODUCTORY ADDRESS BY H. G. RAWDON, M.D., LECTURER ON PATHOLOGY.—Dr. Rawdon commenced his address by referring to the various circumstances which made the first day of the session peculiarly interesting. He bade the students welcome to the school, and expressed his hearty wishes for their success in their studies, as well as in the Profession which they had chosen. He exhorted them to unremitting application to their studies, reminding them that the time allowed was very limited indeed. He impressed on them the importance of system and method in the arrangement of their studies, and advised them as to the best mode in which they were to be pursued. Having referred to the pleasure which he himself felt on looking back to his student days passed in that school, Dr. Rawdon proceeded to touch upon the resignation of Mr. Fletcher, the Lecturer on Physiology, in consequence of ill-health, which, he said, was a source of general regret, and to the appointment of Mr. Harrison to the position. He then touched on the high and solemn character of the duties devolving on members of the Medical Profession, observing that in their hands were, to a greater or less extent, the health and happiness of their fellow-creatures, among whom they would, in accordance to their degree of ignorance or knowledge, cast misery or diffuse blessings. After touching on the sciences of anatomy, physiology, and pathology, he dwelt briefly on the advantages which Medical students might derive from obtaining clinical clerkships and dresserships. Dr. Rawdon expressed his approval of the plan lately adopted by the Lecturers on Anatomy, of conducting the weekly and prize examination on the dead subject, and thus testing the student as to his practical knowledge. He cautioned them against any intermission in or neglect of their studies, under the delusive idea that by a few weeks of hard and forced application, previous to their examination, they could make up for lost time. Even if students did succeed in obtaining a diploma by such a course, they would be unfit for the practice of their Profession. He also condemned the practice of "grinding," which he said, was happily dying out, in consequence of a more efficient system of examination having been adopted. With a view of showing the great advances made in Medical science in modern times, Dr. Rawdon quoted extracts from several Medical works written in the sixteenth and seventeenth centuries. The earliest book upon the subject of Medicine he could find was "Guido; his questionaires of chyrugerie," bearing date 1579, and having the following title-page:—"A worke both learned and profitable for chirurgions, the like wheroff before this tyme hath not bene printed." At the commencement the author gives "a prayer necessary to be sayde of all chirurgions," in which, after referring to the Fall as the cause of mankind's infirmities, he praises God for "having given vertue unto trees, herbes, roots, beasts, fowles, fishes, wormes, stones, and metals, to the help of their griefes." In a work by "The reverend Master Alexis of Piemont," as he was termed, and about the same date, was the following title:—"The maner and secrets to conserve a manes youth, and to hold backe old age; to maintaine a man alwayes in health and strengthe, as in the fayreste flower of hys age." Don Alexis, the author, was once required to treat a number of soldiers of the Emperor Carlo Quinto (or Charles the Fifth), Duke of Austria's army for dysentery, and the following, he said, was most successful, though Dr. Rawdon remarked that he had no great notion of Don Alexis's veracity:—"First, I caused them to eate wel, and then on ye morning I gave them a vomit, and then every day after they had eaten I caused them to goe into the water of the sea, and there to remaine four or five hours." In a book by Peter Lowe, dated 1612, it is said, in reference to the amputation of fingers and toes. "Some for this purpose doe use a sharp chizell and a mallet, laying the member on a blocke, and so cuts it off." Dr. Rawdon next referred to the progress which of late years had been made in Medical and Surgical practice. The student had now, he said, the opportunity of learning his Profession from several professors, and he acquired a more extended knowledge of Medical science by listening to the discourses of men of opposite views. Nor should they under-rate the aid furnished by the extensive Medical literature of the present

day, whilst collateral science has also contributed to this end, chemistry and the microscope having rendered assistance in the study of physiology. Still it was necessary to progress, for, although their knowledge was constantly being increased, there yet remained something to be completed.

QUEEN'S COLLEGE, BIRMINGHAM.—The Session was opened by an Introductory Address by Dr. Hind. The subject chosen was "the present and probable future status or position—scientific, and social or Professional, of the Medical body, and its relation with those so-called signs of the times; and movements by which that future status must to a great degree be influenced and determined." In the course of his address, Dr. Hinds paid the following tribute to Professor Sands Cox, the founder of the College and Hospital. In private life we find it much easier to lose friends than to gain them. Therefore we strive to keep those we have. Does not the same principle apply to the College? Let us keep every man, so long as we can, who is a real friend to the College; and what should we have done without the corner stone? Without this corner stone, some of us believe that the whole superstructure would have toppled on some occasion ere this. I need mention no more, for a name is in every one's thought—a name which will remain an integral part of the future history of this College. Thus it should be, for he who could undertake and accomplish the self-imposed task of founding a College, and then a Hospital, and then that of collecting, for the purpose of required improvements in the latter, and by means alone of postage-stamps of the value of one penny, the sum of £1700, can be no ordinary man. Such a man is our esteemed Dean of the Faculty. After the delivery of Dr. Hind's address the following prizes were distributed:—Medicine—First medal and certificate, Mr. Thomas. Surgery—First medal and certificate, Mr. Thomas; certificate, Mr. Bradley. Chemistry—First medal and certificate, Mr. Down; second certificate, Mr. Peacock. Anatomy—First medal and certificate, Mr. Sawyer; certificate, Mr. Bradley; certificate, Mr. Clarke. Physiology—First medal and certificate, Mr. Snow; second certificate, Mr. Sawyer. Practical Anatomy and Demonstrations—First medal and certificate, Mr. Sawyer; certificate, Mr. Bradley; certificate, Mr. Wheatcroft. Materia Medica and Therapeutics—First medal and certificate, Mr. Peacock; second certificate, Mr. Snow. Midwifery—First medal and certificate, Mr. Brown; second certificate, Mr. Peacock. Botany—First medal and certificate, Mr. Morris; second certificate, Mr. Cranmer. Practical Chemistry—First medal and certificate, Mr. Down; second certificate, Mr. Peacock. Forensic Medicine.—First medal and certificate, Mr. Bradley; certificate, Mr. Clarke; certificate, Mr. Withington.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Dr. Dyce Brown's Paper is intended for early publication.

D.—Ask any Physician or Surgeon, and pay him a fee.

Mr. T. Taylor.—We regret that our arrangements do not permit us to insert in the obituary the names of any except members of the Medical Profession.

A Candidate, Brighton.—As the examination in classics, mathematics, and French for the Fellowship of the College of Surgeons was not over until Thursday evening, we are unable to publish the result this week.

Alton.—We have already, on several occasions, noticed the subject on which our correspondent writes. There is no doubt that the scale of fees is disproportionate to the work required; but we are credibly informed that in consequence of the small sums insured and the moderate rates of insurance charged, the Government could not make the fees higher without loss.

A Fellow and Member of the Association.—The subject of voting by proxy is now under the consideration of the Council. Need we remind our correspondent that great bodies move slowly? The *Proceedings* are not yet published. The Calendar, which is to supersede the list, is printing.

G. P. R., M.D.—The honorary gold medal of the College of Surgeons has only been presented for extraordinary services and to the following gentlemen—viz., in 1800, to Mr. James Wilson; in 1822, to Mr. James Parkinson; in 1825, to Mr. Joseph Swan; and on the last occasion, in 1834, to Mr. George Bennett. No award has been made since.

THE ALLEGED DEGENERACY OF VACCINE LYMPH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In a communication in a recent number of your Journal the writer appears to found the idea of the degeneracy of vaccine lymph on the supposed fact that vaccination in the present day produces little or no inflammation of the arm or febrile disturbance.

As these effects can be easily produced, I beg to express the belief that there is still room for two opinions on the subject. In proof, let the lymph be taken only from those vesicles that are young and destitute, or nearly so, of areola. On inquiry, these will be found to have made their first appearance only three, four, or five days previously. There is this disadvantage, however, to a public vaccinator, that the mother, finding the child ill, declines often to bring it out, and therefore it is not forthcoming on the inspection-day. Besides, is it not rather uncommon for a public vaccinator to see infants on the ninth and tenth days, when the febrile disturbance is most to be expected? I am, &c.

Southwick, Sunderland, Oct. 14. F. CLEMENT, Public Vaccinator.

MR. WELLS'S CASE OF CÆSAREAN SECTION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having been informed by several of my Professional friends that their impression from the perusal of the case of ovariotomy complicated with Cæsarean section, published by Mr. Wells in your number of September 30, was that I was a party to the diagnosis made, without wishing to cast in any way the slightest imputation on a colleague, still in justice to myself I feel bound to say that I am in no manner responsible for the diagnosis made. I never saw the patient till within a few minutes before the operation, and then only to advise as to the propriety of immediate operation at the Hospital or after removal to a neighbouring lodging.

I am, &c. C. H. F. ROUTH, M.D.

52, Montague-square, October 12.

CHLOROFORM ADMINISTRATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As Mr. W. J. Smith claims a few closing remarks on the best mode of administering chloroform, its chapter of accidents, its use in midwifery, the mode of death, the part played by heart disease, etc., possibly a few hasty words may clear up what still remains obscure.

A popular error loosely adapted from a wrong interpretation of an induction by Snow in the *Lancet* has thrown back chloroform a dozen years; this error pervades all our manuals; the *British and Foreign Quarterly*, all the ponderings in weekly essayists, etc., and heart disease, like a great ogre, has frightened away this healing dittany from many an agonised sick patient. It is for us to prevent this as far as possible. A better knowledge is abroad, if our "Introductories" would say so; and in anæsthetics, as in other branches of Medicine, by deductive reasoning we are now convinced of the correctness of an idea from groups of facts compared one with another. No doubt we now and again lack some necessary link in the chain of proof as to this idea; but this is better still than erroneous statistics or hasty induction. As we will settle such questions as the part played by mercury in the cure (?) of syphilis, change of type in disease, use of wine in typhus, or whether the present cattle plague is not from Russia, as held by persons who are only afraid of the word "quarantine," so we must not be frightened by errors as to heart disease and chloroform.

We may or did for a season hold that the lancet in typhus is better than wine (I have heard this often said); that heart disease must ever be a giant Despair in our path as to chloroform, because it was held to be so a dozen years ago; we may make even a small and dismal party question of it; yet even in cases where actual death occurs, a steady flow of blood from the heart (right side) is distributed over the capillary surface of the lungs, requiring only electricity to set up artificial respiration, and thus restore life. We must as yet enjoin caution, nevertheless, on those who dogmatise as to what is exactly the mode in which death from chloroform occurs.

Of my experience of chloroform, I may, perhaps, be permitted to say over again that I went to Paris in 1848, when it had just "come out." I then saw, and attended as visitor, 1600 gun-shot wounds treated for the first time by chloroform, an account of which appears in the *Medical Times* of that epoch. Next, that almost continuously from that time to this (seventeen years), I have had occasion in London Hospital theatres to observe the pulse, respiration, condition of the pupil, etc., of at least ten thousand cases; and yet I never had the opportunity of seeing the mode in which death occurs. I attended over a dozen minute post-mortems and inquests on such cases. At two Hospitals I happened to come in a few minutes after the deaths, the dead bodies still on the table—a very mournful sight! In one case at Guy's, the galvanic battery in process of vigorous use in every conceivable way but the right one (I am nearly certain such a case could now be easily restored to life); in another at St. Thomas's, oxygen was being used, and rather killed the patient outright. The peculiar rhythmic action of respiration by the Faradisation plan, so infinitely valuable, was not dreamt of in either case. Mouth-to-mouth inflation, upheld by the editorial admirers of chloroform "mixtures," caused emphysema rather than healthy capillary lung circulation.

I believe in the earlier years under this teaching the pulse was watched to the total neglect of the respiration, and deaths were very frequent. Even now deaths from chloroform occur every week in England; but we look to the Registrar-General's registerings for the fact. These sad and direful cases occur from the innocence of nurses, or dressers, or first or second year's students, added to idiosyncracy of chloroform patients, which it requires rare tact and thoughtfulness to guard against. Deaths have occurred, too, this year in Scotland and Ireland from chloroform. I have never had a death from chloroform myself, though I have collected now the facts of some 250 such.

As to administration, the simpler the inhaler the better, and let the administrator use only his own inhaler and simple chloroform. A napkin pinned into a cone shape is at once clean and safe, and always to be had. Then, as to quantity, experience of late runs in favour of largish doses, and the inducing of anæsthesia quickly in about four minutes. This saves the vomiting stage, and the period when spasm of the glottis occurs and apnœa. If the pulse fail during the administration, a dash of ether in the inhaler seems to restore it while continuing the anæsthesia as chloroform would. We have Rechabites who forbid the use of wine in typhus, and say it only adds to the intoxication of chloroform; but a few glasses of port wine, with bark and ammonia, for a week before a capital operation are excellent preparatory measures. In the *Transactions* of the British Association and *Medical Mirror* I have gone further into the subject, if Mr. Smith wishes further to discover how my views agree with his speculations on the tonsils.

A remedy as bad as the disease almost is, in chloroform accidents, that of passing the negative pole of a small electro-galvanic battery along the inferior vena cava into the right side of the heart, and the opposite pole over the heart externally. In this way a pulmonic current quite wonderful may be produced from the contraction of the right ventricle thus set up,

a contraction that will be continued even to the left ventricle, ending in what appears restoration of life and general muscular action and rhythmical action of the muscles of the chest. A remedy as bad as the disease this poking of needles into the heart itself, but still very suggestive: the patient will probably recover from the apparent death by chloroform, but die of endocarditis thus set up, judging by experiments on animals.

In midwifery chloroform continues to be a safe and blessed boon to the otherwise agonised mother. It requires great discretion in the use of it. The patient almost invariably begs to have very much more of it than it might be right to let her have. There is no advantage in quackish anodynes or mixtures advertised by men who wish Physicians' prescriptions to be written in English; useless complications of absurd mixtures are to be avoided; they have been tried and found wanting.

Deaths from chloroform in midwifery can as yet only be argued about as an unknown quantity, an algebraic x. One-half of Mr. Smith's late note tested in this way is a contradiction of the other half. Our chief views or ideas are only corrected by groups of facts in shape of experiments on animals, but in not one of the 250 deaths in the human subject was there heart disease; in not one was electricity tried; in none was the respiration regarded as the pulse was; and in one of the latest accidents the safety balloon bag was being used, or "tried and found wanting."

I am, &c.

Sackville-street, September 23. CHARLES KIDD, M.D.

THE ANTIQUITY OF THE CATTLE PLAGUE.

The following letter has been sent us for publication. It originally appeared in the *Newcastle Daily Journal*:—

"SIR,—Will you allow me, through the medium of your columns, to show that the generally received opinion as to the recent origin of the pestilence now devastating our herds of cattle is by no means founded on sufficient historical data, but that, on the contrary, it was, in all probability, a scourge familiarly known in ancient times.

"Those who are at all conversant with the subject, and, therefore, competent to express an opinion, will, I feel assured, allow that the Georgics of Virgil convey a lucid description of the condition of agriculture, as practised in its various branches by the Romans, in the age of Augustus, immediately prior to the Christian era—making, of course, every allowance for poetic license on the part of the author. Now Virgil, in the third book of his Georgics, pourtrays a disease by which, in his day, the herds of cattle in Italy, and many of the adjacent Roman provinces, seem to have been almost exterminated, and this disease, moreover, possessing so many points of resemblance to our modern rinderpest that even at this distant date it is much more easy to establish than disprove the identity of the two affections, as will appear from the following passages:—

"470. Non tam creber, agens hyemem, ruit æquore turbo,
Quam multæ pecudum pestes; nec singula morbi
Corpora corripiunt; sed tota æstiva repentè,
Spemque, gregemque simul, cunctamque aborigine gentem.
Tum sciat aerias Alpes et Norica si quis
Castella in tumulis, et Iapidis arva Timavi
Nunc quoque post tanto videat, desertaque regna
Pastorum, et longe saltus lateque vacantes.
Hic quondam morbo cœli miseranda coorta est
Tempestas, totoque autumni incanduit æstu;
Et genus omne neci pecundum dedit, omne ferarum,
Corrupitque lacus, infecit pabula tabo.
Nec via mortis erat simplex, sed ubi ignea venis
Omnibus acta sitis miseros adduxerat artus;
Rursus abundabat fluidus liquor; omnia que in se
Ossa minutatim morbo collapsa trahebat.
Sæpe in honore Deûm medio stans hostia ad aram
Lanea dum niveâ circumdatur infula vittâ
Inter cunctantes cecidit moribunda ministros.

"I venture to give the following translation:—

"'The whirlwind driving the wintry storm rushes not so frequently from the sea as cattle plagues are numerous. Nor do diseases sweep away single bodies only, but also whole folds suddenly, the young and the old flock together, and the entire stock from its origin. He will be convinced of this sad truth who views the aërial Alps, and the Bavarian castles on the hills, and the fields of Iapidian Timavus, and the regions of the shepherds oven now after so long a time deserted, and the empty meadows stretching far and wide.

"Here, some time ago, a devastating plague arose from the distempered air, and grew more and more virulent through the heat of autumn, and destroyed all the cattle, all the wild animals, poisoned the lakes, and infected the pastures with contagion. Nor were the symptoms of the disease common and familiar; but when the burning fever penetrating every vein had shrunk their wretched limbs, again the pestilential fluid abounded, and converted into its own substance the marrow of the bones, rendered putrid by the disease. Often amidst the sacrifice to the gods, the victim standing at the altar, the wooden fillet with snowy label binding its temples, has dropped down moribund amongst the surprised officiators.'

"Here, then, is a vivid picture of a cattle plague springing up suddenly anterior to the time of Virgil, and devastating whole regions so effectually that even in his day they had not been re-peopled by inhabitants.

"Let us now compare the features (viewed pathologically) of the ancient with those of the modern disease, and see how far it is possible to establish an identity.

"First of all, Virgil's malady sprung up unexpectedly and exterminated whole flocks suddenly, old and young, and extended itself in every direction. This proves it to have been intensely contagious. Secondly, it grew most virulent during the heat of autumn. Thirdly, its progress was rapid, the animal falling suddenly down moribund. Fourthly, it was almost invariably fatal. Fifthly, it was a species of fever. Here, then, we recognise all the features of the rinderpest, about whose modern origin so much has been written.

"The following quotation will show the inefficacy of the treatment employed in its cure:—

"Profuit inserto latices infundere cornu
Lenæos, ea visa salus morientibus una
Mox erat hoc ipsum exitio.

"At first it was of service to pour wine down their throats with a horn; this seemed the only remedy for the dying. Soon after it proved their destruction:—

"Præterea, jam nec mutari pabula refert,
Quæsitæque nocent artes: cessere magistri,
Phillyrides Chiron, Amythaoniusque Melampus.
Sævit et in lucem Stygiis emissa tenebris,
Pallida Tisiphone; morbos agit ante metumque,
Inque dies avidum surgens caput altius effert.
Balatu pecorum, et crebris mugitibus amnes,
Arentesque sonant ripæ, collesque supini.
Jamque catervatim dat stragem, atque aggerat ipsis
In stabulis turpi dilapsa cadavera tabo;
Donec humo tegere, ac foveis abscondere discunt,
Nam neque erat coriis usus.

"'Nor, moreover, is it of any service now to change the pasturage of the cattle. The healing art applied has proved injurious; its accomplished masters, Chiron and Melampus, have failed. Pale Tisiphone, despatched from the Stygian shades to the regions of light, grows furious; drives disease and terror before her, and daily rising, erects her rapacious head still more highly. The parched banks and the sloping hills resound with the bleating of flocks and the repeated lowings of the cattle; and now by droves and flocks she deals destruction, and piles up in the very stalls the corpses rotting with foul contagion, until they learn to bury them in the ground and conceal them in pits. Their hides could not be used,' etc.

"Between the ancient and modern treatment of the malady there seems to be few points of difference, except, perhaps, that we anticipate the disease by ordering the immediate destruction of its victim.

"I have no doubt that the works of Cato, Columella, and Varro, will give more explicit information on this subject; but they are not within my reach at the present moment. "I am yours truly,

"A. S. DONKIN, M.D.

11, Elswick-villas, September 22, 1865.

"P.S.—Since the above was written, I see Mr. Disraeli has, in a cursory way, alluded to the subject in a speech to the agriculturists of Buckinghamshire."

COMMUNICATIONS have been received from—

Mr. THOMAS TAYLOR; Dr. WOLFE; Mr. F. CLEMENT; THE UNIVERSITY OF CAMBRIDGE; O.; Dr. D. DYCE BROWN; Dr. A. W. BARCLAY; Mr. F. EDWARDS, jun.; Dr. JAMES A. GRANT; Dr. BULLAR; Mr. A. FIDDES; Dr. JOHN PATTERSON; Mr. EDWARD BELLAMY; Dr. SMART; Dr. T. C. ALLBUTT; THE ADMIRALTY, SOMERSET HOUSE; Dr. F. E. JENCKEN; APOTHECARIES' HALL; Dr. F. W. GIBSON; A.; Dr. JOHN WHITMORE; Mr. J. Z. LAURENCE; Dr. C. R. BREE; Dr. SILVER; Dr. USSHER; Mr. J. W. IRVINE; Mr. T. NUNNELEY; THE SECRETARY OF THE EPIDEMIOLOGICAL SOCIETY; Dr. G. R. IRVINE.

BOOKS RECEIVED.

On the Application of Physiological Tests for Certain Organic Poisons, and especially Digitaline. By C. Hilton Fagge, M.D., and T. Stevenson, M.D.

*** An important and interesting paper. We shall recur to it.

Report on the Sanitary Condition of the Parish of St. Mary, Islington, during the year 1864. By Edward Ballard, M.D., Medical Officer of Health.

*** Contains an account of the mortality for seven years of persons following twenty-one kinds of occupation, with the proportion dying from each of the principal forms of disease.

The Endoscope as an Aid in the Diagnosis and Treatment of Disease. By Francis Richard Cruise, B.A., and M.D.

*** Reprint, with some additions, from the *Dublin Quarterly Journal*.

A Lecture on the Treatment of Gastric Ulcer. By B. W. Foster, M.D. London: T. Richards.

Handbuch der Allgemeinen und Specialen Chirurgie. Dr. V. Pitha, Dr. Billroth. Erlangen: V. F. Enke.

Bathing: How to do it, When to do it, and Where to do it. By Edgar Sheppard, M.D. London: R. Hardwicke.

Die Grossen Volkskrankheiten des Mittelalters. Von J. T. C. Hecker, Berlin: Th. Ch. Tr. Enslin.

APPOINTMENTS FOR THE WEEK.

October 21. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

23. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

24. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

25. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

27. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

EXPECTED OPERATIONS.

St. Peter's Hospital for Stone.—The following Operation will be performed on Tuesday at three o'clock:—

By Mr. Armstrong Todd—Lithotomy.

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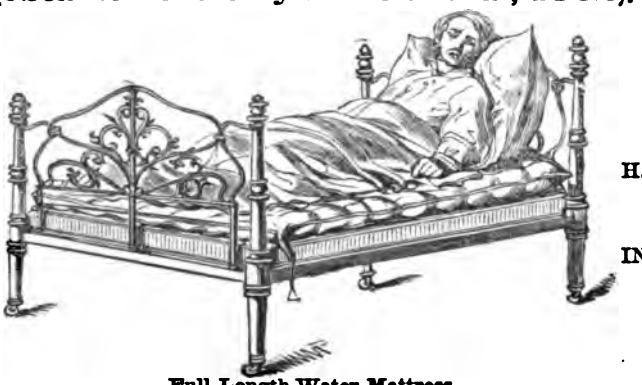

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ORIGINAL LECTURES.

A CLINICAL LECTURE

ON THE STUDY OF CHILDREN'S DISEASES.

GIVEN AT THE

Hospital for Sick Children.

By CHARLES WEST, M.D.,
Physician to the Hospital.

GENTLEMEN,—A very wise and good man, to whom I owe much of whatever I have learned of my Profession—Dr. Latham—makes somewhere the remark that he was struck at the outset of his career with how, in a large Hospital, knowledge was continually running to waste for the want of some one to gather it. He says, too, that this which struck him then, struck him even more forcibly in after years;—the old experience, in short, "*Ars longa, vita brevis*," which is realised more and more as the shadows lengthen and the day goes down.

I feel it specially with reference to this Hospital, because here, or in inquiries such as its wards suggest, my time and thoughts and energies have been engaged for the past five-and-twenty years, and I rejoice to see you here to-day, Gentlemen, because in some of you I trust that I may find fellow-labourers—men already schooled by previous study, and who will be able as well as ready to gather for the common benefit some of that knowledge which will otherwise be but too likely lost.

But I am glad, also, to see others here, who as yet are but imperfectly trained, because, while they have much to learn, they have come here to one of the best places in which to learn it, since disease may here be studied in its simplest forms.

It has been recommended by some most fitted to give advice that the student of Medicine should begin with the diseases of the eye, since through its transparent coats, as through a glass, the various processes of disease and recovery may be seen transacted, and "many of the little wonderful details in the nature of morbid processes may be learned, which, but for the observation of them in the eye, would not have been known at all." The ophthalmic wards of a Hospital must, indeed, be revisited at a later period for the sake of the special knowledge to be obtained there; but they may well be visited at first for the elementary teaching which they afford.

Somewhat in the same way you may come at two periods of your career to the study of children's diseases. *First*, to observe disease in its simplest conditions; then *later*, to investigate the peculiarities of symptoms which result from the tender age of your patients, and the modifications of treatment which on that account may be required.

First, I said, to study disease in its simplest form. The chemist who analyses a substance submits it to various processes in order to remove from it all extraneous matters, and then applies to it tests to determine its real nature. This which the chemist does, however, is very difficult indeed in the investigation of disease. Pure pathology is the doctrine of disease unmodified by the intervention of disturbing causes from without or from within. To this in adult age we scarcely ever attain. The body even in apparent health yet tends imperceptibly to decay. We study disease in its influence on parts already damaged. The follies of youth, the vices of maturer age, the anxieties of business, the failure of hope, all leave their impress on the body, diminish its reparative powers, and render the different organs inapt to do their duty, so that almost all disease appears in a complicated, scarcely ever in a simple, form.

Care, too, which sits at the bed's head of the grown person, does much to retard recovery and to complicate disease. "Is your mind at ease?" said his Physician to poor Goldsmith on his death-bed, observing how his pulse outbeat the frequency for which his bodily ailment would have accounted. In childhood there is little or none of this; no regret for the past; no dread of the future. The present is the world in which little children live; pain past is almost forgotten; and this mental tranquillity contributes in no small degree to their recovery.

But I will no longer occupy you with insisting on things with which a little time spent here will make you quite familiar. I will rather take a hasty survey of some of the cases which are now in the Hospital, or which have been here so recently that many of you have had the opportunity of seeing them. I select them very much for the illustration they furnish of the unsolved problems which I want some of you to try to answer.

A little boy, aged 19 months, was admitted into the Hospital on the fourth day of an attack of pneumonia of both lungs. His respirations were 60; his pulse beat 148 in the minute. There was dulness at the base of both lungs, especially of the right; fine crepitation was heard below both scapulæ. I scarcely need add that the child seemed very ill. He was drowsy, but at the same time restless. He was very hot, and his skin dry. He had some cough, but not very much. A mustard poultice was applied to the back and the chest. A little ammonia was given with small doses of ipecacuanha; beef tea and wine for food.

In the night the distress and restlessness were extreme until relieved by spontaneous vomiting; but on the afternoon of the fifth day the child was already better; the respiration had fallen in frequency to 44; and there was slightly improved resonance of the chest. Improvement continued. On the ninth day the respiration had fallen to 21 and the pulse to 124; percussion yielded an almost natural sound; and some largish crepitation was the only evidence remaining of the dangerous illness.

Now here the recovery took place speedily and decisively, and in a way in which one could not refer it to the remedies employed. Nor is this a solitary case; it is one of many to which attention has of late years been especially called, which raise the question as to when and how far an expectant treatment may be adopted in inflammation of the lungs. It suggests to you the importance of determining the period of pneumonia at which spontaneous improvement is most likely to occur, the circumstances which in any given case justify you in expecting it, and those which, on the other hand, render its occurrence doubtful. Further, there remains the important question whether, though recovery would take place independent of treatment, it yet occurs sooner, or is more complete if treatment is adopted than if the case is let alone.

A girl 7¼ years old was admitted with the following history: Nine months before she suffered from severe pain in her limbs, which yet did not constantly keep her in bed; but she was up every morning, and then as afternoon came on grew worse and went to bed. During much of this time her heart beat very much, and at the end of a month, when the pains in her limbs had already ceased, she suffered so much from her heart that she was confined to bed for six weeks. When better she attended for some months as an out-patient, but six months after her illness began her legs swelled, her breath became short, and at length she came for admission here.

The heart's impulse was visible in the fourth, fifth, and sixth interspaces; the apex beat in the sixth interspace, one and a half inch outside the nipple line. The upper dulness limit reached to the third rib, and the inner to a finger's breadth to right of the sternum. The oblique diameter of the heart was five and three-quarter inches, the transverse five, the longitudinal three and three-quarter inches; while, as you can now see for yourselves, there is a very manifest bulging of the whole heart's region. There was a prolonged wheezing systolic murmur heard at the apex, which diminished rapidly in loudness towards the base; the second sound was inaudible at the apex, but clearly heard at the base of the heart.

I am not going to trace this child's history in detail. She got relief from treatment, went out much better in three months, but soon came back in a state of great distress, for now pericarditis had come on. For some time she seemed likely to die, but once more got better, and you see her now eighteen months after the rheumatism in which her sufferings began.

Now, here you have a case of heart disease, with enormous dilatation of the organ, succeeding to a comparatively slight attack of rheumatism. Each year adds to the child's sufferngs, from which she will find rest only in an early grave.

Why is this so? Why does even a very small amount of valvular disease tend in some instances to produce a large amount of dilatation?

It is not an invariable occurrence. So little, indeed, is it invariable that Dr. Latham notices the probable existence of some compensating power in the young heart by which atonement is made for the effects of valvular disease: "a certain *protective* power possibly inherent in the growing heart, whereby it can accommodate its form and manner of increase to material accidents, and so suppress or counteract their evil tendencies."

But why is this sometimes? Why not always? Why not often? Is this happy issue rarer now than formerly, and if

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so, can it be that the change in practice which recent years have brought with them—the abolition of depletion, the disuse of mercury, have rendered the cure of rheumatic affections of the heart less complete than formerly? Or is it only, and this I apprehend to be the case, that our diagnostic skill and pathological knowledge have outstripped by far our therapeutical resources, that we discover the ills which we are impotent to cure?

A strong-looking, well-made girl, 10 years and 9 months old, began to suffer causelessly from chorea three weeks before admission into the Hospital. There was no history of rheumatism in her family, nor had she herself presented any rheumatic symptoms, though there was a weak systolic bruit audible at the apex of her heart, which persisted, but did not increase either in extent or in loudness during the whole of her illness. The choreic movements were at first limited to the left arm, but they increased rapidly in spite of treatment, so that a month after admission the child was compelled to be placed in a bed padded all round on account of the violence of her movements, while deglutition was very imperfect, and speech almost abolished.

She remained in the Hospital for three months; at the end of which time she was almost well, and was sent into the country. She was submitted to very varied treatment, but without benefit, and her eventual improvement was spontaneous. For a time she improved in the country, but at the end of two months returned with a relapse of all her symptoms, though their severity was far less than on the former occasion. In this instance medicine seemed just as unavailing as before. The child began spontaneously to improve at the end of one month, was well at the end of two months, and has, I believe, since continued so, though the time is yet too short to feel sure of the permanence of her recovery.

Here, again, are several questions which await an answer. Why is the first attack of chorea almost always the most severe? Why is there no definite relation between the severity of chorea and the severity of the heart affection, and why is the heart sometimes quite unaffected even though the chorea is very severe? Lastly, why is the heart affected at all, since the assumption of its rheumatic character, though true to a certain extent, is yet by no means always tenable?

Further, what clear indications can be laid down for the treatment of chorea besides the two furnished by the existence of constipation on the one hand, and anæmia or debility or the other, and the combined use of purgatives and tonics which they suggest?

Zinc and antimony, strychnine and belladonna, shampooing and sulphur baths, have all been used in the treatment of chorea. When is the one right, when the other, or in what combinations are they best employed? In what combinations? for I would not have you fall into the error into which the prevalent folly of homœopathy may imperceptibly lead you of supposing that in order to act at all each remedy must be employed alone. He is the best Physician who knows best not only what remedies to use but in what combinations; as the skilful general trusts not to his infantry alone, nor alone to his cavalry, but gains his victory most surely and most quickly by using different troops in combination; or,

> "As many arrows loosed several ways
> Fly to one mark."

Two more cases, and I have done for to-day. One is in the Hospital now, the other recently left.

A boy, 8¼ years old, was always a backward child, and while teething had three attacks of convulsions. Three months since he seemed causelessly languid for a fortnight; and then he was suddenly seized with vomiting. For six weeks together the vomiting returned daily or every other day. It was associated with an increased languor, and, by degrees, with drowsiness, and with pain in the occiput, which, though constant, became sometimes so severe as to make him scream aloud. A month after the commencement of these symptoms he was first observed to squint, and at the end of two months he had a fit which lasted for half-an-hour. In the ensuing month these fits returned six times. The vomiting ceased after the first fit, but the other symptoms continued, and became associated with pain on any movement of the limbs, and three weeks before his admission into the Hospital it was first observed that his pupils were dilated, and that he had lost the power of sight.

He was a pale, thin child, with a peculiarly wretched expression of countenance; absolutely blind—his right eye looked straight forwards, his left inwards, and both were in a state of constant motion. He had complete power over his limbs. His headache was not constant; his appetite was good, and he did not vomit during the fortnight that he remained in the Hospital. Nothing, however, seemed for a moment to amuse or please him, and he was allowed to go home all the more readily that his case was not one which held out much prospect of benefit from treatment.

What was this case? There was no family history of tubercle, nor did the boy present any appearance of it. Still the symptoms are not those of any acute inflammatory disease, and I should be disposed to imagine that they were due to the gradual development of some tumour (and these tumours are almost always tuberculous), which, arising at the base of the brain, had by degrees increased until by pressure on the optic nerve it had abolished the power of vision. And here it may remain stationary, though more probably it will continue to grow until it causes death either suddenly by some outpouring of blood from the vessels at the base of the brain, or, more slowly, by the production of inflammation, or by effusion into the ventricles consequent on pressure on the veins of Galen.

Here is, lastly, another case, somewhat obscure indeed, but yet less so, I take it, than the preceding one:—

A girl, 8½ years old, whose father and two of her brothers had died with symptoms of brain disease, had suffered for a fortnight from troublesome cough, when she seemed unusually heavy, was attacked by violent sickness with headache, and sank speedily into a state of stupor, which continued with intervals, during which her mind wandered, and she rambled in her talk for thirty-six hours. At the end of this time consciousness returned, and the child sat up in bed, and showed some gleams of cheerfulness, but the pulse, which had been irregular during the state of stupor, still continued so, and the head was held somewhat retracted. Pain in the head and some retraction of it continued, though the child was well enough to be up, and moved about the ward.

She left by her mother's wish in a fortnight, and at the end of another fortnight she returned, much emaciated, complaining of pain which was now referred more to the ears than to the head, of pain also in the neck and in the right shoulder, towards which her head was inclined.

On this occasion she remained in the Hospital four weeks. During this time she grew thinner and thinner, her skin became harsh, her abdomen retracted and tender to the touch, and her head was still drawn back as before. Auscultation now found the breathing weak everywhere, but especially so at the apex of the left lung, and percussion there was obviously dull. There was no vomiting, however. The bowels, once constipated, had now become regular, the complaints of headache were less constant, and the pulse had lost its irregularity. General tuberculosis was advancing; the mischief in the brain, I suppose, was stationary.

What is the import of this sudden development of the signs of cerebral disease, and what of their spontaneous passing into abeyance? If we could learn to answer these inquiries aright we might possibly do something to arrest disease, even though we were unable to effect its cure. Here, then, is another problem which I leave for your consideration.

But, say you, you came here to be told what I do know, and I have talked to you almost entirely of what I do not know, and that is not the object of a lecture, the purpose of which should be to impart positive knowledge.

Gentlemen, it is not quite so. The acquisition of knowledge implies an active, not a passive state, and to this it was my object to excite you. It is when you seek as for riches, and search as for hid treasure, that you gain it; so at least said the man wiser than other men, and who himself wrote of all things, from "the cedar of Lebanon to the hyssop that groweth on the wall."

You have come to the study of Medicine furnished far differently from those who, like myself, entered on it more than thirty years ago. It is but right that you should turn these advantages to good use. We are, indeed, as has been well said, like people standing together on a hill, which I have climbed before you, and I, to whom the landscape is in some measure familiar, may say to you, look here and look there, and you will see this and that. But further, I say to you, the objects there are indistinct to me; but you have perspective glasses of higher power than mine; turn them in this direction or in that, and you may with patience discern clearly what I can see but partially, or, with my imperfect instrument, perhaps cannot see at all.

If you visit the wards of this Hospital I may, too, do some of you this service, that I may point out to you what is worth the seeing, and may help to guard you from the dangers of the

young student,—that of playing with the instrument itself, vain, perhaps, of his dexterity in its use, or of turning it thoughtlessly on trifling things not worth the investigation.

You must not forget that it is your duty, as it is mine, to map out the country for the use of yourselves and of future travellers, to seize its great features, which may serve as land-marks, and not to waste your time on some quaint tree or curious rock which lies quite out of the path along which you have to journey.

"Nisi utile est quod agimus vana est gloria nostra" should be your motto, though in a different and a lower sense, indeed, from that in which it was employed by the inspired penman some eighteen hundred years ago.

ORIGINAL COMMUNICATIONS.

CASES OF OVARIOTOMY IN PRIVATE PRACTICE.

By T. SPENCER WELLS, F.R.C.S.,
Surgeon to Her Majesty's Household, and to the Samaritan Hospital.

EVERY case in which I have performed ovariotomy in the Samaritan Hospital since the last case recorded in the first volume of my work on "Diseases of the Ovaries" has been published in the *Medical Times and Gazette*. But no case which has occurred in my private practice has been published since six cases which may be found in the first volume of this journal for this year, pages 304 and 355. The following cases include all in which I have operated since the case last published and the present month.

Case 1.—*Ovarian Tumour and Pregnancy—Abortion—Ovariotomy—Recovery.*

On March 11, 1865, I went into Northamptonshire to meet Dr. Francis, of Northampton, and Mr. Forster, of Daventry, prepared to perform ovariotomy upon a lady whom I had not seen, but upon whose case I had corresponded with both these gentlemen, and had been informed that she was 36 years of age, had for eight years lived a married life, and had two children, the elder 7, the younger 5 years old. Besides this she had aborted twice, the last abortion having occurred in January, 1865, in the thirteenth week of pregnancy. There was no great emaciation, no ulcers of the legs, no varicose veins, and although when pregnant the patient had suffered from œdema of the right leg, the swelling had entirely disappeared. The girth at the umbilical level, when measured by Mr. Forster early in March, was 39½ inches, the distance from the umbilicus to the ensiform cartilage was 6½ inches, to the pubic symphisis 9½ inches, to the right ilium 9½, and to the left 9¾. The uterus was quite moveable, and was slightly inclined to the right side of the pelvis. The cervix uteri was soft, enlarged, and elongated; the vagina was healthy. The catamenia, which began at the age of 14, had always been regular. They ceased thirteen weeks before the last abortion, and since the abortion there had always been more or less of a coloured discharge without any distinct period. The urine was normal, but it could not be retained for more than two or three hours. The digestive organs were sound. The patient slept well, and complained of no pain. Ever since the commencement of her disease, however, she had been subject to hysteria. The lungs and heart were healthy; the pulse usually about 88. There was no distinct hereditary tendency to disease, but one of the patient's sisters died from cancer of the breast. Nearly two years before I saw her the patient had been conscious of a fulness in the left side of the abdomen and of pain there when coughing or shaken in any way, as, for instance, by the motion of a carriage. Twelve months later Mr. Forster discovered an abdominal tumour. At this time the patient suffered much from pain and swelling of the leg, but erroneously believed herself to be pregnant. The tumour increased rapidly in size, but the patient really became pregnant and miscarried about the end of the third month, in January, 1865, as previously stated. Towards the end of February a general hectic condition came on, with crepitation over the surface of the tumour, and other symptoms of cyst inflammation.

On examining the patient, I found that the abdomen was occupied with a semi-fluctuating tumour, which reached from the pelvic brim to six inches above the umbilicus, filling the hypogastric, umbilical, epigastric, left inguinal, and left iliac regions; but, although extending considerably to the right of the mesian line, still leaving a large portion of the right iliac and right inguinal regions clear on percussion. About the middle of the right border of the tumour there was a deep sulcus, almost giving the idea that both ovaries were enlarged.

Entirely agreeing with the conclusion at which Dr. Francis and Mr. Forster had arrived, I performed ovariotomy at once, Mr. Forster, Mr. Johnson, and Mr. Lewis, of Daventry, giving me their kind assistance, and Dr. Francis administering chloroform. The incision was commenced below the umbilicus, and was enlarged until it reached from one inch above the umbilicus to two inches above the pubic symphisis. There were no adhesions. One large cyst was emptied by tapping, and a second cyst tapped through it. The whole tumour was then withdrawn. The pedicle, which sprung from the left side of the uterus, was of three fingers' breadth; the left Fallopian tube was very thick and long, the fimbriæ having been attached to the front of the cyst nearly as high as the umbilicus. The pedicle was secured in a medium-sized clamp, which broke when it was being tightened. A second clamp was immediately applied, but as it did not seem to secure the Fallopian tube perfectly, I tied doubly with silk, and fixed the ligature to the clamp. There was scarcely any bleeding; no vessel required ligature. The right ovary was found to be healthy, and the wound was closed with six deep and two superficial sutures of silk. The appearance leading to suspicion of both ovaries being diseased depended on a deep sulcus in the cyst caused by the rotation of the tumour and the pull on the Fallopian tube.

About twenty-four pounds of fluid were removed during the operation, including four or five pounds of fibrine or broken-up clot. Dr. Ritchie examined the tumour very carefully, and reported as follows:—

"A large cyst, nine inches in diameter, with some marks of inflammatory action on its external surface. The large cyst is unilocular, nine-tenths of its wall being of a uniform thickness of one-third of an inch; the other tenth is from two to three inches thick, the wall at that point being formed of a multilocular cystic mass, whose enclosed spaces vary in size from a millet seed to a walnut. Attached to the external surface of the thickened part of the wall are the remains of the Fallopian tube with the pavilion. In the double fold of peritoneum which connects the Fallopian tube to the wall of the tumour a transparent cyst is to be seen of the size of a large pea.

"On making sections of the thin part of the wall of the principal cavity of the tumour, and examining them under a high power (500 diam.) the wall is found to be composed, for the most part, of fibrous tissue, and to be covered externally with peritoneum and internally with epithelium. The epithelium is generally tesselated, but in some parts becomes columnar and stratified, these latter points of course projecting into the interior of the cyst.

"That part of the wall of the cyst which is next its peritoneal covering is distinctly fibrous, the fibres being arranged concentrically with the cyst. Where, however, the wall approaches its epithelial layer, the fibres separate, so as to enclose oval spaces, some of which are $\frac{1}{100}$th of an inch in long diameter. These spaces are lined with spheroidal epithelium. In some of them, that part of their wall which is nearest the internal surface of the tumour is only formed of epithelium, the fibrous stroma appearing to be deficient at that point. In fact, all the appearances are identical with the description of villous growths given by Dr. Wilson Fox in the forty-seventh volume of the *Transactions* of the Medico-Chirurgical Society.

"On examining the thick part of the cyst wall nothing peculiar is found; it is an instance of ordinary multilocular cyst formation. The majority of the cysts are transparent; a few are clouded, their contents being purulent. There are no jelly-like contents. The walls of a few of the cysts are puckered inwards, as if they had formerly been larger than they are now. Two cysts are found in the broad ligament; the larger has been already noticed. It was situated immediately below the pavilion, and was full of clear serous fluid, in which swam some epithelial scales, not unlike those which form the membrana granulosa. The other cyst was no larger than a barleycorn. Its connection with the remains of the Wolffian body was not made out. It contained a thick, transparent fluid."

The patient did not rally very well. She required a whole bottle of champagne during the first night. Next morning she was tolerably well; the pulse 132, soft; urine abundant;

no pain. I tightened the clamp (an operation which caused a little neuralgic pain from the thigh to the knee), and cut away the extruding slough. I then left the patient under Mr. Forster's able management, to which a large share in the success is due. He removed the stitches on the evening of the second day after operation, and found that the wound had united most favourably.

The clamp came away on the eighth day, and the patient was then so well that her husband declared that she had recovered more quickly than she did from her confinements.

On April 4 the ligature of the tube came away. The patient quickly regained strength, and Mr. Forster wrote on April 4—"She can walk about, is in good spirits, and is better than she has been for two years at least." I have heard of her since as perfectly well.

Case 2.—Multilocular Cyst—Parietal and Omental Adhesions—Ovariotomy—Recovery.

In consultation with Dr. Bloxam and Dr. Arthur Farre, on May 18, 1865, I saw a lady who had come from Constantinople suffering from an ovarian tumour. She was 38 years old, had been ten years married, and had five children, the youngest of which was born in April, 1864. She had never miscarried. She was of a cheerful disposition. Her face was pale and rather sallow, and she had lost much flesh during the three months preceding her return to England. The temperature of the skin was normal. Perspiration was easily induced. There was no œdema of the feet, nor were the veins of the legs varicose. The abdomen was occupied by a tumour which reached as high as the ensiform cartilage. When the patient sat up there was dulness on percussion in both loins; when she reclined the clear resonance of intestine was to be heard on the right side. Just above the umbilicus there was a patch over which crepitation could be heard and felt. In the left iliac region a wave of ascitic fluid could be felt, on displacing which the finger came upon the resisting surface of a semi-solid tumour. The tumour seemed unattached on the left side; but in front and to the right, adhesions were indicated to the omentum and to the parietes. There was no tenderness on pressure, except over the left groin. The parietes were of normal thickness, the skin marked with numerous lineæ albicantes, but with no very dilated veins. No very large cyst was to be felt anywhere. The uterus was central and free; the os was open, the cervix soft and velvety. The tumour could not be detected in the pelvis. The catamenia had always been regular up to 1862, after which they were regular as to time, but excessive in quantity, usually lasting a week. After the birth of the last child, the catamenia were absent for three months. Pain over the uterus was then complained of, and the doctor at Constantinople recommended leeching of the os uteri, which relieved the pain, and the periods recurred. These continued regular for two months, then appeared at irregular intervals, and finally became so much prolonged that the discharge was never absent for more than a week. The urine was loaded with lithates, but contained no albumen. The digestive organs were in fair order, the lungs and heart healthy. The patient was one of a healthy family. Before marriage she had had an attack of inflammation of the kidneys, from which she made a good recovery. She had lived ten years in Constantinople. During the first four she had enjoyed good health. Two or three months after the birth of her third child, in 1860, she began to complain of pain in the right groin; this had recurred at intervals ever since. After the birth of the fourth child, in 1862, there was a bearing down of the uterus, and sometimes a feeling of weakness in the left leg. After this pregnancy the patient never regained her normal size; the abdomen always continued large. She became pregnant for the fifth time, and her size was enormous. When the child was born the bulk of the abdomen seemed little diminished. Some time later it increased; but in October, 1864, there was a notable diminution. In February, 1865, the size again increased, and the patient, thoroughly alarmed, came to England.

My diagnosis was—"Multilocular cyst, with adhesions to the abdominal wall on the right side and to the omentum. Some ascitic fluid to the left side." Dr. Farre and Dr. Bloxam agreed with me that ovariotomy offered the only hope of doing any good; and as there was no reason for delay, I performed the operation on May 20, 1865, Drs. Arthur Farre, Bloxam, Bowen, and Ritchie kindly assisting me. Mr. Clover gave chloroform.

The incision was commenced midway between the umbilicus and the pubic symphisis, and extended five inches downwards. A few adhesions immediately under the incision gave way with ease; but there was a very firm band running upwards in the median line above the umbilicus, and incorporating the cyst wall with a piece of omentum. The cyst was cut open, as its contents would not pass through the trocar; then the tumour being too large to get through the incision, the cysts were thoroughly broken up, emptied of their contents, and, after separating a large piece of adhering omentum, the whole was drawn out. The pedicle sprang from the right side of the uterus. It was several inches long, and as broad as two fingers. It was temporarily secured in a large clamp, and afterwards, there being some prolapse, the smallest clamp was applied, and the portion of stump in and immediately beneath the larger clamp removed. There was scarcely any hæmorrhage; the only ligatures used were four of fine silk, which were put on shreds of omentum containing large veins, to secure them before the shreds were cut away. The ligatures were cut off short and returned with the healthy omentum. The left ovary appeared healthy, but was about twice the normal size, and very close to the womb. The wound was closed with eight deep and one superficial suture, all of them above the clamp. The only peculiarities of the operation were the extreme firmness of the band of adhesion and the varicosity of the omental veins. The operation was over at 4.30 p m. During the next four hours 135 minims of opium and 5 oz. of brandy were given, as the pulse was slow and there was much pain. At 8.30 the patient was rallying well; 2 oz. of urine were drawn off. During the night she slept at intervals, neither brandy nor opium being necessary; 6 oz. of clear urine were drawn off at 2 a.m., the pulse was 100, the skin moist, the voice strong, the patient thirsty. At 10 on the first morning the pulse was 100, and there was a little flatulent hiccup. At 8.30 p.m. the patient became restless and uneasy; she had twice vomited barley water tinged with bile; her pulse was 104. Solution of morphia was twice given in ten drop doses. The restlessness increased, and there was tendeney to sickness. Forty minims of laudanum were given by the mouth in a little champagne at 11 p.m. The patient almost immediately fell asleep, and slept continuously till 4 a.m. next morning, when she awoke, declaring herself a new woman.

Next day the pulse was down to 88; there was no tympanites, and everything was satisfactory.

On the third day uterine epistaxis came on.

On the fourth day I removed all the stitches. The wound had united well. The patient was eating with appetite.

On the fifth day the urine was passed without a catheter.

On the sixth day uterine epistaxis ceased.

On the eighth day I removed the clamp. There was slight prolapse of the pedicle. There was one spot on its surface, where pressure produced neuralgia.

The bowels acted on the ninth day. The patient went out in a Bath chair on the 13th of June. Strength rapidly returned, and on the 6th of July she left for the sea-side. I have since heard of her as being in perfect health.

The following is Dr. Ritchie's report on the tumour removed:—

"The solid portion of the tumour removed weighed about five pounds; twenty-two and a-half pounds of fluid had been evacuated during the operation. A few ounces of this fluid were ascitic, the rest ovarian. The tumour consisted of one loculus larger than an adult head, into which projected, at intervals, secondary cysts. I examined carefully a portion of the wall of the large loculus at a point where no secondary cysts were visible to the naked eye. It was lined with spherical epithelium, which dipped also into a number of seeming *cul de sacs* imbedded in the cyst wall, and opening on its internal surface. These *cul de sacs* had much the appearance of sebaceous follicles.

"The mass of secondary cysts which I examined was oblong in shape, four to five inches long, three inches broad, and as many deep. It was composed of a large number of minute cysts closely pressed together and distended with a transparent fluid coagulable by alcohol.

"Separate from the mass was a single cyst as large as a walnut. It contained watery fluid, in which swam a yellowish body, one to two lines long, one and a-half lines broad, and half a line thick. Under the microscope it seemed to be composed of a number of globules, which were apparently in a capsule of some thickness."

(To be continued.)

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LITHOTOMY.

DIFFICULTIES DURING THE OPERATION—ALARMING HÆMORRHAGE FORTY-TWO HOURS AFTERWARDS—SUCCESSFULLY TREATED BY PASSING A CATHETER—RECOVERY.

By FRANCIS P. STAPLES,
Assistant-Surgeon, 19th Regiment.

KUTHA S., aged 18, a sepoy in H.M.'s 45th Native Infantry, came to the regimental Hospital on April 30, 1865, complaining of great frequency in passing water, which symptom, he said, he had had for the last three months. On being questioned, he stated he had no scalding or pain of any kind, and only sought relief on account of wetting his clothes on parade.

To help in making the diagnosis of the case, I passed a sound, and immediately came upon a stone. I then proposed to operate next day, and he willingly consented. Ordered a dose of castor-oil, and to retain his urine the next morning until Hospital hour, 8 a.m.

May 1.—*The Operation.*—The patient having been fully brought under the influence of chloroform, the bladder was entered by the ordinary lateral method. The transverse perineal artery was divided in the second incision, but the bleeding from it was easily checked by torsion with the finger-nail—a plan, I may state here, I have always found effectual with the small vessels of this situation. When I got my left forefinger into the bladder I found that viscus small and contracted, and the calculus, which I could only reach with the point of my finger, was found lying in a sacculus above and to the left of the pubis. To lay hold of the stone in this situation I was obliged to use a very curved forceps, and the only one at my command of this description was very small, and its blades very short, so that during the process of extraction through the wound their wedge shape was too abrupt, and the consequence was the stone broke. On withdrawing them, I again introduced my forefinger, and this time found the original nucleus of the stone in the inferior fundus, and easily extracted it by means of a straight forceps. The fragments were next removed with the scoop, and the bladder washed out twice with tepid water. The patient's thighs were now bandaged together, and he was removed to bed.

2nd.—He is very well to-day; had a good sleep last night, urine passing by the wound.

3rd.—About two o'clock this morning I was sent for to see this patient. When I found him, he was bleeding very freely from the orifice of the urethra, and had already lost about thirty ounces of blood. There was none whatever coming from the wound, the edges of which were approximated by the inflammatory action which is usual about the third day. The blood did not appear to be mixed with urine, and came away in a steady stream. To have cold lotions constantly applied over the pubis and perineum; pressure over the ramus ischii, and the following pill every third hour:—℞ Plumbi acet., gr. ij.; opii., gr. ½. At 4 o'clock the bleeding became less, and continued to come by drops till 6 a.m., when it broke out in the most alarming manner, coming by a perfect stream from the urethra. The patient became very distressed, and lost all courage. It was now determined to pass a catheter into the bladder, with a hope that it might act as a plug to the bleeding vessel. I accordingly introduced a No. 6 very carefully, and drew off about twenty ounces of urine slightly tinged with blood. The hæmorrhage was now found to be completely stopped, and as its stoppage was attributed to the plug-like action of the catheter, I thought it advisable to leave that instrument in the bladder. The patient, however, insisted that he was unable to bear the pain it occasioned him, so I was obliged to withdraw it. Ordered the lotion to be continued.

4th.—There has been no return of the hæmorrhage since yesterday morning; urine passing by the urethra; says he feels very well, but weak.

6th.—Urine passing by the wound; the latter looks very healthy. From this date the patient progressed favourably, the wound becoming smaller and smaller every day, and completely closed up on the 27th, on which date he was discharged to duty.

Remarks.—The above case is, I think, remarkable in the following instances:—1. The absence of the usual symptoms of stone. 2. The position in which the stone was found in the bladder. 3. The comparative absence of hæmorrhage at the time of operation. 4. The alarming hæmorrhage which set in forty-two hours afterwards. The first three do not appear to be specially worthy of remark in a short paper like the present, and I have merely to observe in reference to them that if I should ever meet with a case of the kind again, I would select a pair of forceps with a very long curve, and with blades as wide and strongly made as a straight forceps. By this means I believe the operation might be completed without change of instruments. With regard to the fourth point (the hæmorrhage), why did it manifest itself forty-two hours after the operation, and not at the time of operation? What was its source? The first question, I think, can be accounted for by the fact of the stone having been broken, and its rough edges performing the operation of torsion, and so arresting the hæmorrhage for a time. With reference to the source of the bleeding, I believe it to have been either from the artery of the bulb or from the vesical plexus of vessels, and I am inclined to look upon the latter as the more probable of the two opinions. If we adopt the former view, it will be borne out by the fact of the hæmorrhage having taken place from the orifice of the urethra, and by the blood not having been mixed with urine; but, at the same time, the circumstance must not be overlooked, that if such a large vessel as the artery of the bulb had been divided during the operation, surely some evidence of such an occurrence would have been observable at the time. Again, if the latter view be the correct one, the blood must also have come from the orifice of the urethra, as the wound in the perineum, as above stated, was closed by the result of inflammatory action. And the fact of the vesical plexus being wounded at the time of operation might be easily overlooked, as the blood issuing from its vessels is always mixed with the gush of urine which takes place when the knife first enters the bladder. From whatever source the hæmorrhage actually proceeded, there can, I think, be no doubt that its temporary arrest (for forty-two hours) was produced by the torsion of the broken calculus, and that its permanent stoppage and the life of the patient was owing to the timely introduction of the catheter. But whether this instrument acted by torsion on the mouths of the bleeding vessels, or whether the result of the operation—viz., the dislodgment of twenty ounces of urine from the bladder—did allow that viscus to contract more firmly, and thus to constrict the divided vessels of its neck, is a matter for conjecture.

Jullunder.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

REMOVAL OF A LARGE FIBRO-GLANDULAR TUMOUR FROM THE NECK OF SEVENTEEN YEARS' GROWTH.

(Under the care of Mr. JOHN WOOD.)

IN the *Dublin Quarterly Journal*, No. lxxii., part 1, 1863, Mr. Spence has recorded a case of a tumour somewhat similar in character, growing in the cervical region, and which he successfully removed. The patient was a female, aged 34. It commenced in precisely the same spot as the following, it was very slow of growth (16 years), and caused her little or no pain; it had attained to an enormous size, and weighed more than seven pounds. It involved a great deal more of the face, and from its numerous deep-seated processes and attachments required different incisions and more dissection than Mr. Wood's case, a large portion of the tumour being below the sterno-mastoideus and being firmly attached to it. The attachments and connections of the tumour in Mr. Wood's case could be easily made out on examination, and it was freely moveable over the subjacent parts; but, as Mr. Spence remarks, "the apparent mobility of a large cervical growth can never altogether be depended on; for even if it involve or be adherent to the vessels or their sheath, these being loosely connected, move with the tumour on the more fixed parts."

T. S, aged 33, a healthy-looking man, a farm labourer, was admitted September 23, 1865. The tumour commenced, he states, seventeen years ago with a kernel, just below the lobe of the left ear. Its growth seems to have been steady and regular. It had never given him any pain whatever, and, notwithstanding its enormous size, he had continued his work almost up till the date of his admission. The tumour "broke" about two months ago, and has since discharged some very

fetid matter. To the touch it was hard in some parts and yielding and almost fluctuating in others. The hand could be passed completely round it, and at its pedicle a strong fold of fascia (a process of the deep cervical from the parotid to the hyoid bone) could be felt separating it from the deeper structures of the neck. (The accompanying sketch represents the tumour before removal.)

October 7.—He was placed under the influence of chloroform, and Mr. Wood made an eliptical incision around the tumour, inclosing a large portion of hypertrophied integument. The mass was seized with a strong pair of forceps, and dissected away from its attachments, from which it almost "shelled" out. The bleeding vessels were tied, the edges of the wound brought together by sutures, and a compress and bandage applied.

The section of the tumour, which had very much the appearance of a melon, showed a large cavity, containing broken down material, discharging most offensive matter. It weighed 6lb. 9oz.

There were no communications with the carotid artery or internal jugular vein. The combined lingual and facial vein was dissected out and tied before it was cut, as the bleeding from it would have been copious and hindered proceedings. The facial artery did not pass through the mass. A great deal of skin was removed, partly on account of its hypertrophied condition and partly because its removal would diminish the chance of pyæmia, and just so much was left that when the incision has thoroughly healed and contracted the patient will not experience any loss.

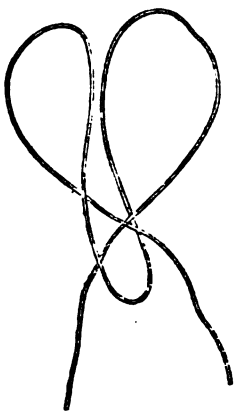
Up to the present time (October 23) the patient has been doing well. The tissues are contracting rapidly.

CASE OF SUBCUTANEOUS VENOUS NÆVUS OF THE CHEEK, WITH PHLEBOLITES IN THE INTERIOR.

(Under the care of Mr. WOOD.)

Frances S., aged 17, admitted September 5, 1865. A rather delicate-looking girl, with a large swelling on the right cheek, reaching from the orbit to the lower jaw, and from the corner of the mouth to the ear. The tumour is soft, yielding, and elastic, and can be compressed and diminished in size like a sponge. At the upper and back part is a bluish area, of the size of a penny, in which the outline of tortuous veins can be distinguished. A little below the middle, two hard oval moveable bodies (phlebolites) can be felt in the interior of the tumour. These can be pushed a little from their places, but afterwards assume their original position. The action of the muscles on that side is impeded to some extent, and the right corner of the mouth hangs below the other. States that she has had a swelling there from infancy, but that it has increased somewhat rapidly of late.

On Saturday, September 9, under chloroform, Mr. Wood applied his subcutaneous clove hitch to the tumour. The object of this ligature is to strangulate the varicose parts with as little damage to the skin as possible. The thread was introduced through the skin at the upper and back part of the circumference of the tumour, and brought out in the inside of the cheek, at the lower and front part, in such a way as to avoid the duct of the parotid opening opposite the second upper molar. A stout semicircular needle, mounted on a handle (Wood's), was first passed around the upper half of the circumference of the tumour, close under the skin, and brought out on the inside of the cheek. A stout hempen ligature, well waxed and soaped, was then attached, and drawn back with the needle, leaving one end in the mouth. The needle carrying the other was then passed deeply across the base of the tumour diametrically, carrying a loop of thread; this was seized and retained as the needle was withdrawn. The needle was then passed close under the skin round the remaining part of the circumference, the end of the thread seized and detached, and the needle withdrawn. In each case the needle entered at the same aperture in the skin, and emerged by a single opening in the mouth. Through this latter, both the ends and the loop of the thread were at this stage of the operation hanging out. The ends of the thread were then passed separately, and in opposite directions, through the loop, and then tightened up, and tied in a bunch. The tightening produced a marked impression upon the bulk of the tumour, and depressed the skin all around.



Two days after there was a considerable amount of swelling of the face and eyelids, which were œdematous. Complained of much pain, which was relieved by Battley's fluid. Suppuration then set in profusely, emerging freely at both openings, but chiefly through the mouth. Shreds of lymph were occasionally discharged. About ten days after, a small abscess made its appearance at the border of the lower jaw from gravitation of pus. This was opened by a small puncture, and well squeezed every day. It was hoped that the phlebolites would become squeezed out into the mouth in the course of the daily manipulations, but this did not occur. When the ligature came away, which it did in a small loop about fourteen days after the operation, the hard bodies could be felt adherent, and not moveable, close under the mucous membrane of the cheek, whence they may easily be removed by a slight incision if necessary. The whole mass has now become solidified and hardened throughout; a slight discharge passes out at each of the punctures. The movement of the muscles of the cheek and mouth is considerably impaired from the division of the plexuses of the portio dura. This and the induration will doubtless be in time entirely overcome.

ST. BARTHOLOMEW'S HOSPITAL.

COMPLETE CRUSHING OF ALL THE SOFT PARTS, AND OF BOTH BONES OF THE LEG, FROM THE PASSAGE OVER THE LIMB OF A HEAVILY-LADEN WAGGON — PRIMARY AMPUTATION ABOVE THE KNEE—RECOVERY.

(Under the care of Mr. WORMALD.)

E. N., aged 48, a very muscular, rather free-living man, was admitted into the Hospital on August 22. He had been knocked down by a very heavy waggon, the wheels of which had passed over his right leg. The limb was completely crushed; the tibia and fibula could be felt broken in several places; the calf was much swollen and discoloured from effused blood, and a large extravasation of blood had occurred round the knee. Mr. Wormald at once amputated through the middle third of the thigh. The method of amputation was by skin flaps, and a circular division of the muscles. The wound was not closed at first, but sutures were inserted through the flaps, and left loose, to be tightened at the end of a few hours, when the surfaces should have become glazed, and if there appeared to be no threatening of hæmorrhage. No hæmorrhage occurred, and the sutures were tightened on the following day (August 23).

The note taken on August 24 says:—"The patient has been doing remarkably well. The expression of his face is almost that of ordinary robust health; pulse 84, quiet, rather full;

skin only moderately hot from reaction; tongue scarcely at all coated. He had a good night."

After this date the patient had no check of any kind; at no time after the amputation was his pulse above 96; generally it was below 80. He took an ordinary meat diet with relish, slept well throughout the night, and always said he was quite well. The stump healed quickly. He left the Hospital, at his own request, on October 9.

COMPOUND COMMINUTED FRACTURE OF BOTH BONES OF THE LEG, WITH EXTENSIVE LACERATION OF THE SOFT PARTS—CONTINUED HÆMORRHAGE—AMPUTATION—RECOVERY.

(Under the care of Mr. COOTE.)

J. L., 38, a big, heavy brewers' drayman, drinking, as his customary allowance, two gallons of beer a-day, had his leg crushed between the wheel of his dray and an iron post at the corner of a street, on September 1. A compound comminuted fracture of both bones, with great bruising of the muscles of the calf, was the result. He was brought about four hours afterwards to the Hospital. Hæmorrhage, which, it was said, had been to a large amount, was still going on. The limb was placed on an iron back splint, and the wound (about two inches long) closed with lint soaked in blood. As both the main arteries of the leg could be felt pulsating, it was hoped the bleeding might cease; it still continued, however, and the calf was soon much discoloured and swollen by the infiltration of blood beneath the skin and among its lacerated muscles. As there was no hope of saving the limb under such circumstances, Mr. Coote proceeded, twelve hours after the accident, to amputate just below the knee. The operation was performed by making a short anterior and a long posterior flap and a circular division of the muscles. The flaps were brought together by a single central silver suture, and bands of strapping. It was found, on examining the leg after its removal, that the tibia and fibula were fractured in several places, and the muscles lacerated in their whole extent. The anterior and posterior tibial vessels were entire; the exact source of the hæmorrhage which had occurred could not be discovered.

For the first thirty-six hours after the operation the patient remained quiet and very drowsy; reaction then commenced, and was well established on September 3, when he was hot, flushed, and still drowsy, with a red tongue rather brown in the centre, and a full, bounding pulse of 120. The stump looked rather sodden and œdematous, and a large amount of sanious fluid was being discharged. No symptom of delirium tremens, to which his previous habits had made him liable, appeared. He took his diet well; this consisted of two pints of porter, four ounces of brandy, beef-tea, milk, and two eggs.

By September 5 all excessive reaction was passing off. The pulse was quiet, 108; the skin cooler; and a healthy suppuration was beginning in the stump; the patient slept well at night, and expressed himself as feeling free from uneasiness. From this date he went on uninterruptedly to recovery, and was able to leave his bed on October 2.

A few days ago, when the amputation-wound had all but healed, he fell in the ward and injured the stump; this accident, however, promises to detain him in the Hospital only a few days.

COMPOUND COMMINUTED FRACTURE OF THE MIDDLE THIRD OF THE LEFT FEMUR—WITH FRACTURE OF THE LEFT HUMERUS—SUPPURATION AROUND THE FRACTURE OF THE FEMUR—NON-UNION AFTER EIGHT WEEKS—THREATENED DEATH BY EXHAUSTION—AMPUTATION—RECOVERY.

(Under the care of Mr. SAVORY.)

George G., aged 28, an artificial flower maker, of intemperate habits, went, while intoxicated, in the evening of May 22 to the top of his lodging-house to eat his supper on the roof. Falling asleep, he rolled off the house, and tumbled a distance of thirty feet to the ground, sustaining a comminuted fracture of the middle third of the left femur, made compound by a small wound on the outer side of the thigh; a fracture of the humerus just above the elbow; and a fracture of the nose. He was shortly afterwards brought to the Hospital in a state of insensibility. The fractured femur was adjusted to a long splint, and side splints were placed on the upper arm. The patient soon recovered consciousness, and subsequently made good progress till May 31, when delirium tremens set in; this developed itself into a severe attack of a week's duration, and then finally passed off. From this time nothing of importance was noticed in the case till the first week of June, when suppuration at the seat of injury in the thigh took place. This was accompanied with considerable pain, and swelling of the soft parts, and wide-spread redness of the integuments. A large collection of matter soon pointed, and was let out by Mr. Lawrence in the first week of July. At the end of eight weeks after the accident the fracture of the humerus was firmly united; but there seemed to be no attempt at repair in the femur. The whole lower extremity was at this period in a very bad condition; the abscess in the thigh still discharged in large quantity, and, although there was a free outlet for the escape of pus, some amount of bagging around the femur could not be avoided. The whole limb was very much swollen, and the surface pitted deeply on pressure, and there was redness of the skin over the greater part of the thigh. The patient was daily losing ground in general health, and it was evident that he could have no reasonable hope of life unless something was done for his relief. Under these circumstances Mr. Savory proposed amputation as the only measure that could be adopted; and as many of his colleagues, on being asked to see the case, agreed in thinking this justifiable, it was performed on August 19. The method of amputation was by double skin flaps and a circular incision through the muscles. The thigh at the seat of injury was found in an irreparable condition. The soft parts were disorganised by wide-spread suppuration, and the broken ends of the femur, which were necrosed, lay bathed in serous fœtid pus.

A very gratifying change in the patient's condition followed immediately upon the removal of the limb. This was especially to be noticed in his general aspect and in the expression of his countenance, which in place of being, as before the operation, pinched, worn, and indicative of severe suffering, became cheerful and almost that of a person in sound health. He slept well at night; the skin, which before the operation had been relaxed and clammy, regained its tone; the pulse went down from 140 to 108 beats in a minute; and the appetite quickly returned. On August 24 he looked wonderfully better, and expressed himself as being so; he was taking a liberal diet with relish, and the stump, which had a charcoal poultice applied to it, was looking well. It is not necessary to give the daily progress of the case; the man soon looked convalescent, and rapidly gained flesh and strength. A small sinus still remains unhealed, as if there were a small exfoliation in process of separation from the end of the femur. He is, except for this, quite well.

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Medical Times and Gazette.

SATURDAY, OCTOBER 28.

THE INTERNATIONAL CHOLERA COMMISSION.—WHO ARE THE CULPRITS, THE TURKS OR THE ENGLISH?

If our readers will be good enough to turn to that chapter of the Special Report on Cholera which appears in our present number, they will find an account of that proposal for an International Conference on Cholera the suggestion of which has done infinite honour to the French Government. Instead of quailing before a pestilence which we carelessly allowed to be brought home to our very doors, the French Government proposes to seek it at its fountain-head, and to suppress the first sparks of what afterwards becomes a world-wide confla-

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gration. As the cholera has come to the Mediterranean ports from Egypt, and as its propagation has been fostered by the superstitious practices of the Mussulmans, and as Turkey is a semi-barbarous government, so it is quite right that the uncivilised professors of a false religion, who are scarcely kept in check by the decaying authority of Turkey, should receive that amount of extrinsic control which the pressure of the European Powers can effect.

But surely in all this the French Government is laughing at us. *Mutato nomine, de nobis fabula narratur.* As our vigorous contemporary *L'Art Medical* has pointed out, the whole thing is a sarcasm at England. We are really the effete and barbarous nation that requires to be shamed into its duty by pressure from without! It is not Arabia, but India, not Mecca, but Jessore, which is the cradle of the cholera; and can it be imagined that in calling on the Porte to prevent superstition, filth, and barbarism in Arabia, the French are not covertly putting us to shame for allowing superstition, filth, and barbarism in India?

The testimony of all persons who have visited India is unanimous as to the existence of causes adequate to breed pestilence amongst the natives. The history of the last fifty years shows that pestilence so bred will travel. These causes are the most utter recklessness as to the disposal of all offal whatever, and more particularly of the dejections from the human intestine. Hence a state of filth in the native villages which requires to be seen to be believed. Hence the contamination of all water supplies; and hence, what is comparatively a lesser evil, the propagation of worms amongst the persons who eat of the flesh of animals fed in those filthy pastures. Add to this the foul state of the rivers, which are made the common sewers and cemeteries of the towns, and we shall find in India a state of things which may well prevent the English from being too severe on the Turks.

It appears, too, by the first of these Reports on the Sanitary Condition of Places, which we propose to lay before our readers, that our hands may find plenty to do at home, before we throw stones at the Turks. If the report of our Commissioner be true—and any Londoner may satisfy himself on this point in an hour—there are amongst our very dwellings foci of pestilence sufficient to invite, detain, and foster the cholera even where they do not originate it. In fact, so far as we can define the difference between the inhabitants of Weatherhead-gardens and those of a Bengal village, it would be that the Bengalese probably wash their persons, and that the Bethnallers do not. We had better look at home, and not rely on the vague fact that "sanitary powers" have been conferred on London vestries for ten years.

THE CATTLE PLAGUE COMMISSION.

Few can envy the position of the Cattle Plague Commission in the execution of their honourable but gratuitous labours. They have been directed to investigate "the origin, the nature, and the treatment," together with "the means for arresting the progress" of this obscure disease. On these points they have been engaged from day to day, receiving, no doubt, the most contradictory evidence. They will have heard from one source that the disease could only have been brought hither from abroad; from another equally interested source they are assured that it must have been generated in the London cowsheds. All will, however, agree that, whatever be its origin, it is an intensely contagious disease, which can be propagated, with or without contact, amongst ruminating and no other animals. The Commissioners, no doubt, have been assured, in reference to treatment, that there is but one remedy, the pole-axe; and, on the other hand, thousands of specifics must have been suggested to them, each bearing the guarantee of almost certain success. On one side the disease is said to be analogous to human typhus, then to human typhoid, and then to influenza, and then it is asserted that there exists no analogous disease in the human subject at all. They will have heard that the progress of the disease can only be arrested by the most stringently restrictive measures on the movements of cattle, whilst they will be assured, on the other hand, that the malady will die out, and should be let alone.

We have the utmost confidence in the discretion and experience of the Commissioners engaged in this difficult and responsible inquiry. We learn with satisfaction that they have drawn up a plan for a full and complete investigation into the nature of the disease, and into such courses of treatment as give a reasonable hope of success. These investigations have been assigned to Drs. Murchison, Sanderson, Bristowe, Beale, Marcet, and Angus Smith, together with Messrs. Symonds, Varnell, and Pritchard, of the Veterinary College. Abundant means should be, and, we believe, will be, placed at the disposal of these gentlemen, and the result of their labours will be to tell us fully and fairly what is known, and what is not and cannot be known on the subject. The only facts we really possess on the subject may be thus summarised:—That the disease is *rinderpest*, or steppe murrain, a plague which prevailed in this country, and lasted for twelve years in the middle of the last century, and then destroyed hundreds of thousands of cattle; that then, as now, the most discordant opinions were entertained as to its origin and character; that "orders in council" were issued then, of which the present orders are almost copies, though not knowingly made to be so, and that the analogy is made even more complete by these orders having been issued by a Council whose President at that time, as at this, was a Lord Granville, and that unfortunately the orders of 1745 were of as little effect as those of 1865 in controlling the progress of the plague; that the present pest was introduced by foreign cattle during the last summer into the Metropolitan Market, and that it has thence spread throughout the country by its contagious properties; that its progress may be impeded in some measure by maintaining in good condition the health of cattle, thus rendering them less susceptible, and by the use of prophylactics—such, for example, as steel in the form of muriated tincture of iron. But we are convinced, however, that the disease can only be checked by stopping fairs and markets, and by restricting the movement of all store cattle. The accomplishment of this object consistently with feeding the people is one of the problems which the Royal Commission is called on to solve, and in the solution of which we shall look for some clear and decided expression of opinion. The value of restrictive measures is already illustrated by recent proceedings in Belgium and Holland. It is well established that the disease has been introduced within the last few months into Holland by a small herd of cattle sent thither from our market. The disease spread in Holland before its existence was recognised. The Belgian authorities, thus warned, were vigilant, and the moment the disease crossed the frontiers they adopted the usual restrictive measures. A cordon was drawn round the infected districts, all the cattle within the district were killed, and in a fortnight the disease had disappeared. In South Holland, on the other hand, the disease still prevails extensively, and diseased animals have arrived in England from Dutch ports. To apply restrictive measures of the required character in England will be a work of great difficulty; but for some such measure, as of absolute necessity, the country must be prepared.

DOCTRINES OF MODERN CHEMISTRY.

No. III.

Atomic Hypothesis.—When Dalton announced the proportionality relations of bodies, which he first clearly recognised, he advanced in explanation of it the atomic hypothesis. It was, as held of old, that all masses of matter are aggregations of indivisible particles of great minuteness, or atoms; further, that all the atoms of an elementary substance have exactly the

same weight as each other; and that the chemical combination of masses together is due to the combination of their respective atoms. This hypothesis, or rather these hypotheses, being accepted, it evidently follows that, when bodies combine together, they must do so in definite proportions by weight; that, when there are several proportions in which they combine, these must be simple multiples of each other; and, lastly, that the numbers which express any proportions, in which certain elements combine together, will also, either multiplied or not, express all the proportions in which they combine with any other element. In short, the well-known laws of chemical combination by weight are consequent upon this assumed atomic constitution of matter.

It must be remembered that when Dalton put forth his theory, many important deductions from facts now familiar to us were undiscovered. Beyond a slight knowledge of the specific heats of a few bodies, hardly anything was known of the association of weight with any of the other properties of bodies except that of chemical combination. It is probable, therefore, that his theory would not have obtained a general reception by others, and possibly even would not have been so firmly believed in by himself had he not dressed it in this very plausible hypothesis. But at the present time the truth of his theory is too well established on the teachings of facts to require any other support.

A great objection to the atomic hypothesis is, that it has caused chemical transformation to be interpreted as indicating that certain bodies are *composed of* and *contain* certain others. The facts of the transformations of bodies are these: that the bodies disappear at the moment that others become manifest; that the bodies which are the results of the transformation have not such properties as would result from the mere compounding and blending of those of the bodies transformed, except that of a certain weight; and lastly, that in most cases a transformation can be reversed—either directly or through several intermediate transformations, so that the resulting bodies shall be like those originally transformed. Chlorine and sodium, when brought into contact, instead of blending together, at once change into *salt;* and salt, when fused and submitted to the electric current, instead of quietly transmitting it, as the conducting wire does, changes into the two bodies chlorine and sodium. Gunpowder is composed of little particles of charcoal, nitre, and sulphur in intimate union, and with all their respective properties unchanged; ignite the gunpowder, and sulphur, and charcoal, and nitre all change, by the magic of nature, into sulphate of potassium, nitrogen, carbonic acid gas, etc. These bodies were *formed from* the gunpowder, but they are certainly not *composed of* it. The charcoal, the nitre, and the sulphur are all *gone*. But is not the sulphur *in* the sulphate of potassium, and the charcoal *in* the carbonic acid gas? *In* them! Apply all the senses to them, break them up into such a degree of minuteness that they almost cease to be manifest to the senses at all, and they are still sulphate of potassium and carbonic acid gas, just as much as when first formed, and have about as much resemblance to sulphur and charcoal as they have to zinc or iodine; certainly the sulphur and charcoal are not *in* them, though they can be *formed from* them. Again, how can we suppose, in opposition to all our senses, that in a lump of salt there are little particles of sodium—a combustible, silvery-bright, soft substance—and other little particles of chlorine—an offensive-smelling, greenish, poisonous substance—lying side by side, however closely and however firmly stuck together? If any persons can do so, they must at least admit that it is on hypothetical grounds, and that these, including the atomic hypothesis, are logically bad ones, inasmuch as they are beyond the evidence of our senses, and, consequently, beyond the possibility of ever being proved to have been true.

We believe very few thinking chemists accept the atomic hypothesis at the present day, though all must hold the theory of *atomicity* or proportionality-relations of bodies. Let not our readers suppose, therefore, when they meet such terms as *atom, atomic weight, atomic volume*, that they have any necessary reference to the hypothesis of there being little indivisible particles of matter, unless historical, but only to the theory of those relations of bodies which will probably ever be known as their *atomicity*.

The study of the formations and transformations of chemically-compound bodies proves decidedly unfavourable to a belief in the atomic hypothesis; but this we shall endeavour to show when treating of the chemical functions of bodies, and the theories of *compound radicals* and *types*. We ourselves also feel convinced that this hypothesis, with its consequent belief that there is an *attractive force* to hold the atoms together, called chemical affinity, is a great impediment to a true comprehension of the correlations of *chemical* with other forms of force; but upon this we shall not dwell in these articles.

An Hypothetical Chemical Property attributed to Atoms by Dalton.—The atomic theory, made out with wonderful discernment by Dalton almost in advance of his facts, rested for its application exclusively upon the combining proportions of bodies, at least till Gay Lussac put forth his law of volumes. Since, however, many bodies combine with each other in several proportions, these alone were insufficient data for determining their atomic weights. In the absence of additional facts, Dalton put forth the hypothesis that the *most stable* combination of those formed from the same two elements was that of *single atom to single atom* of each. By its aid it became practicable to assign with tolerable method to each substance an atomic weight. (a)

Though this was little better than a fancy of his, yet he adhered to it afterwards with considerable obstinacy in the face of facts opposed to it, as did also many others. It appears to have been accepted in consequence of resolvable or "compound" bodies being conceived according to the atomic hypothesis as aggregates of unlike particles. For then that particle A should stick to particle B with great firmness, and that the introduction of one, two, or more particles of B or of A in addition should interfere by their attractions with this firm adhesion of the two seems plausible enough. But of course this aggregation of little particles held together by attractive force is a vagary of the imagination, both incapable of proof and opposed to the evidence of the senses.

To this hypothesis is due the adoption of a number of the atomic proportional weights now in use in the old system. Still, many deviations have been long made from it in determining atomic numbers. For instance, 5 [corrected = 4·67], the atomic number for nitrogen at one time used by Dalton, and deduced, in accordance with his assumption, from the resolution, or "decomposition," of ammonia, was never, we believe, generally accepted, but instead of it, the number at present in use—14, or three times 4·67. Although we do not give here the various arguments in favour of the adoption of 14 instead of 4·67 as the atomic-number of nitrogen, we beg our readers to keep constantly in mind the fact of this adoption now universal among chemists, whether of the old or new school. For, as Dr. Odling has forcibly detailed, every argument which can be brought forward in support of it applies with as much weight to the adoption of 16 as the atomic number of oxygen, instead of 8; or, what is the same thing, but more expressive, every argument for holding *ammonia* to be formed of *one* atom of nitrogen to *three* of hydrogen is equally one for holding *water* to be formed of *one* atom of oxygen to *two* of hydrogen. All that can be brought against

(a) The application of this hypothesis, however, has proved in some instances very unsatisfactory, as the prescriber well knows to his annoyance in that of mercurial compounds. For which of the two oxides, chlorides, etc., is to be regarded according to it as the combination of one atom of mercury to one atom of the other element it has been found hard to determine, so that the adopted nomenclature and notation of these bodies have been almost solely a matter of caprice, and have varied accordingly.

regarding ammonia and water as thus constituted is Dalton's hypothesis, and that, symbolically, HN and HO look simpler than H_3N and H_2O.

Faraday's Hypothesis Concerning Atoms.—Faraday, again, has made an assumption by the aid of which the laws of chemical combination and resolution might prove sufficient to enable us to settle the atomicity of bodies. It is that only *one* combination of any two elements can be truly electrolysed, that is, resolved into its elements by an electric current, and that the electrolysable one is the combination of single atom with single atom of the respective elementary bodies. Faraday put this forth years ago, and attributed the apparently exceptional cases then known to him to secondary or indirect effects of the electric current. It is now known that *two* combinations of the same two elements can be electrolysed under circumstances which preclude the possibility of treating either resolution as exceptional—we refer to the resolution by the current of both the chlorides of copper in the fused state—so that this assumption falls to the ground. Besides which, it must be understood that the splendid electrical researches of Faraday have had no real bearing upon the probability or otherwise of the truth of this assumption of his. For though they have tended to show electrolysis to be the result of force acting equally in opposite ways at once, and to be indicative, therefore, of a certain *equality in power* between the two bodies produced, yet the very fact that two elements can form combinations in *more than one* proportion shows that in *differently-proportioned quantities* of the same two elements *there may be such an equality of power.*

The hypotheses to which, in this article, we have called our readers' attention are some of the foundations of the old system of chemistry. Of the new they form no part.

THE WEEK.

MEDICAL HEROES IN NEW ZEALAND.

Amongst the promotions announced in the *Gazette* of Friday, October 20, is the following:—"Assistant-Surgeon William George Nicholas Manley, from the Royal Artillery, to be Staff Surgeon, for distinguished and meritorious services rendered to the sick and wounded in the field during the recent operations in New Zealand." The same *Gazette* contains an official despatch from Major Holmes, of the 43rd Light Infantry, to the Garrison Adjutant at New Plymouth, calling attention to the services of another member of our Profession. The writer states that in reference to the engagement between a patrol under the late Captain Close and the rebel natives of Kongakumi-kumi, he has the honour to bring to the notice of the colonel commanding the very zealous and efficient services rendered by Assistant-Surgeon Grant, 43rd Light Infantry, who was exposed, as he is informed, to a very heavy fire, under which he directed Captain Close's body to be carried under cover. The Medical officers of the two services have now established a character for cool courage second to that of no section of officers in Her Majesty's service. Ten Medical officers of the Army have received the Victoria Cross—an honour which is never bestowed except for some act of conspicuous bravery. The man who has learnt to face a fever or cholera ward has had an admirable training for confronting death and danger when they are presented in less subtle, but not more real forms.

POISONING BY VERATRIA.

An inquiry has lately terminated at Greenwich which is of great interest to toxicologists. The wife of a Veterinary Surgeon being in the ninth month of pregnancy was seized with vomiting, pain, and convulsions, and died after some hours' illness. A suspicion of foul play, founded upon the fact that her husband was a pecuniary gainer by her death, led to a coroner's inquest. The post-mortem examination showed that at her death labour had been going on for some time, that she was the subject of Bright's disease of the kidneys, and that cerebral hæmorrhage had taken place—an effusion of blood from rupture of a vessel on the surface of the brain on the left side. These appearances were quite sufficient to account not only for death, but for the symptoms which the deceased had exhibited. Portions of the viscera, however, with some wine found in the house, were sent to Mr. J. E. D. Rodgers, Lecturer on Toxicology at the London Hospital Medical School, for analysis.

At the inquest Mr. Rodgers deposed that,—

"In the wine he found an alkaloid; it gave indications of the presence of a deadly poison known as veratria, or white hellebore. In the kidneys, viscera, and portions of the liver he found the same traces in minute but clear quantities, and in the stomach the poison was in greater quantities. One-fourth of a grain of this poison would be dangerous to life, whether swallowed or taken into the system in any other manner. Half a grain would be very dangerous, and death would take place in from six to twenty-four hours."

After a very protracted inquiry, the jury returned the following verdict, leaving the case still open for further investigation:—

"That the deceased Elizabeth Reeve came by her death on the 15th of August, 1865, from the effects of a deadly poison known as veratria, or hellebore; but how, when, or by whom such poison was administered there is not sufficient evidence before them to show. The jury, however, wish to add that in their opinion the taking of such poison was not the act or deed of the deceased herself."

Now, without desiring in any degree to cast a doubt on the propriety of the verdict or on the validity of Mr. Rodgers' experiments, we should be glad if that gentleman would publish the details of them. Alkaloids are confessedly difficult things to detect in the viscera and in organic mixtures. The only test given in the British Pharmacopœia for veratria is, that "heated with access of air, it melts into a yellow liquid, and at length burns away, leaving no residue." We know that when treated with strong sulphuric acid it turns first of a red and then of a purple colour; that it forms a yellow mixture with nitric acid; that it is insoluble in water, and sparingly soluble in ether and alcohol. But we should be glad to learn by what means Mr. Rodgers obtained it in sufficient quantity and purity from the contents of the stomach and the tissues to assert its presence with certainty. The known connection between renal disease, puerperal convulsions, and apoplexy easily accounts for the death of the woman. It is quite possible, however, that she may have been poisoned, and that the vomiting consequent on poison produced rupture of a cerebral vessel. We must, however, withhold our assent to this view until we see a scientific statement of the whole case.

FROM ABROAD.—DEATH OF PROFESSOR MALGAIGNE—THE CHOLERA IN PARIS—VACCINATING FROM THE COW.

France has just lost one of her greatest Surgical celebrities in the person of Professor Malgaigne, who, seized a year since, while occupying the chair as President of the Academy of Medicine, with some ill-defined cerebral affection, attended with great prostration, has lingered on to the present time, not having yet reached his 60th year. His friends attribute his malady to overwork, for he was a man of insatiable literary activity, and never cared to spare his labours when any worthy object was in view. It is said that prior to his illness he was engaged upon a large work on hernia, which he was ambitious should contribute as much to his fame as his classical treatise on fractures and dislocations has done. The history of Surgery upon which he was once engaged, and from which so much might have been expected, judging from his admirable introduction to his edition of the works of Ambrose Paré, was, we believe, abandoned some time since. Malgaigne never seems to have attained a large practice, his true sphere of activity appearing to have been rather the Professor's chair

and Academical tribune. Conquering his way from a humble position by *concours* after *concours* to the highest posts attainable, he knew well how to hold his own; and gifted with an unrivalled eloquence, and a formidable power of sarcasm, the part he took in the debates in the Academy was of great importance and always looked forward to with intense interest by his auditory. In the famous action for libel brought against him by Jules Guerin he defended himself with an eloquence, ability, and power which were the admiration not only of his Professional brethren, but of the legal circles themselves. With all this power of eloquent combativeness and critical acumen, he was in private life a man of the most genial disposition, and much beloved by his intimate friends. Since his illness commenced one of his twin daughters was married to M. Le Fort, one of the most promising of the rising French Surgeons.

During the last week the cholera has been on the increase in Paris, and has exceeded the formidable number of 300 deaths per diem, reckoning private and Hospital patients. While at some Hospitals a diminution in the number of admissions has been observed; in others these have increased, so that the St. Antoine and La Charité now receive more than the Hôtel-Dieu; but it is in private practice that the increase is chiefly observed; while many of the patients who were already in the various Hospitals for other complaints prior to the outbreak have fallen victims to it. It has been noted that of 210 deaths occurring in a certain quarter of the town 90 of the individuals occupied the *rez de chaussée* (ground-floor), 43 of this number being *concièrges* (door-porters), and the remainder grocers, fruiterers, charcoal sellers, etc., pointing with evident demonstration to the effects of an insufficient supply of air and defective ventilation. According to a communication of M. Guyot, one in three of the patients received at the Hôtel-Dieu and the Lariboisière recover, some of the cases having reached a very advanced stage on their reception. At both these Hospitals a favourite tisane for the purpose of inducing reaction is the rum tea, 125 parts of rum to 875 of tea, the *elixir de la Chartreuse* being also given with success. When there is much vomiting, ipecac. in doses of from ten to thirty grains is also given, and bismuth when the diarrhœa is persistent.

It will be recollected that at the Medical Congress at Lyon last year, Professor Palasciano, of Naples, gave an interesting account of the practice of vaccinating from the cow followed at Naples for the last sixty years. At that time a kind of panic prevailed in France respecting transmission of syphilis through the medium of vaccine lymph, and the Neapolitan plan was warmly welcomed as offering an effectual preventive to such a disaster. Cows were accordingly vaccinated in Lyon and Paris; but as we have heard nothing whatever of late of the plan being pursued, we suppose that either practical difficulties or a suspicion that great exaggeration had prevailed concerning the evils attendant upon the ordinary mode of vaccination have prevented its being continued. However this may be, the Prussian Government, having had its attention drawn to the matter, has caused a report to be prepared, of which Dr. Müller gives an account in a recent number of the *Berlin Med. Wochenschrift*. It seems that a Dr. Galbiati commenced the practice of vaccinating directly from the cow at Naples sixty years ago, and that it has been regularly continued from that time by Signors Feola and Negri. From the years 1849 to 1859, the cows employed were the property of the King, who had his own family vaccinated in this manner; but since then Negri has conducted the vaccinations as a private speculation, charging 5 francs for bringing the cow and vaccinating the child at its parents' residence. The generation of the vaccine pustules does not seem to injure the cow, but the udders, upon which are often from 80 to 100 pustules, are so much damaged that the animal is usually slaughtered, the price obtained for it going towards covering the expenses. It is remarkable, however, that this mode of vaccination does not seem to have become, even after so long a period, very popular in Naples, although warmly supported by influential persons, the ordinary vaccinations being performed just as in other countries, the employment of Negri's cows being confined to the richer persons and the revaccination of a portion of the army.

Some of the Neapolitan lymph having been forwarded to Berlin, Dr. Müller made some comparative experiments with it and with lymph derived from other sources, and found the results identical. He also vaccinated some cows and calves with the lymph, generally producing true vaccine pustules, which attained their full development by the sixth or seventh day. They were, however, far from containing the quantity of lymph stated by Negri to be produced, this not running out after the separation of the scab, as is usually the case in the human pustule, so that the glass tubes were filled only with difficulty. This lymph produced true pustules in some children, while in others it did not succeed. The milk of the cows submitted to the process diminished in quantity, and the animals became emaciated. Alarmed also, they offered much resistance to both the inoculation and abstraction of the lymph; so that it is evident that Negri's cows must furnish a larger supply of lymph, and belong to a quieter race, or he must be much more expert in their management, to enable him to take them to the patients' houses for the small sum of five francs. However, the trials made establish the possibility of vaccinating direct from the cow in all cases, but they also show that it is neither an easy or cheap process. After all, is there any great advantage in substituting this mode of proceeding for the from arm-to-arm vaccination? and is there not at least as much danger of transplanting diseases of the cow as of conveying syphilitic poison, especially as the best and most robust cows would naturally not be those employed for this purpose?

PRESENTATION. — Mr. Hartley, a well-known and highly-esteemed Surgeon, who has practised for the last twenty years at Ivybridge, Devon, and who has lately left that place, has been presented by 170 of the principal inhabitants of Ivybridge and its neighbourhood with a handsome testimonial, in the shape of a valuable silver salver. The testimonial was presented at a meeting presided over by the incumbent of Ivybridge. The salver bears the following inscription:—"Presented to Mr. and Mrs. E. Hartley, as a token of the esteem and regard in which they have been held by their numerous friends during a residence of nearly twenty years in Ivybridge: to the former for his valuable and prompt services rendered in time of need, particularly to the poor; and to the latter for her sympathy in affliction and usefulness in every good and Christian work.—October 21, 1865."

QUACKS AND QUACK LITERATURE.—In a recent number of the *Star* we read the subjoined paragraph with great pleasure:—"*How they Serve Quack Doctors in France.*—Two quack Doctors of extraordinary local celebrity, named Colandre and Benati, the latter an Italian calling himself a commendatore, have just been tried by the correctional of police at Lille, for the illegal practice of Medicine, and sentenced to fines of 1600 francs each. They drove about Lille and the environs in a carriage with four horses, proclaiming that they would cure the poor of all sorts of diseases gratis, their rich clients paying for them; and they became so much in vogue that people thronged their doors from five in the morning till eight at night waiting for their turn to get advice." We were much disgusted to find at the bottom of the same column, in the same type, a paragraph of just the same size announcing the "successful results" of "Holloway's ointment and pills." It is true the word [advertisement] was prefixed, but this would not, to the ignorant who swallow such baits, prevent their thinking that the paragraph appeared with at least the approval of the conductors of the *Star*. A little while ago the *Pall-Mall Gazette* published a vigorous denunciation of quack advertisements, exclaiming against the country papers for admitting a certain class of advertisements which were excluded from "every respectable London newspaper." The advertisement of "Mrs. Johnson's American Soothing Syrup," is, however, to be found in the columns of the *Pall-Mall Gazette* itself. It is but fair to say that the *Pall-Mall Gazette* was denouncing what may be called the sexual advertisements. Yet it is much to be regretted that a respectable journal should in any way help to spread a knowledge of a class of drugs which are not merely worthless, but actually injurious.

THE MEDICAL TIMES & GAZETTE SPECIAL REPORT ON THE EPIDEMIC OF CHOLERA: WITH A PRACTICAL HISTORY OF THE DISEASE.

Chapter XII.

Snow's Theory of the Cause of Cholera Explained and Illustrated.

The writers for the general press and the speakers on politics are fond to say that the Medical Profession knows no more respecting the cause of cholera than they, the writers and speakers, do themselves, and perhaps not quite so much. The gross ignorance on which this assumption is founded lies not altogether with the public, nor is it all the fault of the public. We as a Profession are to be blamed for having fallen into a sort of maundering, uncertain, conceited, chaotic mannerism in reference to the malady. The world outside the Profession knows little of our literature, and some of our brethren, seizing on that fact in order to get a hearing at any price, have not been content to send their suggestions or their experiences to this journal, or to the *Lancet*, or to the *British Medical Journal*, where they would have been properly weighed and measured, but have rushed to the daily press, there to get a hasty admission and an ephemeral reputation for having said something on the current topic.

What the results have been shall we record? Who has read the letters on cholera written by Medical men to the breakfast tables of England? It is the fact, sad and unwholesome, that breakfast readers have really learned less from the Professional than from the public writer—little enough from either, but least from the men who, if they presumed to teach at all, should teach as scholars and professors. Thus it has come to pass that the vast stores of information which we have actually in our possession with reference to the disease are swallowed up in ignorant hypotheses, such, for instance, as that cholera is caused by heat and destroyed by cold; or that it is caused by fear, as though, forsooth, a man could frighten himself into a specific disease—into syphilis, gonorrhœa, scarlet fever, or cholera. We would, if we could, pull up the Profession from this trifling and dilettanteism to something that is real. We would have its members teach that in truth the Profession has worked at cholera, that it has a very clear idea of the origin and mode of propagation of the epidemic, and that it need not be ashamed of expounding what it knows, nor afraid of the results that would follow if such knowledge were acted upon.

The points to which we would specially call attention in this chapter relate to the theory advanced by Snow in respect to the cause and mode of propagation of cholera. This theory, when well understood, gives the clue to all apparent mystery. In the present outbreak the series of facts evolved have been one continuous demonstration of the truth of this theory, and not a single event has occurred to militate against it. Let us, then, see what this theory, which has never yet been properly understood, teaches us.

The first element of the theory is to the effect that cholera, pathologically, is a disease exclusively of the alimentary canal; that the great primary change from healthy to diseased action is at first locally confined to the alimentary tract; that on this there is rapid exudation of fluid matter from all parts of the body; and that the collapse, cramps, coldness, and other external symptoms of the malady are but results of the abstraction of water from the tissues.

The second element in the theory is that the primary change in the alimentary canal is always induced by the introduction into the canal of a specific poison.

The third element is that the poison itself is exclusively contained in the intestinal excreta of the infected person;—that is to say, either in the vomit or in the matters passed by the bowels. There is nothing exhaled from the lungs, nothing from the skin of the cholera patient, that produces the disorder. It is all a question of the increase of poison in the alimentary canal, and ejection of poison from the canal.

The fourth element in the theory is, that the poison is not a gas, is not a vapour, but a substance capable only of existence either in the fluid or the dried form of matter;—*ergo*, it can only be wafted a little way by the air, and when it is in the dried state it can only be carried long distances by being attached to articles of clothing or by being disseminated through the agency of water.

These are the essentials of Snow's theory. They have been misunderstood because they have not been separated from certain broad and practical conclusions with which he carefully connected them, and which have been much misrepresented.

The leading misrepresentation of the Snow theory is that he, Snow, connected the spread of cholera purely with the supply of impure water; and we constantly hear the theory spoken of as though the author of it, having no grounds to go upon, had a bare crotchet that because people drank bad water they took cholera. This is an utterly false view of the case. Snow only looked upon water as the great means by which the cholera poison was distributed. He said, and he proved, that if choleraic excreta be supplied to a community by and through the water which that community drinks, such process will prove the most determinate means of introducing cholera into the community, and that by such process great and sudden outbreaks of cholera will be secured. Acting on this thought, he actually advanced directly to the cause of the cholera during the terrible Broad-street epidemic in London, and, removing the handle of the pump by which choleraic poison was being dispensed to many hundreds of the population, he stopped the plague as if by magic. But while he held to this view of water as a means of propagating the poison, he enforced the opinion that there were other modes of transit. He put these modes into four groups. First, he held that the moist cholera excreta on the clothes and bedding of infected persons might be carried mechanically by the *vapour* of water, and might enter the nostrils and mouth in that form, and so be swallowed with the buccal secretion. It was in this way, he believed, that laundresses engaged in washing the clothes of infected persons were so readily attacked. Secondly, he maintained that the poison might dry on infected clothing, and that from such clothing, on its being unfolded or moved, the solid organic matter might escape in small substance, might be wafted a few feet in the air, and might, in fact, be absorbed through the mouth by any one exposed to it. Thirdly, in respect of nurses, persons who lay out the dead, and others in attendance, he urged that these might actually carry the poison on their hands, and infect themselves by taking their food while their skin was not properly clean. In mines and other dark places where many persons congregate, this, he thought, was a very common means of communication. Lastly, he concluded that the very utensils—such as basins and cups used by the sick—might convey the choleraic matter, or even the cloths on which such utensils, imperfectly washed, have been dried.

Thus there was not a process by which the matter of cholera could be conveyed, omitted by Snow in his thesis; and we venture to state that if all his precautions were carried out, cholera would soon be an extinct disease.

Another cause of misapprehension of Snow's theory deserves notice and explanation. It was unfortunate that the author of the theory died while yet the question to which we have yet to refer was under consideration. The question was, whether there exists a specific cholera cell capable of re-production, and from the first of which all other cells proceed; or whether there can be such a thing as a spontaneous genera-

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tion of choleraic poison. It must be admitted that Snow, who was a staunch opponent of the doctrine of spontaneous generation, held by the cell theory, and was at first content to deal with the difficulties it suggested by comparing the origin of cholera poison with the origin of organic forms. Thus when he was once asked at the Medical Society of London where the first cholera cell came from, he answered by begging the questioner to tell him where the first tiger or the first upas tree came from; adding, "I have no power to answer questions on the subject of ultimate facts." Later, however, in his life he was beginning to re-consider the question of the origin of the poisons both of cholera and of typhoid fever; and had he lived, we doubt not that, guided by his clear and vast intellect, and his unbiassed nature, he would have modified his views in accordance with the natural truths that might have been presented to him.

Is there any reason why at this stage of our knowledge we should ourselves modify that part of the Snow theory which treats of cholera poison as a reproductive cell capable of development only by reproduction? We think there is, and we believe that, in fact, such modification widens and strengthens the basis of the theory. The position seems to be this, that all the points Snow originally taught—in reference to the alimentary canal being the seat of the disease, and the alimentary excreta the poison of the disease, as well as in reference to modes of transmission of the poison—are confirmed; but that, in addition, such poison may, under peculiar conditions, be produced without the intervention of a first case. It is not, however, probable, nor, as far as we can see, possible, for such generation of poison to commence in the living body itself. The evidence seems to point to changes occurring in excreta that have been passed from the body. These excreta, during a process of special decomposition, become transformed into poisonous matter, which by its presence tends to excite the same change, in continuation, in similar matter, and which, introduced, by accident, into the alimentary system of the living body, excites a new organic secretion and reproduction of poison.

That there are periods when organic matters in a state of decomposition undergo peculiar transformations, or, in other words, that the process of decomposition is not a uniform process, always accompanied by the same products, is now generally accepted by the physiological world as a truth the importance of which cannot be overestimated. We shall hope, indeed, one day to show, on experimental demonstration, not only that organic matters yield particular products under particular conditions, but that those products are also particular causes of disease; and we believe that so far, and in accordance with this demonstration, the theory of Snow will have to be modified. We shall then, while retaining the essentials of his theory, accept them *minus* the dogma that there must be, it matters not how remotely, some connexion between one case and another case. We shall say that a case being in a community will communicate the disease if it be permitted so to communicate, and that, too, whether the case be an importation or a development; but we shall not say that necessarily the first case was an importation.

In so far as practice is concerned, the whole experience of the present epidemic has been to show that choleraic poison, once developed, travels only in the manner suggested by Snow, and that all rational measures for suppression of cholera rest on a correct appreciation of his theory. Thus, at Constantinople, infected articles of clothing were washed in water which afterwards escaped to a drinking fountain; thus, in Paris, the disease is spreading by the aggregation of diseased with healthy persons; thus now, as in all former epidemics, it runs that those who attend most closely to the sick and wash the infected clothing die most speedily; thus it is that when the poison is introduced into or developed in towns where it cannot contaminate great supplies of water, the disease is localised and limited.

The most striking illustration of the truth of Snow's theory has been given us at Epping in the outbreak which we described last week. There eleven persons were attacked and eight died. There the centre of the disease was on elevated ground; so that a low position had nothing to do with it. There the disease occurred with a falling in the mean temperature; so that heat had nothing to do with it. There the disease struck and destroyed before the sufferers had time to feel dread; so that fear was not the cause. There eleven people were attacked, while hundreds in the district and some in the house escaped; so that no pervading atmospheric influence especially affecting *individuals* had anything to do with the disease. There there was plenty to eat and plenty to drink; so that poverty had nothing to do with the matter. There there were persons young and old, and of different occupations and sexes; so that age, sex, and habit had nothing to do with the event. And yet eleven persons were attacked. To what central and single source can we look for causation? It is before us. The sufferers drank from an infected well, or they came in contact with excreted matter from infected persons. It matters little whether Mr. or Mrs. Groombridge in their travels did or did not accidentally come in contact with excreted cholera poison, and did or did not communicate to the drinking water of their house such poison; or whether that water, impregnated with organic matter derived from the closet of the house, became poisonous, under a special form of organic decomposition: the results are the same, and while we deplore the catastrophe at Epping, we cannot but express satisfaction that the outbreak occurred in a place from whence the choleraic virus could only be distributed amongst a limited number of the unfortunate.

Chapter XIII.

The Diplomatic Conference on Cholera.

In a previous chapter we noticed the fact that the French Government had proposed a Sanitary Diplomatic Conference on Cholera. It is most fortunate as a fact and as an indication of the progress of science and knowledge that every one of the Courts which has been addressed has responded favourably. The Congress, therefore, will be held in due course of time, and from its novelty and importance, it will, we doubt not, excite the attention of all the civilised world. In accordance with the proposal and its acceptance, M. Drouyn de Lhuys has communicated an official note to the diplomatic agents of the various foreign Courts. The document is of peculiar interest to the Medical Profession, as indicating the first views which the promoters of the measure entertain in reference to the actual objects and labours of the Conference. The note was as follows:—

"Monsieur,—The recent irruption of the cholera into Egypt, whence that malady has successively spread into several other provinces of the Ottoman Empire, as well as into some portions of Europe, has awakened the solicitude of the different Governments as to the dangers to the public health offered by the present insufficiency of the barriers opposed to the development of the scourge. All these Governments, as well those of States which have been attacked as those whose territories, up to the present time preserved, may be subsequently threatened, understand that it is their duty to guard the populations against a calamity doubly formidable, by the evils it entails and the disturbance it creates in international relations.

"Each Power has thus adopted, either spontaneously or to satisfy the pressing desire of public opinion, such arrangements as have seemed to it most efficacious to defend its territory against the invasion of the malady; but experience has shown that these preventive measures taken separately, and differing according to locality, are difficult to reconcile with the customs and wants of our age, impatient of every shackle which fetters the liberty of commercial transactions.

"Struck with the inconvenience of this situation, the Government of the Emperor has asked itself whether, at the same time that means are adopted to arrest the evil in its course, it would not be possible to direct attention first of

to attacking it at the fountain-head by combating it energetically in the very places where it arises by a system of measures concerted with the territorial authorities. To effect this object, the Emperor's Government has considered it was urgent to establish a preliminary agreement among the interested Powers, and for this purpose to bring about the meeting of a Conference in which, besides delegates from the different States, men of science thought the best fitted to assist its deliberations by their especial knowledge might take their seats.

"The object of this Conference would be to investigate the primary causes of cholera, to determine its principal points of departure, to study its characteristics and its march; lastly, it would have to propose practical means for confining the disease and stifling it at its origin. It is not our desire to attempt to mark out in advance the programme of its labours; we wish to leave that care to the distinguished members who will be called upon to participate in it, and who will certainly receive sufficiently ample instructions to enable their studies to embrace all the questions requisite to be examined and resolved. It is, however, already at present perfectly understood that the Conference, while preserving the utmost liberty in its views, will not have to interfere in any act of internal administration, nor take the initiative in any proposition calculated to obstruct the free exercise of territorial sovereignty. The measures whose adoption it might advise would be unable to be put in practice upon the territory of any State otherwise than by the independent authority of that State itself.

"Owing to their geographical position, the countries of the Levant are first attacked by the scourge. The Oriental Governments, therefore, are particularly interested in the ameliorations it is desired to introduce for the general welfare in the organisation of the sanitary service, and we may reckon with confidence upon their co-operation in the measures of which their subjects will be the first to experience the beneficial effects. It must not be forgotten that it is owing to the persevering assistance of the Porte, to the successive improvements it has introduced into the administration of the public health, that the problem of the suppression of the plague has been happily settled. It is from Turkey, therefore, that the Conference will be able to find the most efficacious aid in its labours—it is with her support that it will collect the best elements of practical solution. These considerations, whose value will, no doubt, be appreciated by the Cabinet of ———, appear to me naturally to point out the City of Constantinople as the seat of the Conference. Brought into more immediate contact in this capital of the Ottoman empire with the provinces in which the epidemic has its chief centres, the representatives of the Foreign Powers will gain valuable information from the superior Council of Health working under the supreme direction of the Porte. These favourable conditions will render easier in that city than anywhere else the accomplishment of the important mission to whose success the administration of the Sultan will consider it an honour to contribute.

"I request you, Sir, to be good enough to communicate these views to the Cabinet of ———. We shall learn with great satisfaction that it gives its assent to them. In the event that, as we are willing to hope, the adhesion of the different Powers should allow of the Conference meeting within a short period, I shall acquaint you with the choice made of our delegates.

"You will find annexed a copy of the report which, conjointly with his Excellency the Minister of Agriculture, Commerce, and Public Works, I have had the honour to present upon this subject to the Emperor, who has deigned to approve its conclusions. This document is not intended to be communicated to the Government to which you are accredited, but you may base upon it the arguments which support the views set forth in this despatch.—Receive, &c.

(Signed) "Drouyn de Lhuys."

We forbear here from making at this moment any lengthy comment on this important state paper. But we would point out that the main question proposed for discussion is one purely scientific in character. The Minister at once assures to all nations the principle of perfect freedom: whatever bad system may prevail, that is not to be opposed rudely, but the causes of the particular disease—cholera—are to be investigated, and when these are proven Governments are to be left to act as they may see is most wise in the suppression of such causes as may be discovered. In short, the *intelligence*, not the liberty, of nations is to be appealed to, the only safe course of political action. We shall be interested to see how the Government of this country will proceed in electing its representatives to a scientific congress, in which the Medical element must necessarily stand first and foremost.

Chapter XIV.

The Progress of the Present Epidemic, continued.

The Epidemic in France.

At the close of last week the Government of France undertook to reassure the Parisians in the pages of the *Moniteur*. The subject of cholera was also brought up before the Academy of Sciences on the 16th, when the great academician Le Verrier ventured to twit the representatives of Physic on their uncertain knowledge. He wished to know definitely what a man, who might be seized with cholera, should do in the absence of a Doctor, and he called specially upon M. Velpeau to give an answer. Velpeau replied with due caution: any man, he said, might name a remedy, but the point was to prove the remedy useful. The cause of cholera was better understood than its treatment; the cause was a poison which enters the organism, that seemed clear, but of treatment a wise man must speak with great care. One fact ought not to be suppressed—many diseases, especially acute diseases, get well without remedies. This fact applied to cholera, and there was no doubt that many patients recovered from cholera spontaneously. In preceding epidemics remedies of every kind had been suggested, and actually put into practice, and some patients recovered, but he (M. Velpeau) would not undertake to say in any one case how far the remedy assisted in such cases of recovery.

Altogether, the discussion ended in what M. Le Verrier lamented as a negative conclusion.

Notwithstanding the assurances by the organ of the Government, the number of cases of cholera admitted into the Hospitals of Paris were not less than 250 a-day at the beginning of the week. In order to give confidence to the Parisian public, the Emperor Napoleon, on Friday, 21st, visited the Hôtel-Dieu, and passed an hour amongst the patients suffering from cholera, speaking with them, inquiring if all their wants were supplied, and giving words of encouragement to the sufferers, and of commendation to the attendants. The papers look upon this duty of the Emperor as a singular specimen of pluck; and perchance it is, on the part of an Emperor. We admire the Emperor for the deed, and would have shouted with the rest the *Vive l'Empereur!* when he left the Hospital. But after all, when you take away the Emperor from the man, there was not much pluck in the proceeding, and our admiration would be expressed in favour of the wisdom of the example rather than in astonishment at the courage personally displayed. On Monday, the 23rd, the Empress, following the example of her husband, visited all the important Hospitals, spending a considerable time amongst the cholera patients, and speaking words of kindness and encouragement. The effect on the alarmed *élite* has been excellent.

The Paris correspondent of the *Star*, evidently a well-informed and able man, states from his personal knowledge that the apothecaries of the Faubourg St. Martin have actually established outside their shops "vomitories" for the use of persons seized in the street by the malady. The idea of such procedure is disgusting beyond measure, and one wonders why the Emperor, when he left the Hôtel-Dieu, did not visit the Faubourg St. Martin and stop the vomitories.

The *Union Médicale* of Saturday last has the following remarks on the epidemic:—

"The information we have been enabled to give to our readers respecting the cholera, although not based on figures (which have been constantly refused), has nevertheless been as exact as possible, and has faithfully reproduced the movement of the epidemic. Our latest intelligence stopped at the

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17th inclusively, and showed on that day a slight diminution in the number of deaths, especially in the Hospitals. On the 18th instant the situation remained stationary, with a tendency rather to a decline than an increase. On the 19th there was no perceptible change, the deaths remaining at about the same figure, both in the Hospitals and in the city. At the moment of going to press, one of our collaborators sends us the following note:—'During the last two days (18th and 19th) the number of cholera patients in the Hospital is perceptibly the same. In the city there is an apparent diminution; thus in one of the central *arrondissements*, the fourth, the number of deaths from cholera on the 18th was only three, and on the 19th only five. On the 17th there had been fifteen deaths. The Administration of Public Assistance has opened, at the old Hospice des Ménages, an establishment of convalescence for patients leaving the Hospitals. Many relapses have thus been prevented.'"

To the soldiers and police in Paris flannel belts have been supplied, and the soldiers have three centimes a-day of extra pay to enable them to purchase hot coffee when they go on and when they come off their duties. The police are also supplied at the stations with warm drinks. To provide in some measure for the families of the poor persons who have died of cholera, the Emperor has placed 25,000 francs, the Empress 15,000 francs, and the Prince Imperial 1000 francs, at the disposition of the Minister of the Interior.

The *Avenir National* records that three Medical men have succumbed to the malady. It says:—

"The epidemic continues without any noticeable change. The Hôtel-Dieu received thirty-nine patients on Friday, the 20th, and several cases occurred among the inmates of the Hospital. The Medical world is at this moment painfully affected by the deaths of MM. Caccioca and Mongon, *externes* of the Hospital St. Antoine, who have fallen victims to cholera whilst attending the sick. Three pupils of the College St. Louis have been attacked; two of them died on Thursday, and the other on Friday. One of the servants of the College has also been carried off. On hearing this news, many families immediately withdrew their children, and for a moment there was even some idea of sending away the whole establishment; but the Minister of Public Instruction, after having visited the building, has postponed that measure; and we think he has done right, for the St. Louis College is in a very healthy situation. The death from cholera of Dr. Bréard, an eminent Parisian Practitioner, aged 64, is also announced."

The notabilities have not altogether escaped. M. Segard and Madame Baurée, the wife of the French minister at Portugal, have fallen.

Taking the whole of the news from Paris respecting cholera, the summary is not in any degree encouraging. The better classes of people, foreign and native, do not seem yet to suffer, but the poorer classes and servants of the rich are suffering severely. The Hospital Beaujon, in the Quartier St. Honoré, is filled with patients, and the mortality is enormous, and the disease spreads in the Hospitals. The college called the Lycée St. Louis has suffered, and three students and a clerk have succumbed. The military Hospitals are also charged with the sick, and the Imperial Guard is severely affected. No official returns for the whole city are published.

Dr. Whitely writes to the *Times* to correct a rumour that cholera has broken out at Cannes. He says there has only been one case, and that was imported. A second case was believed to be choleraic, but the evidence was doubtful. Both cases proved fatal.

At Toulon the epidemic continues to decrease. On the 19th inst. there were 9 fatal cases—3 in the town, 3 in the Naval Hospital, and 3 in the Military Hospital. The Port Admiral at Toulon had also suffered from the epidemic, but was recovering.

A report that the epidemic had spread to Pau has been contradicted by an English resident, who states that the disease has never been in the district, and that pipes are now being laid down to supply the town with pure water taken at its source at a distance of eleven miles. The writer adds in explanation—"The South of France, from Bayonne on the Atlantic to Marseilles on the Mediterranean, has an extent of 400 miles. Pau is distant from the Atlantic about 70 miles only, and from the Mediterranean 330 miles; and it is only on the seaboard of the Mediterranean that cholera has appeared in the South of France." The following note from the Prefect of the Basses Pyrenées, who has official knowledge of the development and march of cholera in the South of Europe, accompanies the letter:—

"The cholera has kept to the shores of the Mediterranean, and has not advanced further to the west than Arles, 45 miles from Marseilles and 335 miles from Pau. It has now nearly disappeared there, and at Madrid, 450 miles to the south of Pau, is very much on the decline; and there is no cholera to the north of Madrid. There has been none at Bordeaux, and none at Bayonne. As to the Basses Pyrenées and the neighbouring departments, the public health has never been better."

In Italy.

The disease lingers in Southern Italy, and during the past ten days has appeared, or, rather, reappeared, at Lucera. On the 14th twenty-one deaths from the malady occurred, and there were cases at Melfi, Bodetto, Bisceglia, and Brindisi. In San Giovanni there has been a severe outbreak, 30 cases having occurred in four days: the disease was extremely fatal. The population of the place is 10,000. The disease is also believed to have been imported from San Giovanni to Naples, where two doubtful cases were registered on the 13th. All these places are in the worst possible sanitary condition, and the people are unprepared in every way to meet the disease or to check the progress of the infection. That the disorder, therefore, should penetrate into the centre of Southern Italy is almost a natural consequence.

A correspondent to the *Times*, writing from Nice, states that no case of cholera had broken out spontaneously in that city. Certain cases were, nevertheless, imported from Toulon and Marseilles. When cholera broke out in these last-named towns the wealthier classes first fled, then the citizens and workmen, who flocked in great numbers to Nice. These, refused residence in the villages, brought the epidemic; but the Mayor of Nice promptly raised funds and had the fugitives carried to the frontier with their effects; for some actually brought the mattresses on which their friends had died from cholera. Of nine deaths that occurred in Nice, not one person was an inhabitant of the place. The authorities are introducing sanitary measures with much activity.

The epidemic was spreading eastwards to Ostuni, Viesti, and Grumo Appula. In Barletta there had been 30 deaths in one day, and at Bitetto 6 deaths and 29 attacks.

In Portugal.

The epidemic has appeared at Elvas. Elvas is a frontier town in the province of Alentejo. It lies about 125 miles to the east of Lisbon, and twelve miles west of Badajoz. It is situated on high ground, being on a hill in the midst of a wide plain. The town itself is placed between two forts, or castles, each of which are raised above it, and in the town there are extensive barracks. When we call Elvas a town, we are not quite correct, for, in truth, it is a city; it possesses a noble cathedral, and is the capital of the diocese of Elvas. An aqueduct conveys water into the city from a distance of four miles, but the source of the water we are not able to state. Neither can we speak of the sanitary condition of the place. The barracks are said to be close, and covered in so as to be bomb-proof.

In Spain.

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At Madrid, the epidemic had shown no evidence of decline

on October 20. On that day there were 136 cases and 93 deaths,—an enormous mortality. The people still continued in fear, and were flying away, although the Queen, with true courage, remained faithful to her post.

In Malta and Goza.

At Malta, the Cholera Relief Committee has been unable, owing to deficient funds, to continue its useful operations. The epidemic has not yet ceased in the island. The *Times'* correspondent from Valetta gives the following daily returns from October 12 to 17 :—

Date.	Cases.	Deaths.
October 12	8	6
,, 13	3	1
,, 14	3	3
,, 15	2	0
,, 16	4	0
,, 17	6	2

In the island of Goza, the returns were—

Date.	Cases.	Deaths.
October 10	10	4
,, 11	2	0
,, 12	3	1
,, 13	5	1
,, 14	5	0
,, 15	4	3

The disorder has not appeared for eight days amongst the military. The villages of Zeitum and Asciak have suffered severely.

In Gibraltar.

From Gibraltar Mr. Frederic Sayer writes to say that cholera still continues in the island, and that amongst the poorer classes the distress is very great. To meet the poverty a "Gibraltar Cholera Fund" has been established, and Messrs. Cox and Co., Craig's-court, Charing-cross, have been appointed bankers.

CHOLERA IN ENGLAND.

In London.

A case of a choleraic character, ending fatally, has been received in St. George's Hospital, under the care of Dr. Fuller, since our last report. The facts, kindly supplied to us from Dr. Fuller's notes, are as follow :—

A cook, residing in a family in Gloucester-place, Portman-square, was suddenly seized, about 11 o'clock a.m. on the 14th inst., with severe vomiting and purging. She was a "bilious" subject and was frequently obliged to take castor-oil, and her bowels having been torpid and her stomach deranged for some days, she had taken two pills overnight and a dose of castor-oil on the morning of the 14th. When the excessive sickness and purging set in, she took some brandy and went to bed, but no remedies were administered until she saw Dr. Fuller at 1 p.m. She was then vomiting and purging incessantly, the stools being the characteristic "rice" stools of cholera. The surface of the body was quite cold, the features were sunken, the extremities dark-coloured and somewhat shrivelled in appearance, the limbs were severely drawn up by cramp, she complained greatly of thirst, and the pulse was extremely weak. A mustard poultice was applied to the pit of the stomach, hot bottles were placed at the feet, ice was given her to suck and iced water to drink, and she was ordered to take a pill of calomel and opium every two hours, and forty minims of the dilute sulphuric acid every half-hour. The pills were rejected by vomiting, and so was the greater part of the medicine; but when seen again at 4 p.m. she had improved considerably; warmth had returned to the extremities, and the peculiar expression of her countenance had passed off, but the vomiting was still frequent, the purging was as frequent as ever, and the stools were still colourless and of the same character. At this time her mistress became so much alarmed that the patient was sent to St. George's Hospital. She bore the journey well, and on admission, about 5 o'clock, was still warm, but towards 9 o'clock symptoms of collapse again set in, and it was thought that she would have died in the night. After a time, however, she rallied, and the symptoms of collapse passed off, although the vomiting and purging continued as before. About 5 o'clock on the 15th the purging ceased, and the vomiting became less frequent; the pills, therefore, were omitted, but the sulphuric acid was continued. On the 16th, the vomited matters were bilious and of a dark green colour, but she was hot and feverish, had a dry tongue, and had not passed any urine since 5 o'clock on the previous day, nor was any secreted up to the time of her death, which took place about 5.30 o'clock on the 18th. She lay in a comatose condition some hours before her death, and a small quantity of water which was drawn off from her bladder was found to be loaded with albumen. The kidneys were found to be congested and in an early stage of Bright's disease. The house in which she had resided was well drained. No other member of the family had suffered from diarrhœa, and there was no apparent cause for the attack.

The Report of the Registrar-General, for the week ending Saturday, October 21, supplies the following facts :—

The deaths registered in London during the week were 1265. It was the 42nd week of the year, and the average number of deaths for that week is, with a correction for increase of population, 1189. The present return exhibits an excess of 76 deaths above the computed number.

The deaths from diarrhœa in London are slightly more numerous than they were in the preceding week. In the three weeks of the present month the fatal cases of this disease were successively 83, 54, and (in the week that ended last Saturday) 62. The mortality from diarrhœa exceeds the average for the third week of October, which is 40.

Two children died from cholera, and two adults. The following are the particulars of the latter cases :—On the 16th of October, at 77, South-row, Kensal-town, a whitster, aged 48 years, "cholera (4 days), gradual exhaustion (14 days)." On the 14th of October, at 10, Copenhagen-street, Islington, the widow of a wine merchant, aged 73 years, "cholera (2 days), exhaustion."

The annual rate of mortality last week was 22 per 1000 in London, 31 in Edinburgh, and 24 in Dublin; 40 in Liverpool, 34 in Manchester, 35 in Salford, 25 in Birmingham, 37 in Leeds, 14 in Bristol, 30 in Hull, and 30 in Glasgow. The rate in Vienna was 27 per 1000 during the week ending the 7th inst., when the temperature was 4·7° Fahr. lower than in the same week in London, where the rate was 21 per 1000.

In Epping and Thoydon.

In connexion with the epidemic at Epping, reported in our last, we would state that we under-estimated by one death the fatality of the outbreak. The housemaid of Mr. Groombridge succumbed to the consecutive fever following the choleraic attack. Thus, out of eleven persons attacked, eight died. No other cases have occurred up to the present time.

Bearing on the same subject, the enclosed letter has been published in several of our daily contemporaries :—

"Sir,—Having read this morning an announcement of the death of the late Mrs. Groombridge's mother at Thoydon, near Epping, I am induced to send you the following statement, as it may in some measure tend to lessen alarm and relieve Weymouth from the suspicion of having been tainted with Asiatic cholera during the period of the late Mr. Groombridge's stay there.

"Very early in June last the late Mr. Groombridge consulted me, and he told me that he had felt unwell for the last two years; that he had been troubled with indigestion and great depression of spirits, which he said he could not at all account for, as his circumstances were comfortable, and that he had made money not only by farming but also by brick-making.

"I found that he had been under Medical treatment be-

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quently for a year or two past, but that he had only found very temporary relief. As the medicine I prescribed did not produce so much benefit as I expected, I inquired particularly as to the locality of his residence, the drainage, and water supply.

"He told me that, with the exception of a little rain water occasionally, their sole supply was from a deep well, and that the water was very hard, and made the tea very disagreeable. I requested him to bring me a bottle of the water on his next visit, which he did on June 17 last. I found that, although the water was perfectly limpid, it had an unpleasant odour and nauseous taste, amply accounted for by recent disclosures as to the leakage from the cesspool into the well.

"I handed the bottle of water to Mr. Goff, the well-known operative chemist, of Kingsland, who, after examination of the contents, stated to me that he detected sulphuretted hydrogen gas, with a considerable quantity of organic matter. Mr. Groombridge got me to prescribe for his wife and her mother, both of whom had been, to use his own expression, 'out of sorts' for a long time.

"Comment upon the foregoing statement is needless.

"I advised change to the sea coast. They went to Weymouth, came back to Thoydon to drink impure water—their constitutions enfeebled from long-continued functional disorder of the digestive organs—and speedily succumbed to the cholera when attacked. "THOMAS FORSHALL.

"16, Beauvoir-terrace, Kingsland-road, Oct. 18."

The letter of Mr. Forshall thus corroborates the facts which we reported last week in relation to the well on the Groombridge estate. It shows that the family had in truth been drinking a water organically impure for a long time past, and that nothing was required but the introduction into it of choleraic matter to render it a virulent intestinal poison.

The question whether Mr. Groombridge contracted the disease at Weymouth has been carefully investigated for the Privy Council by Mr. Radcliffe, the learned secretary of the Epidemiological Society. The result has been that not a trace of a suspicion exists that any infection was received at Weymouth. It is worthy, however, of being mentioned that Mr. and Mrs. Groombridge, on leaving Weymouth, passed through Southampton, and probably stayed two days at Portland.

IN SOUTHAMPTON.

We regret to state that cholera remains at Southampton. The Registrar-General in his return for Saturday, October 21, reports as follows:—

"Among the population of this borough (estimated to the middle of the present year at 53,001) twenty-six deaths were registered during the week ending last Saturday; of these three were referred to cholera. The annual rate of mortality during the week was twenty-six per 1000 persons living."

During the past week the Officer of Health for the borough, Mr. Francis Cooper, has also succumbed to the malady. He died at twenty-five minutes before one on Tuesday morning, after three days' illness. His death was accelerated by his close attention to his sanitary work. He had been suffering slightly from diarrhœa for three or four days previously; yet he continued the arduous duties of his office, and on the Friday preceding his death inspected a cement factory at Northam, to ascertain the effects of a new invention which had been applied to the works, with the view of getting rid of a noxious effluvium previously generated in the manufacture of the cement, and which had been detrimental to the health of the neighbourhood. He was 64 years of age, and had undergone a late severe trial in the death of his son.

In addition to this case, three others have occurred, two of which have proved fatal. One of these was in a young lady of 16, at Freemantle, in the western district of the town. The patient was seized in church on Sunday evening, and was attended by Dr. Griffin. She died on Tuesday at 7 o'clock. she was a strong girl, and had no premonitory symptoms. The house in which she resided is supplied with well water, and the drainage is reported as bad.

REPORTS ON THE EXISTING CONDITION OF TOWN AND COUNTRY,

AND

THEIR STATE OF PREPARATION AGAINST THE INVASION OF CHOLERA.

(BY OUR OWN SPECIAL COMMISSIONERS.)

No. I.—BETHNAL-GREEN.

WE have determined to cause an inspection to be made, by competent and impartial Medical men, of what it is now customary to call the "sanitary state" of various places in London and elsewhere. We desire to lay before our readers such an account as may enable them to estimate the probability or otherwise of a severe attack of the cholera, should that epidemic spread from Southampton, where it seems to have gained so firm a footing. We assume that if any person who had imbibed the poison—say at Southampton—were to come to London, and to have the disease in its fully-developed form, that then the question whether that disease should spread and slay its thousands would depend on the simple fact of cleanliness or dirt. Would the patients' excretions be disinfected and be got rid of, or would they be hoarded up in dirty bedding, carpets, and clothes? Would their volatile particles rest and feed upon damp, mouldy old walls of rooms already sodden with animal exhalation? Would they find their way into pump wells? Would their vapour be condensed on the surface of dirty water exposed in uncovered tubs, or in cisterns communicating with water-closets? Would they fester on the surface of the earth with animal and vegetable refuse and garbage? If so, we have every right to believe that the epidemic would spread. Again, in districts where Medical Officers of Health have been appointed, the public has a right to ask for the fruit of their labours. "The Nuisances Removal Act, 1855," is not a perfect instrument, yet it gives clear and wide definitions of certain nuisances, and powers for their removal. It defines as nuisances—

"Any premises in such a state as to be a nuisance or injurious to health.

"Any pool, ditch, gutter, watercourse, privy, urinal, cesspool, drain, or ashpit, so foul as to be a nuisance or injurious to health.

"Any animal so kept as to be a nuisance or injurious to health.

"Any accumulation or deposit which is a nuisance or injurious to health."

And although legal proceedings may be foiled in some cases, yet they surely will not be in all; and the visible state of a district may be assumed to be a criterion of the activity of the authorities to whom the powers of carrying out the Nuisances Removal Act have been entrusted.

Bethnal-green was selected as the first parish to be visited by our Commissioners, in consequence of the report of an inquest which appeared in the newspapers on Friday. It appears that a girl named Joanna Butler, aged 11, and living with her parents at No. 5, Union-street, Boston-street, in the neighbouring parish of Shoreditch, broke a rib about three weeks ago, for which accident she was treated by Dr. Greenwood. On Saturday week the family removed to No. 3, Nelson-place, Bethnal-green, and there the girl became worse and died. Dr. Chambers, who was called in consultation with Dr. Greenwood, is reported to have deposed on the inquest:—

"That the removal to Nelson-place was most injurious, owing to the foul emanations and effluvia from the houses, the dust-heaps, etc. The houses consist of two rooms each, and the rent paid was 5s. a house per week. He had a case of small-pox in one of them, which, he believed, arose from poison in the houses, for it had not come on like ordinary small-pox. The effluvium from the premises affected his throat for hours after he visited the court.

"Harriet Butler, the mother of the deceased (we quote from

the newspaper reports), said that the girl got much worse after she was brought to Nelson-place. There was no dust-bin or cover to the water-butt, or rather tub. The house was a step lower than the ground front and back. The yard was covered with stagnant water, and they had to place the wash-house door down to walk dryshod on it.

"Frances Bloxam, 2, Nelson-place, said that she spoke to her landlord, Mr. Chappel, about all the dust being thrown out and left in the middle of the court, dead cats, &c., being on it, and he said, 'You should put it in your yard; I will get any one three months that puts the dust in the front.' All the houses were the same; they were never whitewashed or cleansed inside. The dust-heaps, &c., were only removed at long intervals.

"It was stated that the dust contractor's men habitually avoided narrow streets and courts in low neighbourhoods, where they were not likely to receive 2d. beer money for the trouble of removing dust and garbage, and the consequence was that heaps of refuse were left to decompose for weeks at a time in such places, to the peril of the health of the inhabitants.

"Dr. Major Greenwood, one of the Divisional Surgeons of Shoreditch parish, said that an order was left at his house on September 29 to attend the deceased. The accident had happened a week previously. His assistant found the child lying on the boards the last day he attended. The landlord had seized the bed, &c., for rent. On condition of their removing elsewhere, the landlord gave up the bed.

"Mr. Charles A. Christie, Inspector of Nuisances for Bethnal-green, said that for seven weeks past he was inspector of the south and west district. Nelson-place was in the north district. While the north district was in his charge he served no notice on the landlord of these houses. He had no occasion, for there was no complaint.

"The Coroner: Was it your duty to attend only where there was a complaint?

"Witness: My instructions were to attend on those who made complaints. I had not time to attend to the whole parish, and no single man could do it. The area of the parish is seven miles, and the population 200,000, so that I had enough to do to look where there were complaints made. I attended to two houses at the other end of Nelson-place ten months ago. The orders were obeyed. I did not see to the other houses, but I knew them for years to be decent habitations.

"The Coroner said that the houses could not have fallen into the present state in a year or two.

"A Juror: It is really a startling admission that these poor neighbourhoods are not to be visited or inspected unless when complaints were made. For ten months this neighbourhood had not been inspected. Such a system might satisfy the Vestry, but it would not satisfy the public.

"Witness: I have nothing to do with the public. I do not care whether the public are satisfied or not. I do my duty according to my instructions. You should go and do it yourself.

"Some of the jurors complained much of Mr. Christie's manner as most disrespectful to the court.

"After some further squabbling, the jury returned the following verdict:—'That Joanna Butler, being an infant, did die of the mortal effects of a fracture of a rib, accelerated by great neglect of sanitary arrangements in the locality in which she died; and the jurors further say that the said fracture was occasioned accidentally; and the jurors do further say that the conduct of Mr. Christie, the Inspector of Nuisances, is reprehensible for neglect of duty; and that the landlord of the said premises is highly culpable for allowing the said premises to remain in such a disgraceful condition.'

"It is, perhaps, only fair to Mr. Christie to mention that it was stated in the inquest-room that *it was in consequence of the directions he had received that he only inspected such nuisances as might be brought specially under his notice*, and that a different course might possibly have been attended with very great inconvenience."

So much for the newspaper statements of this inquest, of which we begged our Commissioner to take special notice. Now for his Report.

Report on the Sanitary State of Bethnal-green.

(By a Special Commissioner on behalf of the Medical Times and Gazette.)

In compliance with my instructions, I have visited the parish of Bethnal-green, availing myself of the guidance of a gentleman who has lived in that parish many years, and is well acquainted with every part of it. It is clear that any inspection which I could make must relate to matters on the surface, as it were; such facts as to cleanliness or dirt as are open to the senses, and not to be disputed.

Bethnal-green is a parish at the north-east of the City of London, and is best known to most of us by the fact that the Great Eastern Railway runs through it, and gives the passengers a glimpse of its dingy and dilapidated tenements. Its population is estimated by Dr. Sarvis, Medical Officer of Health, to be at present 113,000; it is said to be about 15 feet above Ordnance watermark, and is, for the most part, a dead level. The population is said to be English, mixed with the descendants of French silk weavers, who, however, have lost all trace of their original language and nationality. Dirty as it is, it is not an Irish quarter. The population are employed as railway-men, workers in engine, gas, and other factories, dock labourers, wholesale shoe makers, and cabinet makers; the women and children work in factories, shops, &c., in the neighbouring parishes, and are employed at the sewing-machine, the wholesale manufacture of trimmings, lucifer match-boxes, cigar boxes, &c. &c. There are said to be twelve new churches, each with schools, and well attended; such of the clergy as reside in the parish are described as zealous and attentive; some are non-resident, and do their duties correspondingly; and the Medical men are numerous, and said to be thriving in general practice.

So much I heard as we walked through some of the principal streets, as Church-street, Bethnal-green-road, etc. These appeared to be occupied by second-class shops, and all looked tolerably clean and tidy. When we got off the main thoroughfares it was evident that the greater part of the ground was occupied by crooked streets, laid out apparently at random, and consisting of houses of one story only. There were many streets newly built and quite decent looking, and their number is said to be on the increase. In these the chief thing which strikes one coming from the West-end of London is the extremely rude, unfinished, and unwholesome nature of the surface of the streets. The pavement scanty or none at all; the gutters ill constructed; but above all, no attempt to form a roadway of hard *metal*, as is the case in better parts of town. How little we think of most comforts till they become conspicuous by their absence! The "macadam" which seems so commonplace a thing in the West, how it would be valued in the East! There the roadway is, for the most part, the soft natural earth only, worn into hollows, readily absorbent of putrid slops and of the natural moisture of the skies, and far less easily cleansed than a hard surface, even were cleansing ever attempted, which seems very apocryphal.

My guide informed me that he believed three-fourths of the parish to be covered by *decent houses*, including the shops in the best thoroughfares and the better back streets. Drainage more or less perfect exists throughout; cesspools have been abolished; and in the *decent* part of the parish, though the houses be, for the most part, built upon the damp earth, yet it seems as though common care and cleanliness ought to preserve the inhabitants in tolerable safety. It is the condition of the remaining fourth which formed the chief subject of explanation; and we began with Nelson-place, the condition of which had been described at the above-noticed inquest.

On this point I must bear witness to the minute accuracy of the evidence given by Doctors Greenwood and Chambers at the inquest. Here was one of a row of ten disreputable and ruinous houses, which looked as if utter strangers to paint, whitewash, and any other means of cleanliness. Everything within and without squalid, dirty, and neglected. There was the room with its floor sunk below the ground; there was the washhouse with its door off, so as to enable the inmates to bridge over the slush of the yard; and there was the

wife and some young children looking as dirty as human beings well could. Yet these houses looked as if once they had been more tidy, and might be again; for there was a decent privy and the remains of a trap to a drain. Moreover, there is another part of the story which ought to be known.

The father of the family earns 33s. per week; so that there is no earthly reason why his wife and three small children should not live in cleanliness and comfort. Whilst commenting indignantly on the meanness of grasping house-owners, do not let us forget the extravagance and debauchery of the working men.

Small-pox existed in two of these houses.

My guide now took me across the Hackney-road to the small mean street, in the parish of Shoreditch, from which these people had removed. It is very difficult to conceive that a patient could be much hurt by the air of Nelson-place who had survived that of Union-street. The house which these people had quitted was under the hands of workmen; but it was easy to see that it had been dirty and dilapidated to an extreme degree, even as its neighbours still are: the sinks in the back premises stinking for want of traps; the back yards or gardens neglected and loathsome.

Returning to Bethnal-green, we passed the new model lodging-house erected by Miss Burdett Coutts, of which I would remark that all such buildings, containing large numbers of human beings in a small superficial area, should be well spread out to sun and wind, and be surrounded with a larger free space than is the case here. The munificent charity of the founder of these buildings deserves all praise.

Immediately opposite is a row of old, crowded, dilapidated houses, with cellars illegally inhabited, and back yards full of stinking rubbish, by which we passed to a place called *Weatherhead-gardens*, the like of which I never saw before, nor could have believed that such a place existed in a civilised country. A large irregular piece of ground, covered irregularly with cottages—if such a name may be given to a lot of tumble-down shanties of the flimsiest construction—filthy within and without; swarming with dirty, half-naked children; here a standpipe dribbling out water, which a lot of gaunt women were collecting in buckets, to keep in their rooms as a day's supply; there a watercloset with a broken drain whence all the liquid flowed on to the path; here an open door, and the room full of children grubbing about; everywhere heaps of refuse of all sorts. "Where are the dustbins?" we asked; "and how often do the dustmen come?" The only answer was a laugh at the idea of such a thing.

Thence we went through Shearwood-place—a dirty *cul de sac*, with an open gully at one end, which a woman said stunk horribly under her window, the surface uneven with pools of dirty slops. Thence we went through Vincent-street, Half Nichol-street, Old Nichol-street, Shepherds'-court, and Nichols-row; all places for human beings to moulder away in, not to live.

In order not to fill my report with vague generalities, let me mention one or two positive facts. The absence of lime-whiting, which is a cheap method of conferring wholesomeness, and even a pleasing look, to the worst buildings, was remarkable. London vestries have been accused of believing in lime-wash as a panacea; the Bethnal-green Vestry seem to have no such credulity. One or two places lately lime-whited seemed quite brilliant by comparison. Then the universal neglect of scavenging in the streets, and of the removal of dust and refuse from the houses. The complaints on this head were unanimous, and the state of Weatherhead-gardens most convincing. In one place we saw some men removing rubbish from a yard; but it was one only. Thirdly, the open and most improper tubs for water, with their interiors lined with vegetable mould. I know for a fact that these low vegetable organisms in water cause diarrhœa. Fourthly, the prevalence of "5 hole sinks" without traps.

But not to be tedious, suffice it to say that the condition of the houses and people I have described must be looked upon as most unsafe for them in the event of the advent of cholera, and that enough poison may be bred there to destroy half the population of London. It is clear that the commonest and cheapest methods of cleanliness are systematically neglected. Then the question is, By whose fault is it? Whom shall we hang?

First we naturally pitched into the Medical Officer of Health. How can such things be allowed? Why does he not interfere?

My guide soon explained this. The Medical Officer of Health, Dr. Sarvis, is universally admitted to do all he can, and to give treble the worth of the miserable £100 per annum which he receives as his salary. He has been active and useful in the matter of the cattle plague, and is so in the case of contagious disease and such other instances as come within his power. But we must not forget that for the removal of nuisances, for causing houses to be cleaned, and other physical acts, a Medical officer may advise, but that is all. The Sanitary Acts give vestries the power of removing nuisances; but supposing they don't choose to do so, who is to make them? The Medical Officer of Health wants a staff of inspectors to serve notices—to see that the work is done; if not, to take out summonses; then he wants legal assistance to enable him to stir up an obstinate or sleepy magistrate, and to defeat the chicanery of the "dirty party," which often imposes upon even a sensible magistrate. But with no inspectors, no lawyers, and no police, a Medical Officer of Health is as the Lord Chief Justice would be if he had no one to serve a writ or effect a *capias*.

The evidence of Christie, the inspector, at the inquest, continued my guide, was true, and honest, and sensible to the last degree. He knows his place too well to be active; if he were so, it might, as he justly said, be attended with great inconvenience. He might lose his place, and his employers in the Vestry, who probably own the property complained of, would have to dip their hands into their pockets.

Here I conclude my report of my visit to Bethnal-green,—a place I never saw before, and desire never to see again, and the existence of which fills me with a horrid sense of insecurity: believing, as I do, that an east wind may waft some of its poison-laden dust and vapour even into the cleanest quarters of the West.

I will just add one word. Every room in the parish is full. Landlords, therefore, can get rid of disreputable tenants if they choose.

"The parish—always full—is now filled to excess, although a large number of dwellings have been recently erected. Houses, even if in a bad condition, are sure to find occupants; and as there is great difficulty in procuring house-room, the tenants endeavour to conceal their sanitary wants, fearing that they will be compelled to remove while the needful improvements are being made."

So says Dr. Sarvis, Medical Officer of Health, in a late Report. I was told that there was not a room to be had, and that 3s. 6d. to 5s. were the common rentals.

Any one who will calculate the cost of construction of a house at the West-end, worth say £200 per annum, and then will think of these wretched shanties in Bethnal-green, and their high rents, must see that the latter yield, proportionally, a larger revenue. He will likewise be able to appreciate the impudent proposal sometimes made, for an equalisation of the poor's-rate over the whole metropolis, which really means that we, who pay our way and have things decent, shall, besides, pay for the cleansing of this small house property at Bethnal-green, and help support the debauched working men who cannot live on 33s. a-week.

A MEDICAL PRIME MINISTER.—The Premier of Nova Scotia is Dr. Charles Tupper, a practising Physician at Halifax.

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GENERAL CORRESPONDENCE.

ANCIENT SCULPTURES ON THE WALLS OF CAVES.

LETTER FROM PROFESSOR SIMPSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the *Medical Times and Gazette* for October 14, you quote some interesting observations regarding the discovery of archaic sculptures of animals found within the ancient caves of the Dordogne, etc., in France. Perhaps you will grant me a corner in your journal to say that I discovered lately an ancient series of interesting sculptures of animals upon the walls of some caves in Scotland.

During last summer, when seeing a patient with Dr. Dewar, I made a rapid visit with him to one or two of the deep and extensive caves upon the sea-shore at Wemyss, in Fife, with the view of finding out if there were any sculptured concentric rings upon the walls of these caves, being engaged, as I was at the time, in writing out an essay upon archaic ring and cup sculptures as the earliest form of carving left by the hand of archaic man upon stones and rocks in this country. I saw enough in one of the caves which I visited to induce me to go back some weeks subsequently, accompanied by my friends, Drs. Joseph Robertson, Duns, and Paterson.

On the walls of some of the caves which we visited on this occasion, we found rude incised sculptures of numerous animals and symbols exactly similar in type and character to those existing on the ancient sculptured stones of Scotland, and which Mr. Stuart has so well represented in his excellent work upon that subject.

Amongst the animals sculptured on the walls of the caves, we saw figures of the elephant, horse, deer, dog, hare, birds, serpent, and fish. Among the *débris* on the floor of some of the caves were long bones, of the ox, sheep, etc., split to extract the marrow, and a few rude implements.

If archaic man carved figures of animals, as has been found in the caves of the Dordogne, upon bone and ivory, at a time when his implements and weapons were of the rudest kind, and not yet metallic, he probably carved also upon the stone walls of the caves in which he sometimes dwelt. And I write this notice principally with the object of pointing out that the walls of our ancient inhabited caves in England, as those of Kent's Hole, Brixham, etc., all require to be carefully looked over (with artificial light, if necessary), with the view of discovering any early human carvings upon them. Will any of our Professional brethren who have opportunity aid in such cave researches? No doubt they will constitute an interesting and fruitful subject for anthropological research.

Yours, &c. J. Y. SIMPSON.

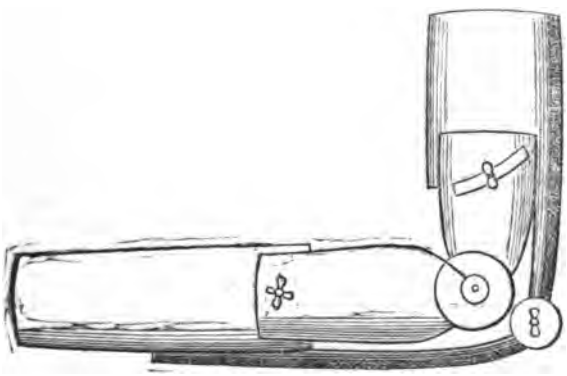
Edinburgh, October 24, 1865.

A MOVEABLE ELBOW SPLINT.

LETTER FROM DR. F. W. GIBSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—I beg leave to forward a description and sketch of a splint which I have contrived for cases of excision of the elbow. The part opposite the joint is moveable, being attached



to the upper and lower segments (which are joined on the outer side by a stout wire having a hinge, with a thumb-screw, opposite the articulation) by means of two thumb-screws, of which the higher moves in a slot. The two segments, hollowed on the anterior surface, are padded with cotton-wool covered with waterproof cloth. A separate pad, of the same material, is placed on the moveable portion. The splint can be set at any angle, and the wound is easily got at.

I am, &c.

F. W. GIBSON, M.B., House-Surgeon.

Taunton and Somerset Hospital, October 13.

P.S.—The splint is made of zinc.

NEW INVENTIONS.

DR. N. R. SMITH'S SPLINT.

OUR attention has been directed by Dr. Marston, Royal Artillery, to this very simple and effectual system of suspension for the treatment of fractures and injuries of limbs. The Profession is indebted to Dr. N. R. Smith, Professor in the University of Maryland, U.S., for this simple and ingenious appliance. Dr. Marston knows a lady who was treated on the Continent by this method, with admirable success, for a severe compound and comminuted fracture of the leg. The patient speaks in the highest terms of the ease and comfort she obtained. The principle may be described as that of the suspension bridge, the support being placed not below, but above the limb which it sustains, just as the iron chains support the weight of the bridge.

The apparatus is simple enough, and is readily understood by a reference to the accompanying figure. It must be of the entire length of the affected limb, and consists, in fact, of two light parallel iron bars, with transverse pieces, and two moveable ringed bars for the attachment of the hooks when suspended. This framework is placed upon the limb at its upper part, and by means of a stout pair of pincers we can exactly and easily give it the necessary bends, to accommodate it to any state of flexion we require. A bandage is first applied to the injured limb, and the frame is placed upon its upper, or anterior, aspect. It is maintained in close apposition by means of separate broad bands of diachylon plaister—say five or six for the inferior extremity; these bands completely encircling the limb and iron frame. The two moveable bars are of course left free, and a cord is passed through these and attached to a hook which moves upon a bar above. It will be easily perceived that the bandaging may be interrupted, and the bands so applied as to leave any part free and open to inspection. Not only does this appear to be an admirable method of suspension, but it has a manifest advantage in the way of procuring extension. We can avert the effects of muscular twitchings, secure a gradual extension, or procure any degree of it that may be required, by altering the position of the rings on the rods and changing the points of suspension, for the weight of the limb and the direction of the iron rods tend to promote and maintain extension. For example, let us suppose that we have fixed the splint on the front aspect of the leg, from the abdomen to the dorsal aspect of the toes. If the limb be then slung from its extremities, one end of the suspending cord being fixed to a ring on the thigh and the other at the ankle, we have the weight suspended between them, as in the case of the bridge; and this secures extension. The advantages may be described by the paradox that it is a moveable-immoveable splint, to which every kind of bandage can be adapted.

This system has been very generally adopted in America, and met with a good deal of favour among our Parisian friends. The reader may refer to the pages of the American Medical journals, and to a practical little paper by M. Charles Shrimpton in *La Gazette Médicale de Paris* of this year for any further information.

A TESTIMONIAL TO A MEDICAL PRACTITIONER.—At the Railway-station, Stamford, on the 25th inst., Mr. Walter D. Eddowes (on his return from the sea-side, where he had been residing on account of his health) was presented by his patients with an elegant little brougham, as a token of the affection and esteem with which he was regarded by them.

OBITUARY.

DR. HERBERT BARKER, OF BEDFORD.

We announce to our readers with the deepest possible regret the death of Dr. Herbert Barker, of Bedford. Amongst provincial Practitioners few men have held a more conspicuous place, and perhaps no one has passed from us who, for variety of attainment in Medical and general science, has stood more prominently forward. It is barely three months ago since Dr. Barker stood at the meeting of the British Association at Leamington, one of the most distinguished members of that learned body, and received from the founder of the Association the Hastings Medal, at present the highest annual award the Association has to offer. It was observed by many on that occasion that Dr. Barker did not exhibit his usual power, and that he spoke evidently with an effort; but no one attached to it further notice than that he looked wearied, and, like many more of the same assembly, overworked and charged with Professional anxiety. We learn that he followed his usual active Professional engagements until about three weeks ago, when he began to suffer from headache, with pains in the limbs at night. He paid little attention to these symptoms, and tried to shake them off by continuance of work; still they continued, and in time excited in his mind considerable apprehension as to his condition. Last Friday fortnight he took to his bed, symptoms of typhoid fever having manifested themselves. On the following Sunday by his own wish, Dr. Murchison visited him, and had the satisfaction of giving a favourable prognosis, as there was nothing to indicate a severe attack of the disease, although its nature was pretty clearly defined. During the ensuing week the symptoms became more marked, and the exacerbations in the afternoon were very distinct, but he continued to take nourishment freely. On the following Sunday he was again visited by Dr. Murchison, who found him reduced in strength, but who thought that, as he had reached the twentieth day of the attack, the symptoms would subside—an opinion which his ordinary Medical attendants, his partner Mr. Goldsmith, and his excellent friend and neighbour Mr. Couchman, were happy to endorse. He progressed in much the same way until the following Wednesday, when the pulse rose rapidly to 112, and he gradually commenced to sink until Tuesday last, when he expired at 4 p.m.

Dr. Barker has been so long and so universally known in the Medical Profession that the record of his labours requires from us little comment. His name had, in fact, become a household word amongst us, especially in reference to the investigation of the type of diseases of the epidemic class, before one of which he succumbed. He was one of the early graduates of the University of London, a Fellow of the College of Surgeons, a Fellow of the Royal Society of Edinburgh, a Member of the Royal Medical and Chirurgical Society of London, of the Medical Society of London, of the British Medical Association, and of the Obstetrical Society. A few years ago he obtained the Fothergillian gold medal of the Medical Society for an essay "On Malaria"—an essay which has become a standard work in our literature. It was in this essay he recorded the well-known series of experiments on the effects of sewer gases on animal life. His last scientific work was the Hastings prize essay, still unpublished, "On Disinfection and Deodorisation," upon which the judges of the prize passed an opinion of the most favourable kind. He added also to many other departments of Medical science, and was one of the originators of those series of meteorological observations on which the system of storm signals, now known to be so valuable for the preservation of human life from shipwreck, is based. For his exertions in meteorology he received a handsome testimonial from numerous scientific friends, at the instance, we believe, of Dr. Barker, of Worthing, who, though bearing the same name, was not related to him. He contributed further to Surgical science, and one of the most interesting sections of Druitt's admirable "Surgeon's Vade-Mecum," relating to phosphatic calculus, is connected intimately with Barker's name.

We have not time to dwell further at the present moment on the remaining labours which marked the career of our learned and industrious fellow-worker, but we may remark that up to the time of his death he was deeply and, as we know, earnestly engaged in presenting to the world a biographical series of the living men most eminent in Physic in his own generation. Alas! for us all, he of that series has fallen first, in the prime of life and activity, for he was only in his fifty-second year.

The marked feature of Dr. Barker's life was indomitable industry. He knew not what it was to be tired, and whatever his hand turned to do, he did it with all his might. By his own efforts he worked his way to the highest position in his own department of science, and made up for genius by the sheer force of indomitable energy. Here we must leave him, regretting, for our own sakes, that a mind so vigorous and a hand so unceasing is with us no longer. "The rest is silence."

MR. FRANCIS COOPER.

We regret to have to record the death, from an attack of Asiatic cholera, of Mr. Francis Cooper, Surgeon, of Southampton, and Officer of Health to the Local Board. The deceased gentleman has had, since the visitation of cholera at Southampton, many arduous and difficult duties to peform, and has experienced much anxiety on that account, whilst the death of a favourite son afflicted him sorely. Towards the latter part of the week he was seized with the premonitory symptoms of diarrhœa, which it is feared were somewhat neglected, and about two o'clock on Saturday morning he was attacked with cholera. He seemed perfectly aware of the dreadful affliction with which he was seized, and called up one of his servants to go for a Medical man, telling her he should not be long in this world. On Saturday morning and during the day he was visited by almost all the Medical men of the town and neighbourhood, and was subjected to every variety of treatment calculated to afford relief; but human efforts proved unavailing, and he died about one o'clock on Tuesday morning. The deceased gentleman was in his 57th year. His qualification was returned as L.R.C.S., Edinburgh, 1828. He was appointed officer of health in 1850, shortly after the introduction of the Health of Towns Act, and performed the duties for 18 months without any salary, which was then fixed at £150 per annum, and about three years ago raised to £200. He had to inspect the common lodging-houses, the slaughter-houses, and the market of the town, his duties involving on an average about 60 visits a week, or 4,060 a year, and in addition to this, where nuisances required removal, three visits were necessary to accomplish them, besides attendance before the magistrates where legal proceedings were rendered necessary.

Dr. Cooper was for many years one of our most active and useful public men. As a politician, he was always most fearless and independent in the avowal of his principles; and in the great struggle for the Reform Bill, the repeal of the Corn Laws, and in the promotion of all the useful measures that have been passed during the last thirty-five years he took an active and valuable part. He was remarkably well informed, and in public always spoke with much power and effect, his eloquence often approaching the very highest order of excellence. He stood by his party and his opinions in times when no doubt it materially interfered with his Professional prospects; but so thoroughly bold and independent was the constitution of his mind that he was never daunted by any fear of consequences. He was a prominent member of the Wesleyan Methodist body, frequently presiding at their annual meetings, and by his advice and counsel lending valuable aid in the promotion of the cause with which he so closely identified himself.

The deceased gentleman was for several years a member of the Southampton Town Council, as the representative of the Ward of St. Mary, and took a leading part in the discussions relating to local affairs, always supporting every proposition that he thought would be of service to the town; but perhaps the greatest service he was able to render to this community was the admirable and exhaustive report which he drew up on the site of the Victoria Hospital at Netley, when its salubrity was called in question by some very influential persons. This document reflected the greatest credit on the scientific and Medical attainments of Dr. Cooper, and had very much to do with putting an end to the debate on this question, as from that time forward no one was found to assert that the locality of the Hospital was unhealthy.

He was one of the oldest members of the Manchester Unity of Odd Fellows, and Surgeon to the oldest lodge in the town. He was much respected by his brother members, for whose

welfare he freely laboured, and we trust that they will take some steps to pay a special mark of respect to his memory. In fact, in every circle in which he moved, Mr. Cooper's genial qualities gained him troops of friends, and his loss will be deeply regretted by all ranks and orders of his fellow townsmen. Even those who differed from him in political opinion will be the first to recognise his manly qualities and social excellences. In him Southampton has lost a most useful citizen, and his old friends another link which bound them to a past generation. One after another our old townsmen are slipping away, but they did their work well in their day and generation, and among the number of those who are gone Francis Cooper, as he was familiarly called, will long be remembered as one of the most active and independent among the band of true and noble workers for the good of their fellow men in darker days than the present. We have simply to add the expression of our deep regret that in his recent labours and anxieties he did not receive that support which he deserved from those whose duty it was to extend it to him, and to which he was clearly entitled.—*Southampton Advertiser.*

MR. W. NEWNHAM.

We regret exceedingly to have to announce the death of Mr. William Newnham, of Tunbridge Wells, late of Farnham. Mr. Newnham was known as an active supporter of the Medical Benevolent Fund, of which he was Vice-President. For some years past he had suffered from chronic cerebral disease, and about a fortnight ago he was seized by paralysis. His active, practical benevolence, principally exercised for the Profession of which he was a member, entitles him to more than a passing notice. We hope ere long to give a detailed memoir of his life.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a General Meeting of the Fellows, held on Monday, October 23, 1865, the following Member of the College was duly admitted a Fellow of the same :—

Benjamin Ward Richardson, M.D. St. Andrews, 12, Hinde-street, Manchester-square.

At the same Meeting, the following gentlemen, having undergone the necessary Examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College :—

Alexander Bruce, 6, Albert-terrace; Frederick John Burge, jun., Marlborough-villas, New-road, Hammersmith; George Gregory, Moses-gate, Bolton; Henry William Larkin, Bilston; Richard John Lupton, 58, Stanhope-street, Hampstead-road; James Grosvenor Mackinlay, Isleworth, Middlesex; Thomas Hall Redwood, L.M. Durham, Rhymney; George Henry Savage, 46, Doddington-grove, Kennington; Richard Burford Searle, St. Just, Cornwall; Charles Smith, 24, Richmond-street, St. George's-road, Southwark; Francis Thomas Tayler, 5, Brunswick-place, Lewisham-road, New-cross; Alfred Edward Wilmot, 62, Nelson-square, Blackfriars-road.

The following were reported by the Examiners to have passed their Primary Examination for the Licence of the College :—

William Edmund Cant, St. George's Hospital; Louis Mark Le Grand, University College; Augustin Le Rossignol, Stratford, Essex; William F. B. Pollard, King's College; W. Wilberforce Smith, Middlesex Hospital; Frederick W. Young, University College.

APOTHECARIES' HALL.—Name of the gentleman who passed his Examination in the Science and Practice of Medicine, and received Certificate to Practise, on Thursday, October 19, 1865 :—

James Alonzo Taylor, Great Barr, near Birmingham.

The following gentleman, also on the same day, passed his First Examination :—

Thomas Sansome, Sydenham College, Birmingham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ALCOCK, J., M.R.C.S. Eng., has been appointed Surgeon to the North Staffordshire Infirmary, Etruria, Stoke-upon-Trent.

CANE, RICHARD J., L.R.C.S.I., has been appointed Resident Surgeon to the Birmingham and Midland Counties Lying-in Hospital.

COLMAN, T. J., M.R.C.S. Eng., has been appointed House-Surgeon to the Bristol General Hospital.

COUCH, THOMAS Q., M.R.C.S. Eng., has been appointed Surgeon of the Cornwall County Gaol.

GARNER, ROBERT, F.R.C.S. Eng., has been appointed Surgeon Extraordinary to the North Staffordshire Infirmary, Etruria, Stoke-upon-Trent.

GRIFFITHS, GEORGE, M.R.C.S. Eng., has been appointed Surgeon to the Pontardawe Tin Works and Graigalo Collieries.

NORRISH, J., M.R.C.S. Eng., has been appointed Assistant House-Surgeon and Dispenser to the Torbay Infirmary and Dispensary, Torquay.

POWELL, W., M.B., has been appointed Senior House-Surgeon to the Torbay Infirmary and Dispensary, Torquay.

WATERWORTH, THOMAS H., M.D. Aberd., has been elected Surgeon to the Surrey County Gaol.

WILKES, A. P., M.B., has been appointed Medical Inspector of Swansea.

DEATHS.

BARKER, T. HERBERT, M.D. Lond., at Harpur-place, Bedford, of typhus fever, on October 24.

BARLOW, FRANCIS, M.D., at Prome, Burmah, India, on August 16.

COOPER, FRANCIS, L.R.C.S. Edin., at Southampton, on October 24, aged 57.

FORD, WILLIAM, M.D., F.R.C.S. Eng., of the Mauritius Civil Service, at 8, Caroline-street, Eaton-square, S.W., on October 18.

GOVAN, G., M.D., late of the H.E.I. Co.'s Service, at Whinfield, near Kinross, on October 11.

GREGORY, JOSEPH L. V., M.R.C.S. Eng., of Risely, Beds, Surgeon in the Government Emigration Service, at Calcutta, on August 15, aged 42.

HENDERSON, JAMES, M.D., at Nagasaki, Japan, on July 30, late of the Chinese Hospital, Shanghai.

JONES, W. G., Surgeon, at King-square, Llanelly, on October 7, aged 25.

KING, WILLIAM, M.D. Cantab., at 23, Montpelier-road, Brighton, on October 19, aged 80.

NEWNHAM, WILLIAM, Surgeon, at 9, Belvidere-terrace, Tunbridge Wells, on October 24, aged 75.

O'FLANAGAN, HENRY, M.D. St. And., at Miltown, Malbay, Co. Clare, on October 7, aged 35.

PERREAU, MONTAGUE J. S., M.R.C.S. Eng., Assistant-Surgeon at Dalingkote, Bhootan, on August 12, aged 27.

WARD, THOMAS, F.R.C.S. Eng., at Southgate, Middlesex, on October 18.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Atcham Union.—Mr. Willing has resigned the Kenley District; area, 11,793; population, 1762; salary, £28 per annum. Mr. Weaver has resigned the Alberbury District; area, 16,430; population, 2098; salary, £30 per annum.

Canterbury Incorporation.—Mr. Edward Callaway has resigned the Out District; area, 3830; population, 14,095; salary, £70 per annum. Also the Workhouse; salary, £30 per annum.

Carmarthen Union.—Mr. R. Istance has resigned the Conwill District; population, 4804; salary, £40 per annum.

Welwyn Union.—Dr. Bubb has resigned the Out District; area 6530; population, 2211; salary, £28 per annum. Also the Workhouse; salary, £12 per annum.

APPOINTMENTS.

City of London Union.—Frederick G. Brown, M.R.C.S.E., L.S.A., L.M., to the Central District.

Hackney Union.—John Symons, M.D. St. And., M.R.C.S.E., to the Homerton District.

Honiton Union.—Robert F. Mayne, L.R.C.P., M.R.C.S.E., to the Eleventh District and the Workhouse.

Langport Union.—William Lockwood, M.R.C.S.E., L.S.A., to the Third A and Third B Districts.

Leeds Township.—Frederick Holmes, M.R.C.S.E., L.S.A., to the Third District.

Saffron Walden Union.—John W. Fry, M.R.C.S.E., L.S.A., to the First District.

Wilton Union.—Thomas J. Bennett, M.R.C.S.E., M.D. Aber., L.M., to the Wilton District and the Workhouse.

Wrexham Union.—John F. Churchill, L.R.C.P., M.R.C.S.E., L.S.A., to the Fourth District.

ROYAL COLLEGE OF SURGEONS.—At a special meeting of the Council of this institution on the 26th inst., for the purpose of electing two Fellows as Members of the Court of Examiners, Mr. Frederick Carpenter Skey, F.R.S., was re-elected, and Mr. Richard Quain, F.R.S., of University College Hospital, was also elected an Examiner in the vacancy occasioned by the resignation of Mr. Hodgson, who still retains his seat at the Council. Mr. William Anthony Harrison, F.R.S., of Keppel-street, Russell-square, was elected a Member of the Dental Board in the vacancy occasioned by the resignation of Thomas Bell, Esq., F.R.S.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—On Wednesday, the 18th inst., being St. Luke's Day, the following officers were duly elected for the ensuing year :—*President*—Thomas E. Beatty, M.D. *Vice-President*—George Johnston, M.D. *Censors*—Henry Kennedy, M.B., Robert Dyer Lyons, M.B., George Johnston, M.D., Thomas Waugh Belcher, M.D. *Treasurer*—Henry Law Dwyer, M.D. *Regis-*

trar—Lombe Atthill, M.D. *Honorary Librarian*—Thomas Waugh Belcher, M.D. *Professor of Midwifery*—Edward B. Sinclair, M.D. *Professor of Medical Jurisprudence*—Robert Travers, M.B. *Examiners in Midwifery*—Benjamin G. Guinness, B.A., W. B. Jennings, B.A. *Examiners in Arts*—W. E. Steele, M.D., John Ringland, M.D., T. W. Belcher, M.D. *Representative on the General Medical Council*—Aquilla Smith, M.D. *Librarian on Sir P. Dun's Foundation*—Hugh James Fennell. *Agent to Sir P. Dun's Estates*—Mr. R. W. Roberts.

ROYAL COLLEGE OF SURGEONS.—At a meeting of the Royal College of Surgeons of Edinburgh, on the 18th inst., the following office-bearers were elected for the ensuing year:—*President*—James Dunsmure, M.D. *Secretary*—James Simson, M.D. *Treasurer*—John Gairdner, M.D. *Librarian*—Archibald Inglis, M.D. *President's Council*—James S. Combe, M.D., Andrew Wood, M.D., Robert Ormond, M.D., Benjamin Bell, James D. Gillespie, M.D., James Spence, *Ex. Offic.* John Gairdner, M.D. *Examiners*—James Simson, M.D., Richard Huie, M.D., William Dumbreck, M.D., Archibald Inglis, M.D., Andrew Wood, M.D., Robert Omond, M.D., James Dunsmure, M.D., Peter D. Handyside, M.D., James D. Gillespie, M.D., Henry D. Littlejohn, M.D., Patrick H. Watson, M.D., David Wilson, M.D. *Assessors to Examiners*—James S. Combe, M.D., James Syme, William Brown, James Spence. *Conservator of Museum and Register of Students' Tickets*—William R. Sanders, M.D. *Officer*—John Dickie.

MEDICAL CHARITIES.—The late Nathaniel Soames, Esq., of Warwick-gardens, Kensington, has bequeathed to the Great Northern Hospital £4000, to University College Hospital £4000, and to the West London Hospital, Hammersmith, £2000.

A SUCCESSFUL CASE OF OVARIOTOMY IN PARIS.—M. Labbé introduced to the notice of the Academy of Medicine a patient, 29 years of age, upon whom he had performed ovariotomy three months before. Suffering from pains and enlargement of the abdomen for seven or eight years, the tumour had only began to assume a large size eight months prior to the operation, the cyst, on its extraction, containing twenty-one kilogrammes of liquid. The operation was performed, with M. Gosselin's assistance, at a *maison de santé* situate in a large garden. The contents of the multilocular cyst were gelatinous, but there being no adhesions the removal was easily accomplished with the aid of Matthieu's clamp, the "*toilette du péritoine*" being most carefully performed by means of fine new sponges. Thirteen points of twisted metallic suture were applied, the peritoneum being included in the suture,—a point to which M. Labbé attaches great importance as a means of preventing the purulent fluids issuing during the healing of the wound gaining access to the peritoneum. The operation was performed slowly, lasting "seven quarters of an hour," the patient being under the influence of chloroform. It was executed on the 19th of July, the patient being able to walk on the 10th of August, and she was presented to the Academy on the 17th of October.

ROYAL VETERINARY COLLEGE.—On Monday, October 2, a very numerous audience, consisting of Practitioners and students, crowded the incommodious theatre and its approaches at the above institution, for the purpose of listening to the introductory address delivered by Professor Varnell. The lecturer commenced by stating that there was an extensive range of subjects from which he had the opportunity of selecting many topics, the discussion of which he trusted would interest his hearers, and serve as advice to those who were just commencing their veterinary Medical studies. In pointing out to the pupils the claims the public would have on them when they obtained their diplomas, the lecturer urged them to diligently pursue the various courses of study taught in the college, and to acquire a sound knowledge of the principles upon which the practice of their Profession is based, and by which it is governed, for they would then not only render more valuable assistance than the purely practical man to those who engaged their services, but they would likewise be in a better position than the past generations of veterinary Surgeons to elevate the scientific and social *status* of their calling. Attention was next directed to the important duties which the public expected veterinary Surgeons to perform in connection with outbreaks of disease among stock, such as the cattle plague, and the lecturer considered the veterinary Profession might congratulate itself on the manner in which it had recently been recognised by the Government. Eminent Professors and Practitioners of both human and veterinary Medicine had visited the College during the last few months for the purpose of gaining information respecting the "plague," and investigating its nature; and it was particularly gratifying to the lecturer to observe the extremely agreeable and courteous manner in which those pursuing human Medicine worked with the veterinarians. This circumstance was mentioned in the hope that it might act as an incentive to veterinary students to acquire all the general and scientific knowledge in their power so as to fit them hereafter to carry on investigations, the results of which would be valuable alike to science and to the Practice of Medicine. In alluding to the public desire for the "practical man," the lecturer remarked "It is frequently said that such and such a person is not a scientific man, but that he is a good Practitioner; or that he is scientific, but a bad Practitioner. Now, I can understand that a man may have vast scientific attainments, although he may not be a good Practitioner; but I am puzzled to know how any one can be a really good Practitioner unless he is also a scientific man." Next followed a brief account of the nature, objects, and importance of the different departments of Medical knowledge to which the time of the student would have to be devoted. Instead of directing attention entirely to the cure of diseased animals, the pupils were exhorted to study the laws of hygiene, so that they might render more valuable aid to the public by advising them how to prevent sickness, and how to maintain the health of their flocks and herds. The lecturer concluded by indicating the relative duties and responsibilities of teachers and students, how knowledge is to be rendered sound and lasting, and how its acquirement may be facilitated. Besides paying attention to lectures, home study and the absolute necessity for thoroughly comprehending step by step the subjects to be learned, were strongly insisted upon, and the anecdote was cited of a sage who, being asked how he had obtained his store of knowledge, replied "From the blind, who never place their feet until they have tried the firmness of the soil. I observed before I reasoned, and I reasoned before I wrote."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Beta.—The Cattle Plague Commissioners are not appointed as witnesses, but as judges, to collect evidence and sum up the result. We believe that they have both the will and the power to employ the most eminent pathologists, microscopists, and chemists, and that their investigation of the cattle plague will be as complete as possible.

Triumph of the Pure Wine Movement.—We are glad to find that the papers on behalf of "pure wine, and plenty of it," which appeared in the *Medical Times and Gazette* some months ago, are bearing practical fruit. In *The Times* of the 24th instant appears a letter headed "Good News for Port Wine Drinkers," in which the writers, Messrs. H. R. Williams and Co., of Crosby Hall, pretend that the addition of large quantities of spirit to port wine has been only practised since 1851, in consequence of the oïdium:—

"Now," they say, "that the oïdium has passed away, and the fruit-bearing of the vine is not disturbed by the appearance of disease, it becomes a matter of some importance to reduce the alcoholic properties of port to a minimum of strength. With this view we have endeavoured to secure ports possessing lightness, purity, and quality; and we have just received a parcel equal to about 1700 dozen from a well-known "quinta" of the Lower Douro. Our correspondent states that '*this wine possesses many of the characteristics of Burgundy*,—viz., fine colour, great body, and is silky, soft, and extremely dry, combined with great flavour.' It is, besides, a fully fermented wine. We would only further mention that the price is 30s. per dozen."

Here is a change of tone! Hitherto, the port bibbers have pretended that the addition of spirit made their wine suitable for our climate; and, if they wanted to sell Burgundy, thought that its best recommendation was that it resembled port. Now they praise their port by affirming that it is like Burgundy. If this be the case, it surely were better to drink real Burgundy than the Portuguese imitation of it. We believe the Messrs. Williams deserve a good word, as they were amongst the first to popularise cheap Bordeaux; anyhow, this move of theirs is a sufficient indication of the tendencies of the public taste, and of the fruit of our own efforts.

The Mustard Treatment of Cholera.—Dr. Joseph Bullar writes thus to the newspapers:—

"A labourer, aged 42, was seized with cholera suddenly at 8 a.m. yesterday, at Bitterne, where several deaths have occurred, and was sent to the Infirmary here, and admitted to an adjoining house reserved for this class of cases. I saw him at 12.30, and found him in the collapsed stage of cholera—livid, cold, shrivelled, with incessant rice-water sickness and diarrhœa, cramps, and his pulse hardly to be felt. I had him immediately seated in a hip bath of very hot water, with three-quarters of a pound of powdered mustard in it, and his feet in a hot water foot bath, with a quarter of a pound of mustard. The water was as hot as the

hands could bear, almost scalding hot, and some little force and much persuasion were necessary to keep him in it at first from its heat. In half an hour he had become warmer, his face less livid and not collapsed, his pulse stronger. He was put to bed with hot tins to his hands and feet, well covered with blankets, and felt comfortable and wishing to sleep. In an hour there was so much reaction that there were good hopes; in four hours he was safe, and to-day he is going on very well.

"While in the bath he drank as much milk and water with lumps of ice in it as he could take, and in the intervals he swallowed small lumps of ice, and after reaction plenty of weak broth and iced milk, and the feverish reaction to-day is slight.

"There can be no doubt in this case as to the effect of the remedy. He went into the hot water mustard bath with all the worst symptoms of the collapsed stage of cholera, and in half an hour was lying comfortably in bed with all his symptoms relieved. Where remedies are given at intervals for some hours, there is always a doubt as to whether the medicines relieve or nature. Here there was no doubt. The improvement was wholly by art.

"A slipper bath would have been better, but was not immediately available, and practically a hip bath, tub, or large pan can always be procured."

In a second letter, Dr. Bullar says:—

"That in the case of cholera referred to, the hot water and mustard bath was the sole cause of the reaction and relief. As I have said in a fuller account of the case in the Medical journals (see the *British Medical Journal* of October 21), after his removal from the bath an ice bag was applied, but it made him so chilly and uncomfortable that it was not persevered in, and the reason it did so was that reaction was sufficiently established. Fully to understand the reason of this requires a long scientific explanation, and if I had stated in the letter you published from the *Times* the bare fact that the ice bag made him chilly and uncomfortable it would have created a prejudice against the treatment, which I should have been sorry to have done.

"The object of both plans is the same—to produce warmth; the means differ. The mustard hot bath acts on the ends of the nerves; the ice bags at their beginnings near the spine."

*** We rather fear that Dr. Bullar is taking up an old line of remedies, which has been discarded because useless. A patient is *cold*; therefore apply *heat*. This is what seems common sense till experience shows its hollowness. We suspect that the history of past epidemics gives little countenance to Dr. Bullar's enthusiasm. If mustard could cure cholera, it would long have ceased to be feared.—ED.

Griffin Testimonial Fund.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscription has been further received on behalf of the above fund:—G. D. Brown, Esq., Ealing, 1Cs. Amount previously announced, £129 3s. 3d. Received at *Lancet* Office, £9 9s.

I am, &c.,

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate-street Without, October 26, 1865.

The Poor-law Estimate of the Treatment of Fractured Clavicle.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly inform me in your next number, in your "Notes, Queries, and Replies," if I can charge as an extra for a fracture of the clavicle of a pauper patient? I am aware allowance for simple fracture of an upper extremity is £1, but I do not know how far I can claim that amount for the clavicle. I am, &c.

Hythe, Kent, October 21. AN OLD SUBSCRIBER.

*** The Poor-law Regulations do not provide a fee for fracture of the clavicle; but, under Article 181, it is open to the guardians in any such case which has presented peculiar difficulty, or required and received long attendance, to make such reasonable extra allowance as they may think fit, and the Poor-law Board may approve.

Impaction of Foreign Bodies in the Urethra.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the report in your last number of instances of "Impaction of Foreign Bodies in the Urethra," Mr. Syme's case is by mistake printed after Mr. Paget's third case: it should have been placed after the second. May I beg the favour of your noticing this in your next issue?

I am, &c., F. HOWARD MARSH.

The Naval Medical Service.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I trust that you will kindly find me a corner for a few remarks on the present state of the Naval Medical service. Its existing unpopularity may be best proved by comparing the present Navy List with that of July last, when we find that the lists of Surgeons and Assistant-Surgeons show, each of them, a reduction of six officers. Moreover, we are now frequently finding Surgeons of some four or five years' seniority appointed to do the subordinate duties of Assistant-Surgeons.

On reference to the present Navy List, we find that the following ships have no Assistant-Surgeons, though one Surgeon and one Assistant is their proper complement—such ships are the *Enterprise*, *Archer*, *Gannet*, *Wellesley*, and the *Zebra*. Again, the *Liverpool* and *Orlando*, frigates, have only one Assistant-Surgeon each, their proper complements being two Assistant-Surgeons with one Surgeon. Then on the Home and the Channel stations we find ten ships bearing supernumerary Surgeons doing the duties of Assistants, and one, the *Victory*, has a second additional Surgeon, doing Assistant's duty with the Royal Marine Artillery. Supernumerary Surgeons are also to be found in H.M.S. *Meander*, *Duncan*, and *Terror*, doing duty as Assistant-Surgeons in the Hospitals of Ascension and Bermuda respectively. Lastly, we have only to look at the ridiculously small staff of Assistant-Surgeons in our two great Naval Hospitals at Haslar and Plymouth to be satisfied that it is quite incapable of efficiently performing the duties of such large establishments. In case of any sudden emergency the navy would necessarily be in a very awkward position, and the thanks of the country are due to Dr. Frederick J. Brown for the very able way in which, by advocating the claims of Naval Medical officers, he points out to the Admiralty a simple remedy for so great an evil as the want of Surgeons, and how they may procure the services of the best men of our schools. Our Medical schools have just commenced their sessions, and many new students are now entering the Profession; to them, and to others, I would, through you, Sir, recommend the perusal of Dr. Brown's pamphlet and the support of their naval Professional brethren by unanimously declining to enter the service until they see that our just rights are granted to us. I am, &c.

H.M.S. ——, Mediterranean, October 14. ASSISTANT-SURGEON R.N.

Poor-law Medical Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I shall feel obliged by your permitting me, through the medium of your journal, again to address the Poor-law Medical officers, as the time has arrived for me to take their opinion as to the course to be pursued in future.

Nearly ten years have elapsed since I first addressed them on the subject of the Medical Relief of the Poor, and as yet no comprehensive measure of reform has been obtained. Some of the Medical officers, in consequence of the general agitation of the question, have induced their guardians to grant an increase in their salaries; but these instances are, I fear, but exceptions to the rule, and the majority of them remain as they were,—a capriciously and underpaid body of men. Some of them have fixed salaries and extra Medical fees, as the order of the Poor-law Board provides; others have fixed salaries and no extra Medical fees; others, fixed salaries combined with a per-case payment; some have fixed salaries and find all medicines; others (a few only), fixed salaries and the guardians find all the medicines, etc., etc. These various modes of payment show too clearly the entire absence of any well-digested plan of Medical relief.

In February, 1861, Parliament appointed a Select Committee on Poor Relief (England), which continued its sittings from time to time until May 31, 1864, when their report was submitted to Parliament; but as its original proposer never intended the question of Medical relief to come before it (the inquiry was only made to embrace this subject on the motion of an independent member of the House of Commons), it will cause no surprise when I say it was only on the last day and last hour of the Session of 1861 that three Medical men were called upon to give evidence upon a question which actually involved five-ninths of the whole pauperism of England and Wales, thereby proving that the most important part of the relief of the poor was almost totally ignored; and when the report on this question was made to Parliament, it was founded almost entirely on the evidence of Mr. Cane, a Poor-law Inspector, as is proved by the quotations contained in the Report. That evidence I unhesitatingly say was most inaccurate, and given in such a way as to mislead the Select Committee; but still there was a minority on this Committee who were not to be mystified by his statements, as is proved by the adjournments and amendments on this question; and a majority ultimately decided that it was requisite for the benefit of the poor that the guardians should find cod-liver oil, quinine, and other expensive medicines; but it was not until many months had elapsed, and after many importunities, that the Poor-law Board could be induced to issue a circular letter empowering the various boards of guardians to carry out the recommendations of the Select Committee; but as this was only a permission and not an order, many boards of guardians have refused to carry it out (Weymouth, for instance); some, however, have allowed their Medical officers to order a few articles of the druggists; others have permitted them to charge as extras for these articles; some now find cod-liver oil, and one board of guardians (Southampton) have adopted the wise and judicious course of establishing a Dispensary, and now find all medicines, to the great relief of the Medical officers, and benefit to the poor; some boards of guardians still, however, ignore the recommendation of the Select Committee so far as the poor are concerned, but, in order to obtain a little peace, have raised the salaries of their Medical officers. But all this is most unsatisfactory, and a disgrace to a public body like the Poor-law Board to permit boards of guardians thus capriciously to carry out (or to set at nought) the recommendations of the Select Committee of the House of Commons.

At the last annual meeting of the British Medical Association, held August 1, 1865, it was resolved—"That a Committee of this Association be appointed to inquire into the present system of Poor-law Medical relief, and to ascertain whether any, and what, alterations are required therein, in order to ensure the efficient treatment of the sick poor, and the just remuneration of the Poor-law Medical officers."

"That the Committee be desired to report the result of their labours to the next annual meeting of the British Medical Association, and that the report then presented contain, if practicable, a complete series of proposals, which may, after adoption by the Association, be urged by it on the Legislature and on the Poor-law Board."

In accordance with these resolutions it will follow that no measure of relief can be laid before Parliament before February, 1867. Are the Medical officers willing to wait so long? My own impression is that a deputation should wait upon the Poor-law Board before Parliament meets, and urge the President to bring in a Bill on the subject of Poor-law Medical relief, or make it a part of his proposed Poor-law Renewal Bill, failing which, we should press upon Parliament at its meeting in February next the necessity of reform, which can only be done by preparing a bill and laying it before them; but this must be supported by a clearly-written pamphlet to each Member of Parliament, showing how the Select Committee arrived at an incorrect decision on this subject. This must be backed up by repeated meetings and private applications to members; but all this cannot be done without money. Will the Poor-law Medical officers again make an effort, and furnish it? Will each of them forward to me at the least a 5s. subscription? It is possible they may consider it would be better that I should retire from my office of Chairman to the Association, and leave it in the hands of the Committee of the British Medical Association. If so, let them send their subscriptions to Dr. Henry, 37, Great Queen-street, Lincoln's-inn-fields, the Secretary of the British Medical Association, as he will require funds if he is to act with vigour; if, on the other hand, the wish is that I should continue to conduct the management of this affair as a distinct body from that of the British Medical Association, they must send their subscriptions to me, and I will take active measures on the subject.

There never was a better time for doing so. A new Parliament, and, perhaps, ere long, a new Government, may listen to us, particularly if the Medical officers have all pointed out to their individual members at the late election, as was advised, the necessity of a reform of the abuses now existing in the system of the Medical relief of the poor.

Can any one have read the reports of the *Lancet* Sanitary Commission

for investigating the state of the Infirmaries of Workhouses without being impressed with the necessity of great reform in the Union houses?

In the *Times* of September 14, 1865, is a leader on this subject, and in it we read—"A useful Act, moreover, was passed, empowering the guardians to award pensions to superannuated officers. In old age the officials of workhouses not uncommonly ended their days in the workhouse themselves, and in order to avoid this fate they frequently lingered in their office when they were unable to discharge its duties. All these measures are so many improvements in the treatment of that unhappy class who depend upon the public for support.

"We may be sure that, so far from the burden they impose on the country being increased by a more liberal and judicious management, it will be diminished. Thus, as we have recently had occasion to show, it is sickness which constitutes the chief problem of pauperism, and a better system of Medical relief would unquestionably have the effect of diminishing the number of paupers. According to the returns in the present report, the Medical relief forms but one-twenty-sixth part of the total expenditure, although the able-bodied, including men, women, and children, compose even nominally but four-ninths of the whole number of paupers. The question is now, however, being thoroughly considered, and the next few years will no doubt see still more important improvements than those we have been reviewing."

After this statement of the *Times*, will the Medical officers be silent? I trust not. The whole system of Poor-law Medical relief requires revision. The present Poor-law inspectors (with one exception), so far as illness is concerned, are a perfectly useless set of men. They know nothing of sickness nor the requirements of the sick poor, as is proved by the monstrous state of our workhouses as revealed by the *Lancet* Sanitary Commission. There must be Medical inspection, and that by Medical inspectors.

Dispensaries ought to be established in all densely-populated places (as is the case in Ireland), and where this cannot be done, a separate payment should be made to the Medical officer for drugs, independent of his salary.

The salaries of the Medical officers should be adjusted on a definite principle, regard being had to the number of patients and distance to be travelled, and then, and not until then, will the guardians ever trouble themselves as to the class of persons receiving Medical relief, as with a fixed salary they are utterly regardless of the number of patients sent to the Medical officer. In one Union with which I am acquainted a boy acts for his father, the relieving officer, and gives Medical orders to all who ask for them, and there the midwifery orders to wives of the artisans are very numerous, and as the guardians do not pay away extra Medical fees, they make no inquiry. This I need not say is most unjust to the Medical officer.

There ought to be a superannuation fund for such of the Medical officers as are incapable of doing their work, and are in such a pecuniary position that they cannot give up their appointments. It is a cruelty to the poor to insist on men doing that which they are physically incapable of accomplishing. There are many other points to be considered, but in a letter of this kind sufficient has been said to arouse the thoughts of all men who are desirous of improving the Medical relief of the poor.

I am, &c. RICHARD GRIFFIN.

12, Royal-terrace, Weymouth, October 20.

COMMUNICATIONS have been received from—

Mr. J. Z. LAURENCE; Mr. T. BOND; Mr. JAMES ROBERTSON; Mr. ARMSTRONG TODD; I.H.S.; AN OLD SUBSCRIBER; ASSISTANT-SURGEON R.N.; Dr. J. R. WOLFE; APOTHECARIES' HALL; Mr. R. GRIFFIN; Dr. ROBERT FOWLER; Dr. DAVID MILLER; M.D.; THE HARVEIAN SOCIETY; ROYAL COLLEGE OF PHYSICIANS; Dr. A. REITH; Mr. J. PEEKE RICHARDS; Dr. FOTHERBY; WESTERN MEDICAL AND SURGICAL SOCIETY OF LONDON; Mr. R. G. WHITFIELD; Dr. T. W. BELCHER; OBSTETRICAL SOCIETY OF LONDON; Dr. T. C. ALLBUTT; Mr. W. PEARSE; Mr. A. WAYMOUTH; Mr. W. J. BURGESS; A SUBSCRIBER; Mr. JOHN E. GROSS; Mr. R. HATTON; Mr. J. B. BROWN, jun.

BOOKS RECEIVED.

Peculiarities of the Deaf and Dumb. By H. S. Purdon, M.D. Belfast: H. Greer, High-street.

*** This pamphlet deserves perusal. It embodies briefly the experience of the Ulster Society for the Education, etc., of the Deaf and Dumb in respect of several important matters, such as the liability of such unfortunates to diseases of various kinds, their domestic and sanitary management, and so forth.

On Reflex Paralysis. By W. Galloway, A.M. London: John Churchill and Sons.

*** A summary of the doctrine of reflex paralysis as taught by Brown-Séquard and his adherents. There is nothing very new in it, but for all that it may be read with advantage by such as desire information upon the subject.

On the Administration of Medical Charities: with Suggestions for a Systematised Plan of Management. By Armstrong Todd, M.B. London: W. Davy and Sons.

*** The proposal of Dr. Todd is that the public Medical administration of the country should be in the hands of a Central Board of Health, with Branch Boards, and that they should have the control of the Hospitals and Dispensaries throughout the country, and make provision for the relief of the sick poor generally. He would thus do away with the present system of Union Medical relief.

An Inquiry into the Cases of the High Death-rate in Leeds. By J. Braithwaite, M.D. Leeds: A. Megson.

*** The old lesson newly illustrated.

The Climate of San Remo. By Henry Daubeny, M.D., M.R.C.S. Pp. 39.

*** Contains the sort of information usually obtainable from pamphlets of the class this belongs to.

Correspondence on the Pritchard Memorial and the Supply of Water in Broseley. By F. H. Hartshorne.

*** So crammed with personalities and abuse that we really cannot get through it.

Report on the Physiological Action of Nitrite of Amyl. By B. W. Richardson, M.A., M.D.

*** Reprint from the Report of the British Association for the Advancement of Science for 1864.

An Inquiry into the Possibility of Restoring the Life of Warm-blooded Animals in Certain Cases where the Respiration, the Circulation, and the Ordinary Manifestations of Organic Motion are Exhausted or have Ceased. By B. W. Richardson, M.A., M.D.

*** From the *Proceedings* of the Royal Society.

The Australian Medical Journal. April, May, and June, 1865. Melbourne: Wilson and Mackinnon.

*** In the June number is an article upon the subject of "Honorary Health Officers." It appears that, in the early days of municipal government in the colony, some Medical gentlemen, influenced by a spirit of good citizenship, voluntarily undertook to perform the duties of health officers gratuitously. Now, however, that the financial condition of the borough councils is flourishing, they consider that the office should be no longer gratuitous. They are right. The duties of a health officer, rightly performed, are onerous and important, and the public, which receive the benefit of their performance, should pay for the advantage which they receive.

The Dublin Quarterly Journal of Medical Science. No. 79. Dublin: Fannin and Co.

*** Contains some excellent papers, amongst which is one upon the Climate of Malaga, and its Influence upon Chronic Pulmonary Disease, by Dr. Madden; and one on Hospital Dietetics, by Dr. Beddoe.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 21, 1865.

BIRTHS.

Births of Boys, 963; Girls, 969; Total, 1932.
Average of 10 corresponding weeks, 1855-64, 1780 9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	647	618	1265
Average of the ten years 1855-64	545·6	535·8	1081·4
Average corrected to increased population..	..	..	1189
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	..	5	10	2	6	8	14
North ..	618,210	3	10	5	2	4	17	14
Central ..	378,058	1	2	10	1	6	9	12
East ..	571,158	2	..	17	2	13	10	15
South ..	773,175	3	10	11	2	7	9	7
Total ..	2,803,989	9	27	53	9	36	53	62

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·337 in.
Mean temperature	46·8
Highest point of thermometer	63·4
Lowest point of thermometer	33·5
Mean dew-point temperature	44·7
General direction of wind	Variable.
Whole amount of rain in the week	2·09 in.

APPOINTMENTS FOR THE WEEK.

October 28. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

30. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

31. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

November 1. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

HUNTERIAN SOCIETY (Council, 7½ p.m.), 8 p.m. Mr. Jackson, "On the Employment of Hydrochlorate of Ammonia in the Treatment of Facial Neuralgia."

OBSTETRICAL SOCIETY OF LONDON, 8 p.m. Dr. Marion Sims, "Procidentia Uteri." Mr. Roper, "Embryotomy." Dr. Aveling, "New Mode of Treating the Pedicle in Ovariotomy." And other Papers.

2. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

HARVEIAN SOCIETY OF LONDON, 8 p.m. Dr. Tilbury Fox, "Remarks on the Cholera in Egypt."

3. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Practical Evening, for the Narration of Cases and the Exhibition of Specimens.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES

ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

LECTURE II.

(Continued from page 413.)

I shall now proceed to cite various instances in which it appears to me the phenomena must be referred to inhibitory action such as I have just described. The first which I shall take is a very simple and familiar one, but not the less worthy of consideration. It is thus noticed by Dr. Graves: "If you place your hand in snow or ice-cold water, you will find that it is not merely the parts subjected to the influence of cold that become numb, and that the diminution of power is not entirely limited to the muscles concerned in the peculiar motions of the fingers, but extends also to those of the fore-arm by which the principal movements of the hand are performed. Here the impression of cold is found to affect not only the parts immediately exposed to it, but also parts that are quite removed from its influence and warmly covered. We see that not only the muscles attached to the fingers, but also those of the forearm, undergo from this cause a temporary paralysis." Graves suggests that a longer continuance of the same cause would produce a permanent paralysis. That the loss of power is not the result of anæmiating arterial spasm of the more centrally-situated parts is rendered probable by Brown-Séquard and Tholozan's observations, who found that when one hand was greatly chilled the temperature of the axilla was not lowered, nor that of the foot, but only of the opposite and corresponding part.

The same cause, namely, exposure to cold, is well known to give rise to paralysis of the portio dura. The time necessary to do the mischief may be very short. Joe. Frank states that there were seven among his patients who were suddenly attacked with this paralytic affection, on getting up in the morning, immediately after they had put their heads out of window, and drawn them quickly back, because they found it very cold. Any one who knows the state of a ward in German Hospitals on a winter's morning (I speak from experience of the Dresden) will appreciate what a transition is involved in suddenly passing from the oven-like temperature within to the cold air without. In instances of this kind, especially in those just cited, it is impossible to suppose that the portio dura was directly affected by the cold through all the skin and fat in which it lies imbedded, while it is certain that the sensory branches of the fifth must have been. Neither, especially in Frank's cases, can we think that any inflammatory effusion had taken place in the bony canal through which the nerve passes, and had compressed it. The kind of treatment—viz., Faradisation—under which recovery often ensues in cases of this kind, forbids such a supposition. We must, therefore, believe that the paralysis depends in this instance, as in the preceding, on a morbid impression made on a sensory and communicated to a motor nerve, whose central termination is more or less closely connected with that of the former. It is interesting to remark that in some instances, as Frank and Trousseau state, mental emotions, terror, anger, grief appear to have given rise to the paralysis. The nerve action resulting from such emotions, we are almost sure, must be of a depressing character, and we may, therefore, conclude that an inhibitory influence may be generated in the superior and larger nervous centres, and react on the minor and inferior. Sometimes the paralysis comes on without apparent cause. I notice this because it indicates the affinity of the inhibitory paresis with the simple primary.

There can be little doubt that paralysis of the lower limbs, or indeed of all, is sometimes produced in the same way. Graves thus sums up a case of this kind:—"Here we have an instance of paraplegia apparently originating from an impression made on the nerves of the lower extremities. The man had been engaged in draining a quarry, and during his occupation was constantly exposed to wet. Shortly after this he begins to complain of numbness and loss of power in the right lower extremity, and during the progress of the disease up along the limb, the left becomes similarly engaged. About three weeks afterwards, the hands, which had been also, but not so frequently, exposed to the influence of cold and wet, begin to be affected with numbness, and the power of grasping objects to be diminished. To what (says he) can we attribute these symptoms except to the influence of cold acting on the nervous filaments of the cutaneous surface of the limbs, extending its morbid impression to the spine, and thence reacting on the nerves, so as to produce impairment of the power of motion and diminished sensation? The man had certainly no symptoms of cerebral or spinal disease. With regard to treatment, Graves states that he has never seen any benefit derived from applications to the spine; he was in the habit of applying his local remedies to the legs and thighs, selecting those parts in which the greatest cutaneous sensibility exists. He kept up a succession of blisters along the inside of the legs, and over the anterior and inner parts of the thighs. His view in this was to stimulate the peripheral extremities of numerous nerve filaments, and through their means to act upon the more central parts. He refers, in cases of sciatica, to the greater efficacy of a blister applied over the ham or calf of the leg, where many of the ultimate ramifications of the nerve are superficial, than of one applied over the trunk. Sulphur baths, an excellent cutaneous stimulant, he also finds beneficial, as well as the internal use of strychnine—our best invigorator of the spinal centres. I think I need hardly apologise for quoting this passage from Graves' well-known lecture, because it so exactly sets forth my own notions as to the origin of the disease in morbid peripheral impressions; and the proper method of cure by, as it were, neutralising or replacing these impressions with influences of an opposite kind. The practical Physician's experience corresponds closely with the results of scientific inquiry. Dr. Copland relates the following case:—"A gentleman who had resided many years in an intertropical country, during his voyage across the Atlantic to this country in the winter season was seized with general palsy of the power of voluntary motion immediately after prolonged exposure to cold and wet. The functions of the brain were unaffected, and neither pain nor uneasiness were felt in any part of the spinal column, under any circumstances of position, flexure, rotation, or pressure. No evidence of inflammatory action or of congestion in the spine could be detected. Cutaneous transpiration was suppressed, and the bowels were costive and torpid; but he retained the sensibility of the surface and command over the sphincters. He was treated at first on the supposition of either serous effusion or congestion having taken place in the spinal canal, but without receiving any benefit. He ultimately, however, quite recovered by having a frequent recourse to warm baths containing stimulating substances." Rosenthal gives the two following cases as an example of paralysis from cold:—"A workman exposed himself to a cold draught, and contracted thereby pneumonia of the left side, soon followed by anæsthesia of the left foot as high as the ankle, which soon disappeared. A female, after washing in a brook, went a long way in a cold wind. The next morning pains set in in both the left limbs, which ceased spontaneously in a few days, and gave place to cutaneous anæsthesia, which spread over the whole arm, even above the shoulder, and extended over the foot and leg. The anæsthesia was of both touch, pain, and temperature. Electro-muscular sensibility and contractility were moderately lessened, voluntary motion was difficult, and walking, especially in the dark, was very unsteady. The power of estimating weight was defective. No hysterical symptoms existed. By the application of the interrupted and continuous currents from the cord to the nerves, and from the nerves to the muscles, recovery was effected in eight weeks. In the first of these cases the paresis seems to have fallen especially on the vasomotor nerves of the left lung, and to have affected the sensory cutaneous nerves but slightly. In the second the vasomotor nerves escaped altogether, the musculo-motor were moderately affected, and the stress of the disorder fell upon the sensory. In Dr. Copland's case the musculo-motor alone were paralysed. I have recently observed a case very similar to Dr. Copland's. The patient was a sailor, aged 40, who had been much exposed to cold and wet in his vocation. He had hemiplegia of the right side as regards motion, but not of sensation. The leg was less affected than the arm. He improved materially under galvanism and stimulating frictions, but left the Hospital before he was quite recovered. Worms(a) relates the case of a soldier who was exposed to cold after being much heated. The same evening anæsthesia commenced in one foot, and extended itself by the ninth day over almost

(a) Worms v. Schmidt's *Jahrb.*, vol. cxix., p. 292.

the whole body. Paralysis of motion was also almost universal, so that respiration was performed only by the diaphragm. The facial and third nerves were paralysed, and smell was lost; speech was much impaired. In a month he was quite recovered under the use of vapour baths, frictions, and electricity. The most striking feature in this case is the very diffuse and extensive character of the paralysis, in which it contrasts with one of Rosenthal's cases and with the one last related. Its functional nature can, I think, hardly be doubted. The following case resembles the one just cited a good deal, and is of much interest as showing the serious effects resulting from the disorder in some instances. J. E., aged 30, young-looking, was admitted October 11 under the care of Dr. Sibson. Four months ago, he stated, he was in wet grass all the morning. His legs became stiff next morning and his knees weak; he felt as if he were standing on pins. The arms also became affected, but only numb. Subsequently his masticating powers and his voice became impaired; he had double vision for about a month, and afterwards singing noises in his ears. On admission he was observed to lift the jaw with his hand in speaking, and to shoot out his tongue involuntarily. He cannot raise his arms above his head when he lies down. He walks slowly, lifting his feet. When he gets on his bed he does it in a series of jerks and then falls flat. Both hands are sensitive. Pupils act. He has vomiting. Pulse 64; respiration 32. Three days later he complained of pain at the back of the head, and of the arms being more powerless. He could not open or shut his mouth without the help of his hand, and the power of deglutition was impaired. Memory was perfect. About six days after his admission he became faint and excessively pallid; his skin was hot and covered with sweat. Pulse 120. Soon after he sank. He had improved somewhat for a time under the use of iron and quinine. *Post-mortem.*—Thymus gland enlarged, weighed 537 grains. Heart full of fluid blood and healthy. Lungs healthy. Liver, kidneys, and spleen were immensely congested, but firm and quite normal in appearance. The superficial vessels of the brain were slightly congested; the brain substance was firm, the grey matter darker than usual, the vascular points more numerous and evident. The lateral ventricles contained a little serum. Nothing abnormal was found in the brain; all the parts were very carefully examined. The spinal cord appeared to be firmer than usual in the part corresponding to the lower dorsal and upper lumbar regions. The upper part was much softer than this, but sections of both these portions revealed nothing unnatural in appearance or worthy of remark. Mr. Gascoyne, the curator, considered the softening as a post-mortem change. Dr. Sibson and I carefully examined portions of the spinal cord and pons Varolii the next day under the microscope, but we could discover no organic morbid change; there was no alteration of the coats of the vessels, nor were there any glomeruli. The kidneys were examined microscopically and found healthy. Death appears to have resulted in this case from the cardiac nervous centres having become specially engaged at last in the paresis. This was of remarkably diffuse and vague nature, extending up as high as the third or the fifth nerve at least, while it had its starting point in the lumbar enlargement of the cord. The history and progress of the case and the results of the autopsy seem to me all to indicate that there was no focus of organic lesion; but that, owing to the original morbid impression which the cord had received, its nerve cells and those connected with them were stricken, as it were, by an enfeebling influence, their nutrition probably depressed and disordered. The condition may be compared to that of choreic paralysis induced by a fright.

Other causes besides cold and wet act in the same way. A case is related in the *Medical Times and Gazette* for January 29, 1859, in which a piece of dead bone in the left thumb produced pain about the orbit on the same side, and paralysis of the external rectus, these symptoms disappearing shortly after the removal of the presumed cause, while previous treatment proved ineffectual. Mr. Hancock relates a case of ptosis cured by the removal of decayed or overcrowded teeth (*vide Lancet*, January 22, 1859). Dr. Roberts records the case of a child (*vide London Medical Review*, vol. 1, page 309), aged 11 months, in whom complete paralysis of the right arm appears to have resulted from the irritation of cutting a molar tooth. Under the use of warm baths and frictions of the limb, recovery was complete in about six weeks. Dr. Burgess states that a coloured man, aged 39, who had become amaurotic in both eyes, and paralysed on one side of the face, and partially in the tongue, recovered after the removal of a tænia. Dr. Palmer gives an instance of nearly complete left side hemiplegia, which speedily disappeared after purgation, and Mr. Austen has frequently witnessed recoveries from the same state in persons suffering from general paralysis in its earlier stages after the evacuation of numerous hard scybala. Such examples as have been now related evidently belong to the class of the so-called reflex paralyses. Their special character which distinguishes them from primary paresis is, that they are more or less completely dependent on some peripheral impression communicated to the nervous centres. In most instances there is probably a predisposition,—an original debility or liability to derangement in the nervous system—which causes the morbid impression to take effect, or gives it its special direction, or determines its degree of intensity. In the most typical cases of reflex paralysis, one of which I have cited above, the disorder ceases soon after the removal of the morbid impression; but in many the nervous centres are enfeebled for a longer period, and recover their power only gradually, or, perhaps, not at all without the aid of counteracting agents. In some cases, as we saw in primary paresis, the functional disorder ultimately becomes complicated with organic change. In no case, I think, are we warranted in regarding the disorder as reflex or inhibitory paralysis unless we can discover some peripheral irritation which may have given rise to it. This caution is not unnecessary, as there has been certainly too much tendency to use the term loosely, and apply it to all instances of paralysis not of organic origin. The well-known case, which Dr. Graves cites from Dr. Hutton's experience, in which a man who had incomplete paraplegia after exposure to wet, cold, and fatigue recovered almost suddenly after a stricture of the urethra had been dilated by passing a bougie, is a perfect example of true reflex paralysis. In many others, however, the morbid impulse once given to the cells of the nervous centre persists, and is only slowly removed by influences of a more healthy kind. The case is very comparable to that of epilepsy induced by a fright or some other accidental cause which acts but for a time, but, nevertheless, leaves on the nervous system the fatal tendency to recurrence of similar disorder. Maissonneuve mentions the case of eighteen sailors who were seized with epileptic attacks four weeks after having been exposed to wet, privation, and cold. The disorder seems to have been severe, as fourteen died in eighteen months. Almost the same causes gave rise to paraplegia or more extensive paralysis in the instances cited above.

(To be continued.)

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS. (a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College, and of University College Hospital.

Lecture X.

DIABETES MELLITUS—GLUCOSURIA—SACCHARINE URINE—ITS NATURE AND RATIONAL TREATMENT.

(Continued from page 439.)

Pathology.

We now come to the consideration of the second form of diabetes—namely, that in which there is no proof of the existence of an *abnormal production* of sugar by the liver, but in which there rather appears to be a *diminished consumption* of the amount normally produced. In illustrating this point I have to rely entirely on clinical data for the opinions at which I have arrived.

It will be remembered that several years ago Piorry communicated to the French Royal Academy a paper, in which he stated that he had successfully treated cases of diabetes by giving the patients sugar-candy, and that he was led to do so from his believing that the cause of death in diabetes is the loss of the sugar which is so necessary to support life. The cane-sugar was therefore given in order to supply the place of the sugar that was lost.

Not long after reading these views, when on a visit at Bristol, Dr. Budd showed me a young man whom he was treating by

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—Ed. *Med. Times and Gaz.*

means of saccharine diet, with apparent benefit. Subsequently, Dr. Sloane(b) and Mr. Amyot(c) published papers on the saccharine treatment of diabetes, expressing similar opinions. On reflecting over the views promulgated by these gentlemen, and comparing them with the results of my own clinical and physiological experience, it gradually occurred to me that there might be two distinct forms of the disease, such as I have already described under the head of diabetes by *excessive formation*, and diabetes by *diminished assimilation;* and further investigation has not only confirmed this view, but enabled me to discriminate between the two classes of cases by the history and appearance of the patients alone. Before giving examples of each form of the disease, let me first explain one or two things regarding the symptoms of diabetes, which, I fear, are but imperfectly understood.

First, as regards the amount of urine eliminated, some appear to consider it a most important sign, and one which we should try and check as soon as possible. Now, I beg to differ from them, for I believe it fortunate that the diabetic patient does pass an excess of water.

The excessive elimination of sugar is not consequent upon the increased flow of urine, for we may have, as already seen, an excessive flow of urine without sugar,—but exactly the reverse; the excessive flow of urine is consequent on the elimination of the sugar. The sugar, in order to be eliminated, must be dissolved, and, in order to be dissolved, must have water, and the more water the more readily does the elimination of the sugar take place. Some may say, we want to stop the elimination of the sugar. Not so; we want to stop the disease inducing it,—not the elimination of the sugar, which is the mere result of the disease. Retaining the sugar in the blood would only tend to hasten the death of the patient by still further deranging the nutritive functions, and causing an abnormal diasmose by altering the relative specific gravity of the blood and other secretions. Remove the cause of the accumulation of saccharine matter in the blood if you can, but if you cannot do that, aid, instead of trying to retard, its elimination from the body.

Diabetic patients generally pass more liquid than they take—about one-fifth or one-quarter more—and although they ought never to drink more than they feel a want for, yet they must never be stinted, for their continual thirst is but nature's cry for relief. If the patient did not drink, the blood would soon get too thick to circulate freely through the vessels, and a variety of secondary diseases would be induced. Stopping the drink diminishes the elimination, but does not stop the formation of the sugar. When the formation of sugar decreases, the urine of its own accord becomes diminished.

As regards the amount of sugar eliminated, which is generally considered an infalliable criterion of the condition of the patient, experience has shown me that such an idea is erroneous. A diminution in the sugar in cases from *excessive formation* is always a good sign, but in those arising from diminished assimilation it is, on the contrary, occasionally the reverse. Thus I have again and again seen patients who were gradually succumbing from the starvation effects of a restricted diet, at once pull up and improve on a judicious mixture of vegetable food, notwithstanding that the amount of sugar in the urine was thereby greatly increased. It is the weight of the patient, not the quantity of eliminated sugar, on which we ought to rely in such cases.

Although advocating the employment of vegetable diet in cases of diabetes of the second class, I do not wish it for a moment to be supposed that I agree with Piorry in thinking that the cause of death, even in this form of diabetes, arises from the loss of sugar; for, on the contrary, I think it springs from the inability of the body to assimilate the sugar it possesses. In such cases, therefore, I give vegetable food, not because it contains sugar, but because it possesses many of the other substances necessary for the purposes of nutrition, which neither exist in the same quantity nor in so easily an assimilated form in animal diet.

It is well known from the reports of travellers among savage nations, that men restricted solely to animal diet must consume an almost fabulous amount in order to obtain sufficient of all the ingredients requisite in the processes of life. We know, too, that an animal can be most effectually starved by limiting him to one particular element of food, although that element be even albumen.

The benefits derivable from Piorry's plan of treatment, therefore, in my opinion, arise from the fact that when he gives sugar he at the same time ceases to restrict the patient to animal diet, and that in the mixed food they find many of the materials essential to life much more abundantly and in a more easily assimilated form than in animal diet.

I shall now give a few typical cases illustrative of the two principal forms of diabetes.

Diabetes from Excessive Formation.

In the beginning of 1860 a young gentleman, aged 19, suffering from diabetes, was brought to me by his brother, a Medical Practitioner, who had detected the disease two years previously. This patient had already been under various systems of treatment. What appeared to agree with him best was animal diet, coupled with small doses of chlorodyne. To look at the patient one would have thought that he was a perfectly healthy individual. His weight was 135 lbs.; the appetite was moderate; and the amount of urine passed was not at that time excessive. The object of bringing the patient to me, it appeared, was in order that I might, if possible, suggest some remedy to replace the chlorodyne, the constipating effects of which were anything but agreeable. On carefully inquiring into the history of the patient, the case appeared to be one of diabetes by excess, and the origin of the mischief could in some measure be traced to some irritation in the liver, which was painful at its lower margin, the pain being much increased on pressure. Having an intelligent Practitioner to deal with, I at once gave my view of the case, and explained how, as scarcely any two cases of diabetes are precisely alike, it would be necessary to try the effects of different forms of treatment in order to discover what would be best for this particular case.

The following table is an abstract of the results:—

Date.	Quantity.	Sp. gr.	Sugar.	Urea.	Weight.	
1860.			grms. grs.	grms. grs.	lbs.	
March 27.	1980	1026	99·05=1535·27	45·50=705·25	135	Animal diet; ordinary bread; 5—6 glasses of wine and chlorodyne.
April 10 .	1680	1034	129·24=2003·22	36·96=572·88	—	On the same diet and drink as above, but no chlorodyne.
April 20 .	1680	1034	93·33=1446·61	50·40=781·20	—	Animal diet; gluten bread and wine.
May 13 .	2085	1024	79·49=1232·09	57·26=887·53	—	Animal diet and gluten bread, without wine or medicine.
August .	2010	1023	87·39=1354·54	46·33=718·11	—	Animal diet and gluten bread, one glass of wine, and ext. conia.(d)
December 1861.	1860	1022	90·00=1395·00	—	149	Same diet and treatment as last.
January .	1798	1024	119·20=1847·60	35·96=557·38	154	Diet the same as before, but part of the conia (6 grs.) replaced by ¼ gr. of belladonna.
February .	1736	1026	157·82=2446·21	34·70=537·85	—	On ordinary diet and without medicine.
March .	1798	1037	224·66=3482·23	46·51=720·90	—	Still on ordinary diet and without medicine.
July. .	1675	1031	83·75=1298·12	50·25=778·87	—	On animal diet, gluten bread, and cannibis indica.
November	1829	1026	61·30= 950·15	25·74=398·97	—	Diet as before; medicine a mixture containing conia, cannabis indica, and hydrocyanic acid.
December 1862.	1736	1028	49·91= 773·60	39·92=618·76	—	Do., do.
July. .	1736	1030	57·60= 892·80	58·31=903·80	—	Do., do., but less restricted diet.

The average amount of sugar passed by this patient during the next six months being from fifty to sixty grammes (775 to 930 grains) and his weight 156 pounds, a quantitative analysis of the sugar was no longer thought necessary. I may add that when I last saw the gentleman in August, 1864 (on the occasion of his bringing to me a poor lad, whose case I shall presently relate), he looked in excellent health, being, as he said, without any feelings of discomfort, although he

(b) *Brit. Med. Jour.*, March, 1858.
(c) *Med. Times and Gaz.*, March, 1861.

(d) As many of the preparations of conia are utterly valueless, in consequence of their containing little or none of the active principle, that given was first tested on frogs before being employed.

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had still to continue his medicine, for as soon as he neglected it, the sugar again increased.

The next case is that of a lady who also suffers from diabetes by excess. Before coming to me she had been under a gentleman connected with one of the City Hospitals, who treated her according to what has been hitherto considered the orthodox principles of restricted diet, upon which treatment she thrived so well that when she walked into my consulting-room I never dreamt that she came to talk about herself, but imagined she came about the health of another patient with whom she had been to see me a short time previously. She looked, in fact, the very picture of health; being plump, hale, and rosy.

Like many patients in her position of life, she thoroughly understood the nature of her disease, and criticised the opinions of our first authorities on the subject in a manner which somewhat surprised me—especially when she finished by saying she had come to put herself under my care, not for the purpose of being dieted, *but for the purpose of being able to live without being dieted.* She was tired, she said, of gluten bread, etc., and wanted to live like other people. She had brains enough to see that dieting kept down the sugar, not by curing the disease, but merely by stopping the supply, and that as soon as she gave up the restricted diet, back came all the disagreeable symptoms.

On analysing the urine I found she was in as good a condition as restricted diet could make her; the quantity of urine passed was moderate, of a specific gravity of 1030, and the amount of sugar comparatively trifling,—310 grains. Diagnosing the case to be one of diabetes by excess, I honestly told her that although her case was one of the most favourable as far as longevity was concerned, it was one of the least satisfactory kind to put on ordinary diet. At the same time adding, that the treatment must, in the first place, be entirely experimental, it being impossible to say what remedy would most successfully allow her to dispense with dieting.

The case so closely resembled the preceding in its general characters, that I ventured on the same line of treatment, and, as will be seen by the subjoined table, with most favourable results. The sugar gradually diminished, until at length, after seven months' treatment, the saccharine matter had entirely disappeared from the urine.

Being too sanguine as to the result, in an unlucky moment I consented to the patient's throwing aside the restricted diet, and whether this was done too suddenly or not I cannot say, but certain it is, that before a month was over, the urine contained as much, and even more sugar than when first I took the case in hand.

	Quantity.	Sp. gr.	Sugar.	Urea.	
1863.			grm. grs.	grms. grs.	
December	1860	1030	20·00=310·0	—	On animal diet and gluten bread; no other treatment.
1864.					
January	2480	1022	5·00= 77·5	81·84=1268·52	After taking conia and cannabis Indica during fourteen days; animal diet and gluten bread, as before.
March	1890	1030	4·23= 65·5	78·56=1217·68	Do., do.
April	1674	1023	2·10= 32·5	50·22= 778·41	On the same diet, but, after increasing the narcotic by one-third (40m), during last three weeks.
May	1395	1030	Too little to calculate	69·75=1081·12	Same as last, but has been occasionally indulging in a very small piece of ordinary bread.
June	1178	1036	Only a trace	44·76= 693·78	Diet still restricted; has once or twice indulged in a potato at dinner; takes the medicine as before.
July	1364	1016	*None*	39·55= 613·02	Has had one meal a-day of ordinary diet during last ten days.
August	1964	—	20.60=319·3	50·50= 922·25	After being for nearly a month on ordinary diet.
November	1550	1030	13·00=201·5	74·40=1153·20	Restricted diet and medicine as at first.
December	1488	1026	10·00=155·0	52·06= 807·24	Do., do.

One very remarkable peculiarity of this case is the very large amount of urea passed by the patient. A large quantity of urea is common to all diabetic cases, and especially to those on animal diet. Regarding the cause of the high percentage of urea in diabetes, the Rev. S. Haughton (e) remarks that it comes from the excessive decomposition of protein substance which takes place in this disease, quite independent of the amount of bodily work done.

In a series of observations on two cases in University College Hospital, Ringer(f) arrived at the following conclusions:—

1st. That after the influence of food on the urine has entirely disappeared, a constant ratio is maintained between the sugar and urea.

2nd. That after a purely non-amylaceous and non-saccharine meal both the sugar and urea are increased, but that during this increase the same ratio between them is observed. This ratio being 1 of urea to 2·2 of sugar.

3rd. That under both these circumstances the sugar could only be derived from the nitrogeneous elements of the body, and, therefore, that some such ratio might, on *à priori* grounds, have been expected.

(To be continued.)

(e) "Phenomena of Diabetes Mellitus." Dublin. 1861.

ORIGINAL COMMUNICATIONS.

ON THE

USE OF ERGOT IN CASES OF TEDIOUS LABOUR FROM INEFFICIENT ACTION OF THE UTERUS.

By D. DYCE BROWN, M.A., M.D.,
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Of all the causes of tedious labour, none is more commonly met with than inactivity of the uterus; for besides being in many cases the sole cause of the delay, in many also it is superadded on other causes, such as disproportion between the pelvis and the child, thus complicating the case, and obliging us to modify our treatment accordingly. Were it not for cases being often thus complicated, the treatment of inactivity of the uterus would be comparatively simple; but it is because this so frequently happens that we are obliged to be most guarded, lest the treatment become productive of more harm than good. It is unnecessary for me to take up space and time in recounting the causes of inefficient action in the uterus, and of the particular cases, comparatively few in number, in which we can, with perfect safety to the mother and child, administer the ergot of rye, as is usually done, in half-drachm doses of the powder, or corresponding quantities of the liquid preparations. These will be found laid down with sufficient clearness in systematic works on Midwifery, and they are well known. As to the causes of inefficient uterine action, I may remark that very frequently we cannot fix upon anything with certainty as the cause, and it is in these cases especially that ergot is most called for and beneficial. Of course, when the cause is obvious, other treatment with a view to its removal is more appropriate. The reason of ergot being inadmissible in so many of the cases of labour, with the complication we are now considering, is the exceedingly powerful effect which is apt to be produced by the 5ss. doses of the powder—excessive and often continuous pains coming on, even after a single dose. This result is, as is well known, most dangerous to the mother, unless the case be what one might call a typically normal case (barring the want of uterine action), and to the child, unless the labour be completed in about an hour and a half after. But if we could give the ergot in such a way as to avoid this excessive action, and produce pains, when they are absent or inefficient, closely imitating, or not to be distinguished from natural pains in their strength and period of intermission, it is obvious that not only will it be much safer and better to use it thus in cases where there would be no risk with the usual doses, but its range of action will be much increased, so as to include cases where it is inadmissible in the usual mode of exhibition. Such an object can be obtained by the very simple plan of giving the ergot in doses of five or six grains of the powder. I mention the powder (which ought to be fresh ground), as I always use it in preference to the liquid preparations, on account of its certainty.

The idea of using these small doses first occurred to me from observing the frequent unmanageable action of the usual doses; and with the object of trying to get a mild action such as I have above described, I used gradually decreasing doses, till I came to about 5 grs. Ten grains seemed to produce, in

(f) "On the Relative Amount of Sugar and Urea in the Urine of Diabetes Mellitus." *Trans.* Med.-Chir. Soc., 1860, p. 323. Year-book, vol. II.

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the cases in which I used it, a safe, moderate, and natural amount of action; but as some constitutions are certainly more susceptible of the action of ergot than others, it is quite possible that even 10 grs. might in some other cases have produced more powerful action than I wished to bring on. I therefore think 5 grs. is the best dose to use, as it cannot have a violent action, and there is no good in using a smaller dose than this, as it is uncertain in its action, though I have succeeded with about 3½ grs. Given in this manner, in the majority of cases, after a single dose, uterine action becomes increased in from five to twenty minutes, and the pains exactly resemble normal uterine pains in their strength, duration, and period of intermission; in fact, they are what might be called excellent, laudable pains, and no more. Sometimes the first dose seems inoperative, or at least not sufficient to bring the uterine action up to the required standard. In this case, after an interval of a quarter of an hour or twenty minutes to watch its effect, the dose may be repeated a second time. Rarely have I found that a third dose required to be given; while if no action is produced by the third dose I believe the constitution will be found to be unsusceptible of the action of ergot. I before remarked that different constitutions differ in their susceptibility to this drug, and I am satisfied that this sometimes goes to the extent of complete unsusceptibility. Dr. F. H. Ramsbotham suggests the possibility of this idiosyncrasy. After stating ("Obst. Med. and Surg.," p. 210) that its alleged inefficiency in certain cases may be owing to the powder not being fresh, he goes on to say:—"It may also be partly owing to the constitution of the patient not being susceptible of its peculiar action. We know that some persons are not susceptible of the peculiar action of mercury; and we may easily believe that in the same manner some constitutions may be unsusceptible of the peculiar action of the ergot of rye." The plan of administering ergot in the small doses already mentioned I take the liberty of bringing before the Profession, as it is recommended in no book I have seen, and from what I can learn from personal intercourse is next to unknown. Dr. D. D. Davis ("Operative Midwifery," p. 77), indeed, speaking of ergot, says that it is used in America in doses of a tablespoonful every ten minutes of an infusion of a scruple of the powder in an ounce and a half of water—that is, about seven grains of the powder to the dose. Dr. Simpson ("Obst. Works," vol. i., p. 372) says, in reference to this remark of Davis's, which is founded on a statement in Prescott's work on Ergot, that "assuredly either the dose is accidentally understated, or it is in itself far too little to be of any avail." The substance of the last part of this sentence expresses the notion which is generally held by Practitioners, namely, that ergot in smaller doses than a scruple in infusion, or corresponding quantities of the liquid preparations, are useless in labour, and that 3ss. is about the proper average dose. Dr. Simpson himself, however, in his memoir on "Anæsthesia in Labour," brings forward evidence of its power in inducing or quickening uterine action when received into the system in small quantity and in a more uncertain manner than when given by the mouth, namely, by inhalation. I may be allowed to quote the passage, as it is extremely interesting. After pointing out that labour pains continued as regularly under anæsthesia as before the inhalation was begun, Dr. Simpson goes on to say:—"Indeed, in some cases they have appeared to me to become increased as the consciousness of the patient became diminished. This has more particularly occurred with one or two patients who breathed ether combined with tincture of ergot, or containing a solution of its oil. A woman was brought into the Maternity Hospital on January 28, after being in labour for thirty or forty hours. It was her second child. Subsequently to her entering the Hospital at 7 p.m. scarcely any decided uterine action could be said to take place. The os uteri was well opened, but the head was still high up in the pelvis, and when I saw her at 4 a.m. of the following morning—nine hours after her entrance into the Hospital—little or no advance whatever had been made, and the case was becoming an anxious one. She was then made to inhale equal parts of sulphuric ether and tincture of ergot. In the course of a few minutes a series of extremely powerful uterine contractions supervened, and the child was born within a quarter of an hour of the commencement of inhalation. Dr. Simpson goes on to ask, "In this case was the re-excitement of strong pains the result of the action of the sulphuric ether, or of the ergot, or of both? or was it a simple but very strange coincidence? More facts than I yet possess are necessary to decide such a question, but I have seen some cases which lead me to believe that other therapeutic agents besides those I have named may be readily introduced into the system by means of pulmonary inhalation." From this last sentence it is evident, I think, that Dr. Simpson inclines to answer his own question by attributing the increased action to the ergot. And from the cases in which I have used the ergot in small doses, and on the results of which I found this paper, I believe that this is the proper explanation of the sudden accession of pains. Its success, also, in doses of a few drops of the liquid preparations in checking excessive lochia and other discharges from the uterus gives evidence that it is capable of action on the uterus even in very small doses.

I know that in stating the results of a certain method of treatment one is open to the fallacy of "*post hoc, ergo propter hoc*" in setting down the success in certain cases to the treatment, when all the time nature would possibly have produced the same result independently of any treatment. In my case-book I have only noted the effects of ergot given in the above manner when the correspondence of cause and effect must have been allowed in ordinary candour. Other cases, which were not sufficiently well marked to ascribe the increased action to the ergot alone, I have omitted to take notice of. But I have not failed to increase uterine action to its normal standard by the small doses in a single case where I have tried it, except in two or three cases, where I found it was not the smallness of the dose which was at fault, but the insusceptibility of the patient to the action of the drug. One other case ought to be mentioned, as the success was only partial, that is, the pains were quickened and strengthened by the first dose, but afterwards, by the time the head had reached the perineum, they again became weak and infrequent, and the uterus refused to respond to a second dose of nearly 10 grs. I was unwilling to push the remedy further, as the pelvis was not a roomy one, so preferred waiting till nature completed the delivery.

I come now to make some deductions. If the position I have taken up be true—that ergot in these small doses does induce uterine action in cases of inactivity of the organ, in as short a time as with the larger doses, the pains induced being normal, and of good strength, but not approaching the excessive and long-continued pains produced by the large doses, it follows that its range of action can, with perfect safety to the patient, be much enlarged beyond the limits usually assigned to its use. Let us see, then, in what classes of cases this method of adminstering ergot is safe and beneficial.

1. In ordinary cases where the os is dilated or dilateable, the head and pelvis in relative proportion, the head low down, and the perineum relaxed, it is, to say the least, unnecessary to give the large doses, as the small ones possess all the advantages of the larger, without their disadvantages. These disadvantages I partly mentioned before; but there are two others which I may here allude to—viz. (1), the frequent production of sickness, which I have never seen produced by the small doses, and (2) the injurious effect on the child which is occasionally observed. It is well known that ergot given to the mother in the usual doses does cause sometimes the death of the child—nay, more, I have seen it evidently the cause of the child's death when only one dose of 5ss. was given. Dr. Ramsbotham (Appendix C., *op. cit.*) brings forward proofs of ergot causing the death of children from convulsions while still *in utero* immediately before delivery. This mortality is to be ascribed possibly, to some extent, to the poisonous effect of the drug upon the child's system, and partly, Dr. Ramsbotham says, "it may be instrumental in destroying the child by the kind of uterine contractions it induces; for they are not only often preternaturally powerful, but uninterrupted and without intermission for a long continuance of time, during which there must, of course, be dangerous pressure on the blood-vessels in connection with the fœtal body." This effect I have not seen produced by the small doses, partly, perhaps, because they are too small to exert their poisonous influence, if there is any, and partly because the kind of pains induced are so mild and normal that no extra pressure is made upon the fœtal vessels by excessive contractions. On this point Dr. McClintock remarks, in a recent paper read before the Obstetrical Society of Dublin, that "the common voice of experience proclaims that the danger to the child is in proportion to the intensity and uninterruptedness of the pains; and that when these are only imperfectly developed by the ergot, or are distinctly intermittent, hours may elapse with impunity to the fœtus." And that "where ergot is not given in a full dose, nor in the second stage of labour after the discharge of the waters, nor with the effect of exciting per-

sistent uterine contraction, then, under any of these circumstances, there is little or no risk of injury to the child." Here the evidence of experience would be *à priori* in favour of the use of the small doses, when the safety of the child is kept in view.

2. When the os is not fully dilated, nor yet perhaps more than slightly dilateable (provided it is not a case of "rigid os"), and the pains absent or inefficient, ergot given in the way described is quite safe and efficacious in producing its further dilatation, and the consequent progress of the labour.

Naturally the dilatation of the os is accomplished by the uterine contractions pressing the bag of the membranes or the head upon the os. If, then, nature has gone so far with its ordinary process, and then ceases to set in motion the very means by which the effect is to be produced, or acts only to an insufficient extent, there is no reason why we should not substitute here also, art for nature, provided there is no risk in doing so, which I believe to be the case with the small doses. Besides, in cases of induction of premature labour, ergot is frequently given before the os is fully dilated or even dilateable—nay, more is given in these cases by eminent men *ab initio* in order to bring on labour. And Dr. Ramsbotham says (*op. cit.*, p. 332) that under its use in scruple doses every four hours he has "generally remarked that the os uteri has become soft and somewhat opened under the action of the drug." Therefore, *à priori*, I see no reason against using ergot in the proposed method, even in the case of a partially undilated os, provided always it is not a case of "rigid os." This last remark is almost unnecessary, as the condition called "rigid os" presupposes strong pains, which, however, are totally ineffectual in dilating the part. Hence it is clear that this condition does not come within the limits of this paper, in which I am considering only cases of inefficiency of action in the uterus. As I have had occasion to speak of ergot in the induction of premature labour, I may here suggest the use of the small doses in preference to the large, when it is wished to employ the drug either alone or in conjunction with other means, as they will be so much safer.

3. The fact of the presenting part being high up is no obstacle, in the absence of pains, to the safe method of giving ergot here proposed. Of course it is needless to say that if the presentation were beyond reach of the finger, no absence of pains would induce me to use ergot till I had first made out its exact nature.

4. The fact of the head not being the presenting part does not militate against the use of ergot as proposed, provided it is not the shoulder, arm, funis, or placenta which present. The reason of these exceptions is obvious, as the absence or weakness of pains is a thing to be desired to facilitate the turning of the child. Even in certain cases where the funis presents it is admissible, namely (1), where the coil of the cord presenting is so small as to be easily pushed up above the head (in which case the presence of a few good strong pains, during which the cord is retained by the finger above the head, would prevent a return of the prolapse), then, in the absence or inefficiency of this necessary uterine action, the ergot in the small doses as proposed would be advantageous; or (2), where, instead of turning, Sir Richard Croft's method of taking the prolapsed coil to the fundus of the uterus, and there hooking it over one of the limbs, is employed, the presence of good pains, as in the last case, prevents the possible return of the cord by the head being forced further down into the pelvis. Then, as before, if these pains are not present, our remedy would be advantageous. In other presentations than those excepted, no harm can result from the use of ergot here spoken of. Exception may be taken, perhaps, to my including cases of face presentation, which, though often finished naturally, sometimes require the forceps. My reasons for saying it is admissible even in these cases, presupposing always a deficiency of pains, will be seen when I speak of the next class of cases, namely:—

5. Those where the pelvis is not roomy, or the head is perhaps slightly large, or unnaturally ossified,—where we have suspicions that the forceps *may* be required, but when this would only be had recourse to after giving the powers of nature a fair trial,—in such a case, in absence or inefficiency of pains, since the effect of good normal pains is the only means of judging of the powers of nature to complete the delivery, I see no objection to this modified use of ergot, since I have found it to be perfectly safe, and only bringing on pains of natural strength. We have done no harm, only imitated nature, and if we find the delivery cannot be accomplished naturally, we can then, still all the same, resort to the forceps. In fact, though the forceps have to be used, the having induced good pains is advantageous for the expulsion of the rest of the child, and for the subsequent contraction of the uterus.

6. In cases of general irritation combined with inefficient action of the uterus, the mild action of the small doses of ergot would tend much to remove this by hastening the labour, and thus doing away with the cause of such irritation; and,

7. The fact of the patient being a primipara in no way militates against the use of the ergot as proposed, since all fear of ruptured perineum, etc., from undilated passages is needless. This process of dilatation is accomplished principally by the gradual pressure of the head on the parts from uterine contractions, and if, as before suggested, nature denies the very means of accomplishing this object, there is surely no objection to the use of a perfectly safe substitute.

To sum up, if called to a case where the labour was brought to a stand-still by the cessation of pains, or was progressing at an annoyingly slow rate, provided that no obvious cause were present which ought to be removed, and that there was no *manifest* deformity or disproportion between the head and the pelvis, and that the presentation was not an arm, shoulder, or funis (the special cases of funis presentation before mentioned being excepted), I should not hesitate at once to give 5 grains of ergot infused in hot water, and repeated in twenty minutes, if no action ensued. I should not often expect to have to repeat it a third time, and as the result of this I should have perfect faith in the rapid production of a series of excellent pains, of normal strength, exactly imitating the natural contractions of the uterus, and thus involving no danger whatever to my patient; whereas, if I were not aware of this practice, I might possibly have to wait a long time for nature to do her work, knowing that there was a risk in giving ʒss. of ergot for a dose. With regard to the irregular contraction of the uterus said to result occasionally from the use of ergot, I have seen it once in a case where the small dose was given, and where the placenta was retained, but as I have seen the same thing happen in similar cases where no ergot was given, I am not sure that I should in this case lay the blame on the ergot; at all events, this result, when really caused by the ergot, would, I should think, much more rarely happen in carrying out my proposed modification. Of course, after the birth of the child and the placenta, where hæmorrhage occurs from want of sufficient contraction of the uterus, I should then give at once ʒss., as our object is to get its full and immediate action, and good instead of harm will result from its powerful effect.

It would prolong this paper too much to detail cases in justification of the position I have taken up, but these amounted to upwards of twenty cases, including most of the varieties I have spoken of, and all with the most satisfactory result, such as I have described, with the exception of the cases already mentioned where the constitution seemed to be unsusceptible of the action of the drug, and the one other of only partial success. It may be said that a conclusion drawn from between twenty and thirty cases is worth nothing. I grant this, if these cases are picked out of hundreds and the failures kept back; but its value is different when one has been successful in a continuous run of cases, which, after all, are exceptions to the rule in natural labour. The reason of the numbers being so small is, that I only began to carry out this practice recently; and if the truth of my position is not proved to the mind of some on account of the small number of cases, they will at least grant that the amount of success justifies its further trial, and I have no doubt that if my plan is fairly tried a most satisfactory and perfectly safe result will qe obtained.

That "meddlesome midwifery is bad" is a maxim universally acknowledged, and to no piece of practice is this maxim more applicable than to the injudicious use of this drug, which is liable to so much abuse, and whose abuse is so disastrous. I have, therefore, in bringing forward I will not say a new practice, but at all events a method of employing ergot not generally known, felt myself obliged to go rather minutely into the subject, stating exactly in what cases it can, and in what cases it cannot, be used with safety and advantage. I am perfectly alive to the danger of ergot given in the ordinary doses, except in markedly simple cases, and I would be the last man to advocate any extension of its use, as nothing would be more reprehensible; but in pointing out the certainty, simplicity, and safety of action of small doses, even in a class of cases entirely unsuited to the large ones, I hope no one will misunderstand me, and set me down as over-active and meddlesome in these cases of uterine inactivity.

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TRAUMATIC TETANUS TREATED BY ACUPUNCTURATION.

By JAMES ALEXANDER GRANT, M.D., F.R.C.S.E., M.R.C.P.L., etc.

In this section of Canada tetanus is by no means an uncommon disease. In Ottawa City, during a practice of twelve years, ten cases have come under my personal observation and all of a traumatic character; nine were treated with the various remedies of the day without a favourable issue, death taking place in seven cases during the height and intensity of the disease, and in two, death appeared to result from exhaustion during the decline of the disease. In an able article on tetanus by Campbell De Morgan (Braithwaite's Retrospect, part 39, p. 65,) the opinion is freely expressed that "all we can do is to enable our patient to weather the storm by giving him as much strength as possible, and not adding fuel to the flame by all sorts of applications and internal remedies which have over and over again signally failed." Such was the opinion of the great Hunter, and such could not fail to be the impression made on the minds of those who have considered the various methods of treatment from time to time adopted for the relief of this disease. In the following case, having failed to counteract the disease by ice to the spine and cannab. Indic. internally, as a *dernier ressort* I had recourse to acupuncturation on either side of the spinal column from the occiput to the sacrum. The beneficial influence was so rapid and marked that I considered the facts should be noted, so that this simple method might be tested.

W. H., aged 37 years, of moderate stoutness, regular habits and generally in the enjoyment of health, engaged as an operative in a saw-mill, July 16, 1865, while in the act of rectifying some portion of machinery, received a wound from a circular saw over the right frontal eminence, and a small portion of the bone was denuded of its periosteum. The injury was attended to immediately, and at the expiration of two weeks healed without any difficulty. On the fourth day after the accident, the orbicularis palpebrarum of the right eye became contracted, and on the eighth day the muscles of jaws and neck became more or less rigid.

July 26.—Stiffness of the jaws became so much worse that he was unable to open his mouth more than half an inch, and he experienced great difficulty in swallowing.

27th.—Removed to the city and came under my charge, tetanic expression of the face very marked, skin cool, pulse 80 and full, urine voided in normal quantity, high coloured, abounding in lithates, sp. gr. 1020, bowels confined, sleep disturbed for several nights; complains of stiffness in the neck and back extending to the muscles of the chest and abdomen; able to walk about his room at a slow pace; could talk moderately distinct, but with some difficulty. At this time there was no spasmodic action of the muscles of the back or abdomen (opis- or emprosthotonos); croton oil and colocynth were given.

On the following morning (28th) there was trismus, the mouth firmly closed, bowels acted freely during the night, skin cool, pulse 85 and feeble, muscles of the face unaltered, masseters and buccinators rigid. During sleep moderate relaxation occasionally took place, at which time the cheeks were frequently bitten when spasmodic action set in; to avoid this the patient placed a small piece of stick between his teeth. The intellect was quite clear. Ordered ℞ Extract. cannab. Indic. alcohol., gr. xxiv.; alcohol dilut., ʒj. A drachm to be given every two hours in a table spoonful of water, also pounded ice to the spine; beef tea to be given freely. 9 p.m.—Ordered calomel, gr. ij; pulv. opii, gr. ij.

29th, 9 a.m.—There had been a few hours' sleep, and the patient had swallowed about two pints of beef tea. In all important points the symptoms continued the same until August 1, when he grew much worse. The forehead became wrinkled; the neck, chest, and abdomen became very tense; the trunk was slightly arched backwards, and the muscles on either side of the spine were very rigid. Those of the arms and legs were unaffected. The sterno-cleido-mastoids appeared thrown forward, and the interspace was deep and well defined. The skin frequently became bathed with perspiration, and the respiration difficult, owing to the inability to expand fully the thoracic walls, from the rigidity of the proper respiratory muscles. Clonic spasms came on about every two hours, giving rise to great pain at the scrobiculus cordis; skin cool; pulse 90 and feeble; pupils natural, acted readily on exposure to light, and the intelligence was unimpaired; bowels relieved by an enema of warm water. 9 p.m.—Much in the same state. The abdomen feels hard, and he complains of an increased pain in the back since morning. Ordered chlorodyne, gtt. xx., in an ounce of water. The mixture continued every three hours, and ice to the spine as formerly.

August 2, 9 a.m.—He passed a restless night, but slept at intervals about three hours towards morning. Skin warm and moist; pulse 85, soft; the extreme tip of the tongue only can be protruded. He had several severe spasms during the night The mixture to be continued, also the wine and beef-tea. 8 p.m.—Much in the same state, excepting that his urine is voided with some difficulty; it has an acid reaction, it is unaffected by heat or nitric acid, and on standing for some hours deposits a considerable quantity of lithate of ammonia. Ordered morph. acet., gr. ½.

2nd, 1 a.m.—Much worse; his jaws closed, and his expression that of great suffering. He had frequent spasms affecting both the arms and legs, and could not articulate without considerable difficulty, each effort being attended by a spasm. His respirations were hurried, and at times the whole body became quite stiff, the extremities becoming extended to their utmost and the soles of the feet quite concave. The extremities being cold, hot bricks were applied; sinapisms over the heart and wine and beef-tea given freely. The difficulty of swallowing was so great that the liquids could only be taken in very small quantities. Pulse 100 and small. Mixture discontinued. At this time Dr. Beaubien, of the General Hospital, visited him in consultation. Ordered morph. acet. gr. ½. 9 a.m.—He had frequent severe spasms during the night, and only slept at very short intervals. Bowels relieved by a castor-oil enema, otherwise there was not any favourable change to be observed. At this stage of the disease, finding the prospect of recovery becoming more unfavourable, I resolved to have recourse to acupuncturation. Three (number 9) needles were forthwith inserted into the muscles of the neck, on either side, and within an inch of the spinous processes of the cervical vertebræ. The needles were separate from each other longitudinally fully an inch. Prior to this operation, the muscles of the neck were firm and rigid, and there was a perfect inability to rotate the head upon the shoulders. The needles were inserted with difficulty, owing to the great tension of the muscular structures. Very slight pain was experienced during the operation. No sooner had they been inserted than the poor man cried out, "Thank Providence, I have got relief!" The needles were removed after one minute. He was then able to move his head laterally with considerable ease, owing to the most marked reduction of the muscular tension. The needles were removed with much greater ease than they were inserted. The power of deglutition was now also increased. Having observed this marked improvement after the first operation, the needles were inserted each day in the rigid muscles of the cervical, dorsal, and lumbar region.

6th, 9 a.m.—Passed a good night; experienced very little pain in any part of the body; the countenance cheerful, and he enjoys his beef-tea, wine, and arrowroot. The jaws have relaxed fully two inches, and he can swallow with freedom; the paroxysms sometimes are felt, but at long intervals and so slight as to cause very little uneasiness. From this date, he continued to improve without any unfavourable indication, the rigidity of the various muscles rapidly giving way under this treatment.

23rd.—He returned home almost perfectly well, only complaining of the weakness resulting from the marked severity of the attack.

I have since learned that he enjoys his usual vigour of mind and body. Drs. Macdonell, Beaubien, Graham, Reill, and several Medical students witnessed the very satisfactory effects of this mode of treatment. Having frequently given immediate relief in cases of sciatica by acupuncturation, I was induced to test the effect of needles in tetanus, doubtful as to any beneficial influence being exerted thus, in a disease, the various phenomena of which are said to depend upon an "unnatural excitability" of the spinal cord. However, in this disease every hint is of more or less value, more especially on account of its intractable nature, and because in its treatment almost "every expedient and every Medicinal resource that ingenuity or skill could devise, has been tried, but in vain; for a remedy that has appeared to produce good effect in one instance, has totally failed in another under similar circumstances."

Should this method of treatment prove beneficial in other cases of tetanus, it would likely be that class in which lesion of the spinal cord is either not present, or present only in a

very slight degree. In tetanus, according to Bowman, under the microscope, the primitive fascieuli exhibit the characteristic signs of extreme contraction and a closer approximation of the transverse striæ than usual. Just in proportion as muscular relaxation took place, the insertion of the needles became more painful, which circumstance led me to infer that the pressure exerted by tetanic muscular rigidity on the minute nervous filaments, which cross the fibrillæ in loops, might account for the reduction of sensation during the first acupuncturation.

Ottawa City, Canada West.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

HEPATIC ABSCESS—LOCAL PLEURISY—SEROUS EFFUSION ON BOTH SIDES—SEVERE PAIN IN THE SHOULDER—NO JAUNDICE.

(Under the care of Dr. HABERSHON.)

WILLIAM W., aged 22, was admitted into Guy's Hospital, under Dr. Habershon's care, on November 2. For six years he had been engaged on vessels trading on the West Coast of Africa, and latterly he had acted as steward. On these voyages his health had been good, and he had never suffered from any intermittent fevers, from dysentery, nor from jaundice. He was a man of steady and temperate habits; he had married, but had no family. Whilst in England, eight months before admission into Guy's, when sitting quietly at tea, severe pain came on in the right shoulder; this was shortly followed by more intense pain in the right side. This severe and almost agonising pain in the side continued for four months, and it never entirely left him.

He was a small man, with a haggard, wasted, and anæmic appearance; and he applied at Guy's amongst the out-patients, saying that his malady was abscess in the liver. On examination, the liver could be felt below the margin of the ribs; but there were indications of pleuritic mischief on the right side. (This was shown on inspection to have arisen from the abscess in the liver leading to local pleurisy on the opposed side of the diaphragm.) He refused to come into the Hospital, and continued to attend as an out-patient. The pain in the right side persisted, and he always had a distressed appearance. On November 2 his wife applied, stating that the pain had become more distressing, and that he was very ill. He was at once admitted. The pain was severe, and the right side was tender. He was very pale; the skin hot; slight cough troubled him. The chest was poorly developed; the left apex was flattened; the respiration was coarse; and the voice was more resonant than on the right side. There was dulness at the base of both lungs posteriorly, and in several parts coarse breathing and crepitation could be heard. The dulness on the right side was more evident in front than behind, and it extended from the nipple to an inch below the margin of the ribs. There was an absence of healthy respiratory murmur, and some crackling could be heard, but not a well-marked râle. The tongue was clean; the bowels quiet. Dover's powder, gr. v., was given three times a-day. Quinine was subsequently added, and given in the form of pill.

On November 14 the pain in the right side became more severe, and he was very ill. The general symptoms were, however, the same. Julep of acetate of ammonia, with solution of acetate of morphia was given, and a blister was applied on the side.

On the 16th he was still worse, and he was unable to move from the left side, upon which he rested. There was no projection of the intercostal spaces, but great tenderness on pressure. No friction sound could be heard, and the general signs were those of local suppuration at the part. The pain was agonising. The tongue was rather dry, slightly furred; the pulse compressible. Mind perfectly sensible. He complained of thirst and of profuse perspiration. There were no rigors observed. The compound soap pill was ordered, but he sank on the same day.

Inspection.—The body was very pale. The head was not examined. Chest: On the left side there was about a pint of serum, with some patches of recent lymph on the lower lobe. The lobe was partially compressed and congested, so also the posterior part of the upper lobe; there were no tubercles. There was less serous effusion into the right pleura, but the diaphragmatic surfaces of the pleura on the right side were firmly adherent. The lung was in the same state as the left. The heart was healthy. Abdomen: The liver was seen to extend about one inch below the ribs; its surface was granular. The general peritoneum was healthy; the intestines were contracted. The upper surface of the liver was firmly adherent to the diaphragm, and on partially separating it yellow projecting patches were observed from suppuration in the substance of the liver beneath. One or two of these abscesses broke, being very near to the peritoneum. On section of the right lobe of the liver from its convex surface, six or eight abscesses, one to one and a-half inches in diameter, were observed; they were filled with yellow healthy pus, and were bounded by dense walls; external to the abscesses the liver tissue was pale and softened, and had evidently become involved in acute diseased action. There was no disease of the gall-bladder, nor any at the transverse section of the liver. The softened part of the liver presented under the microscope hepatic cells mixed with fibre cells—elongated nucleated fibre, and inflammatory cells. The spleen was healthy, so also the intestines.

Remarks by Dr. Habershon.—Although this patient had been on the West Coast of Africa, he had not there suffered from any acute disease; and it was not until his return home that the first symptoms manifested themselves. It might be supposed that the disease had originated whilst in the tropics; and that it might have slowly advanced till its sudden outburst; but he had not till the onset of pain suffered from any known symptom of disease. There was no evidence, either before death or on inspection afterwards, to show that dysenteric ulceration or disease in any part of the chylopoietic viscera had led to the absorption of pus; and this instance tended to confirm the opinion that acute disease of the liver going on to suppuration may take place without any absorption by the veins of morbid product. Such cases of secondary absorbent disease doubtless occur, and probably constitute the greater number of the instances of hepatic abscess; still we think that the exposure to malarious and tropical influences, especially when associated with improper diet, may induce acute hepatic disease and local suppuration. Although the dense walls of the several abscesses in this case showed that the disease had gone on for some time, still many months elapsed between the commencement of the symptoms and the fatal termination, and the time was amply sufficient to allow of the fibrous deposition which bounded the pus; acute disease then took place, as shown by the presence of cell fibre amongst the white and softened liver tissue surrounding the walls of the abscesses. No pressure had been exerted upon the larger bile ducts, so that one cause of jaundice was removed; still it was remarkable, that with such extensive disease of the liver there was no trace of discolouration. Again, although abscess of the liver may exist without pain, the extension of the disease to the serous surface, to the diaphragm, and then to the pleura, quite explained the severity of the suffering.

Pain in the right shoulder was the first symptom of disease; and this fact confirms the belief that the diaphragmatic branches of the phrenic nerve in their hepatic connections, became involved in the morbid processes; for it must be remembered that many serious diseases of the liver take place without pain in the shoulder; and the converse is also true, that pain in the shoulder arises without disease of the liver. Pain in the right hypochondrium very quickly followed, and was both severe and persistent. In ordinary pleurisy the pain subsides when serous effusion takes place; but here the pain continued from three to four months. He became anæmic and wasted; slight cough supervened, but there was no vomiting, nor any interference with the ordinary action of the stomach and intestines. When he came first to Guy's there was dulness on the right side, extending in front from an inch below the ribs to the nipple. The dulness was less marked posteriorly; still the respiration at the base was not normal; there was some crepitation and increased resonance of voice; and I have no doubt that some pleurisy then existed. Subsequently, there was dulness at the base of the left lung, and the belief that there was some serous effusion there was confirmed after death. Many of the physical signs showed that we had a case different from ordinary pleurisy, although pleurisy did exist. The dulness was greater in front than behind; the pain was more persistent than ordinary pleurisy; the intercostal spaces were concave, whereas in considerable pleuritic effusion

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they are plane, and in empyema sometimes convex; and in position of the patient we observed another marked difference, in pain so severe arising from pleurisy the patient lies upon the affected side so as to limit the action of the ribs; again, the dyspnœa was comparatively slight, still the pain was increased by respiration; and lastly, the local tenderness was greater than in ordinary pleurisy. These considerations made me quite prepared to find local suppuration in addition to the pleurisy. The respiration was more coarse and loud at the left apex than at the right, probably from the lung being less compressed and more free in its action; this, in connection with the general aspect of the patient, led us to suppose that tubercles possibly existed.

As to treatment, opium or morphia were given, and for a time small doses of quinine were combined with the opium, and counter-irritation was also used. The fatal termination seemed to arise from the pain consequent on the local peritonitis and the local pleurisy, the partial interference with the respiration by the congestion of the lungs and serous effusion into the pleura, but especially from the nervous exhaustion consequent on acute suppurative change in the liver—a gland so intimately connected with the right constitution and depuration of the blood.

ST. THOMAS'S HOSPITAL.

CASE OF TYPHLO-ENTERITIS FATAL BY PERFORATION OF THE APPENDIX AND ACUTE PERITONITIS.

(Under the care of Dr. PEACOCK.)

During the spring of last year we published a case of this kind, which proved fatal by perforation of the appendix vermiform, which had been under the care of Dr. Peacock. Not long after the former case that which we are about to relate was under treatment by the same gentleman, and proved fatal in a similar way.

A female, aged 24, a servant, was admitted into Elizabeth Ward on February 17, 1864. She stated that eight days before she had been seized with severe pain across the lower part of the abdomen, followed by great tenderness on pressure, the bowels being at the time somewhat confined. Under the influence of purgative medicines the bowels were freely acted upon, but at the time of her admission there had been no relief for two days. The evacuations previously obtained were stated to have been fluid, with some solid feculent matter. From the commencement of her illness she had suffered from sickness and vomiting, and these symptoms continued when she was admitted into the Hospital.

When seen by Dr. Peacock she was suffering from constant vomiting, and the matters brought up were distinctly stercoraceous. She had pain and tenderness in the bowels, and the abdomen was much distended and tympanitic. She had an anxious expression of countenance, but her intelligence was entire. Her pulse was feeble and rapid, 120 in the minute. She was much troubled with hiccup. The tongue was dry, red and glazed in front, and furred at the back, and the skin was cool and bathed in cold perspiration. She was, indeed, evidently sinking, and died eighteen hours after her admission.

The body was examined on the 20th. The thoracic cavity was contracted from the pushing up of the diaphragm, and the lungs were slightly congested. The heart was healthy. The abdominal viscera were matted together by recent lymph, and the intestines presented red lines of congestion at their borders of contact, and were adherent to the anterior abdominal wall. In the posterior part of the cavity there was a considerable quantity of sero-purulent fluid, and in many places between the intestines there were small collections of pus. The upper part of the small intestines were filled with fœtid brown fæcal matter; the lower part of the ileum was contracted and nearly empty. The appendix contained a fæcal concretion about the size and shape of a cherry-stone. The coats about the concretion were apparently ulcerated through, and the cellular tissue around was infiltrated with pus. At the apex of the appendix the coats were thickened. The mucous membrane of the alimentary canal was elsewhere healthy, and, except that the liver was somewhat congested, the other abdominal organs were free from disease.

Though the result in this instance was similar to that in the former case which was reported, the present case differs from that in the circumstance that the original source of irritation in the cavity of the appendix was found after death, and proved, as in so many other cases, to have been a hard fæcal concretion embedded in the canal.

The case is also interesting in a practical point of view, showing as it does the disadvantages which may result from the employment of active purgatives in the early stages of such cases, for it seems probable that the perforation and general peritonitis was rather promoted than otherwise by the treatment adopted before the admission of the case into the Hospital. In all forms of constipation it still continues to be too much the practice to have recourse immediately to the exhibition of active purgatives, without considering the very different causes upon which the confinement of the bowels may depend, and the difficulty of ascertaining the precise nature of the affection in the early periods of illness.

In cases of disease in the appendix or cæcum the objects of treatment should, in the early stage, be mainly to relieve the local irritation, and to limit the disease to its original seat. This is best accomplished by the use of calomel and full doses of opium, and by the application of soothing remedies externally, followed, if necessary, by leeches or other local depletion. In a large proportion of cases under this treatment the local symptoms will subside and the bowels act without assistance, for the constipation is not generally very decided or persistent. If this be not the case after the local irritation has been to a considerable extent subdued, the bowels may be relieved by injections, or some very mild aperient may be exhibited, and the whole of the symptoms will often rapidly subside. Should the local disease still continue, and an abscess form, the process must be encouraged and the patient's strength upheld, and many such cases ultimately do quite well. If, on the contrary, drastic purgatives be exhibited in the early stage, they are very likely to aggravate the local irritation, while, if the source of irritation be in the appendix, they will almost certainly, and if in the cæcum very probably, fail to remove it. The chances, therefore, of perforation and extensive peritonitis will be increased. Should, however, the latter evil be averted, and an abscess form, it will probably be extensive; and the patient's strength may be so reduced by the previous treatment as to lessen the probability of the maintenance of life sufficiently long for the abscess to point and afford the opportunity of evacuating the matter.

THE LONDON HOSPITAL.

TRAUMATIC TETANUS—RECOVERY.

(Under the care of Mr. HUTCHINSON.)

[Reported by Mr. Tay.]

Marianne A., aged 17, was admitted on June 10, 1865. Her right hand had been crushed by a cog-wheel. There were severe lacerations both before and behind, but no fracture was detected.

She went on very well until June 29, when it was noticed that she could not open her mouth more than about half an inch. Her eyebrows were elevated, and the physiognomy of tetanus was characteristic. She complained of pain while eating, and, on being questioned, said that she had felt some stiffness of her jaws all the week, but she had not complained of it. She had slept fairly. Pulse 136. She had not had any pain in the back of her neck nor in her abdomen.

The wound, which had at first been unhealthy, was now, under the influence of poultices, freely suppurating. Mr. Hutchinson observed to the class that there could be no doubt as to the diagnosis; but that from the comparatively long period which had elapsed since the accident, the slow development of symptoms, and the absence of tetanic spasms, he was inclined to hope for a favourable result. Quinine, wine, and a purgative were ordered.

30th.—Her pulse was 132 in the minute. Her symptoms were not more urgent than on the previous day. Her bowels had been freely opened.

July 1.—Her bowels had again been opened. Her pulse was 128 in the minute. At 9 o'clock the same night her pulse was 108 in the minute.

2nd.—Pulse 128. Other symptoms much the same.

3rd.—Pulse 128. Steady improvement.

5th.—Pulse 100. She now opens her mouth quite an inch.

11th.—Pulse 120. She opens her mouth much wider. The corners of her mouth are still somewhat drawn, and the eyebrows a little elevated, but only slightly. Her bowels are regularly opened. She is very pale, but the wounds are healing. She eats well, and is up and about the ward.

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22nd.—She was made an out-patient. She could now use her lower jaw well, but there still remained a slight grin on the face from elevation of the eyebrows, etc.

WEST NORFOLK AND LYNN HOSPITAL.

TETANUS FROM SMASH OF LITTLE FINGER—DEATH.

(Under the care of Dr. LOWE.)

EDWARD W., aged 35, a healthy labourer. Little finger smashed in a thrashing machine January 6, 1865; the wound was dressed by a Surgeon, and a bandage applied: inflammation set in in the hand and arm, with great uneasiness, loss of sleep, no appetite, confined bowels; and on January 14 he tried to lift his head off the pillow, but felt something twitch it back again, and severe pain strike through the back of his neck; difficulty to open his mouth, and inability to pass water. He was admitted into the Hospital at 1 p.m., walked upstairs and undressed himself, and got to bed. The hand was found to be acutely inflamed, the redness and swelling extending to the shoulder. The wound sloughy, ragged, and a piece of dead bone protruding. Speech difficult; jaw fixed; intense pain down spine, and occasional spasms of the muscles of the back of the neck; head drawn back, and dorsal muscles rigid, curving the spine; angles of mouth drawn; eyes fixed; sterno-mastoidei rigid; spasm occurring about every ten minutes, brought on by attempting to speak, moving the bed-clothes, or other slight cause, and giving rise to the most severe agony. Bowels not open since accident. Urine, sp. g. 1028, passed with difficulty, no sugar, excess of lithates, chlorides diminished. He was kept in a dark ward by himself. A mercurial purge administered, ice to the spine, six leeches to the hand, followed by fomentations, and four grains of tobacco infused in an ounce of water every hour. 8 p.m.—Much easier; bowels have acted freely twice, and leeches bled well; no pain in arm; swelling gone down; spasms slighter and much less frequent.

15th.—During night spasms returned worse than ever, and are now (10 a.m.) very distressing; risus sardonicus well marked; can only speak a word at a time; no relaxation of muscles; pain moved to bottom of back and between the shoulders; skin warm, perspiring freely; no pain in head; wound looking healthy. 4 p.m.—Spasms continue to increase in severity; now difficult to keep him in bed; the back so arched that the arm can readily be passed between it and the bed; motions and urine pass involuntarily. ℞. Cannabis Indica, ♏x. at first every two hours, then every hour, with tr. bellad., ♏v., but as this seemed to make him worse he returned to the cannabis every half hour. At first the latter seemed to relieve him, but as the spasms got worse nothing seemed to have any effect. Enemata of beef-tea and wine gave temporary relief. Spasms became more frequent and more severe till 9.30 a.m. on the 16th, when he died, being conscious to within the last few moments.

Post-mortem Examination Thirty Hours after Death.—Brain healthy, but congested; spinal cord rather hard and congested, but rachidian plexus in cervical region greatly gorged with blood; wound looking healthy; post-mortem rigidity but little marked; other organs healthy.

MACHINE SMASH OF ARM—AMPUTATION—SYMPTOMS OF TETANUS—RECOVERY.

(Under the care of Mr. KENDALL.)

John M., aged 27, a labourer, generally healthy, right arm completely smashed in a machine at 7 a.m., January 25, 1865. He was brought to the Hospital and arm amputated at 11 a.m. All went on well, except the sloughing of a portion of the skin on the outer side of stump, and it was healing healthily, till February 11, when he complained of pain at the back of his neck, and stiffness of the jaws. Pulse, 110, small; pupils dilated; pain prevented him sleeping; speech impaired, and cannot swallow without difficulty, it causing pain all down spine. Bowels open yesterday; a mercurial purge and five grains of quinine every two hours.

12th.—Stiffness of jaws continues, with occasional spasms of posterior cervical muscles, and great pain; no sleep, though he took twenty-five drops of liq. opii sed.; urine, sp. gr. 1028, high coloured, trace of sugar (?); copious deposit of lithates; no albumen or phosphates. To take ♏xx. liq. opii sed., and ♏x. tr. cannabis Ind.; continue quinine.

13th.—A short sleep after draught; feels better; no more spasms; neck still stiff.

16th.—No signs of cinchonism. Take quinine, gr. j. ter. die. Stiffness almost gone; feels well again. From this time he progressed favourably. Made out-patient May 1.

May 27.—A piece of dead bone removed.

June 3.—Well.

TETANUS—RECOVERY.

(Under the care of Dr. LOWE.)

Henry A., aged 24, a tall, healthy young man, a brickmaker, jumping, fell on an iron rake, three prongs of which entered the sole of the right foot, admitted July 19, 1864, having lost a large quantity of blood from one of the wounds. A compress arrested hæmorrhage, and a poultice applied to foot.

24th.—Complained of pain at the angle of the jaw and stiffness of the tongue; speech indistinct; swallows with difficulty, and this causes pain in back of head. At noon the jaw was quite stiff, could not move it; complains of pain and stiffness of the back; could not lie flat, "as it makes his loins ache so violently;" head drawn back; occasional shiverings, and drawn, anxious expression of countenance. Mustard poultice to spine, and five grains of quinine and half a drachm of tincture of sesquichloride of iron every two hours. Liq. opii sed. ʒss. at night.

25th.—No sleep, but feels easier this morning. Decubitus dorsal; wounds looking healthy; jaw still stiff, and pain at neck and loins. All these symptoms gradually faded away, and on July 27 he felt nothing of them. Wounds rapidly healed, and he was soon after discharged quite well.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 4.

CHOLERA ATMOSPHERE.

WHAT is a "cholera atmosphere?" Is there, besides the effluvia from a person sick of the disease, a general quality of the air over a particular region which disposes to bowel disorder?—and this, too, quite apart from the influence of heat. Many persons believe it; some hold, besides, that this unknown state of air is quite sufficient to cause the disease, and so they exclude the notion of contagion. But as two truths must be held, if each stands upon independent and sufficient evidence, even though they may seem to be incompatible with each other, so we feel compelled to hold the doctrine that cholera is contagious,—is communicable by the secretions of the sick, in liquid or vapour,—and yet that there may be a state of atmosphere highly conducive to the disease *per se*, and rendering itself evident by the unusual prevalence of bowel disorder which can be traced to no other cause.

The general mortality of London was high last week. The deaths exceeded the estimated average by 158, and there were 48 deaths from diarrhœa, besides 4 from cholera; so that, as the Registrar-General observes, "there is at the present time in London a greater amount of fatal diarrhœa than has usually been found to prevail at the end of October."

A high rate of mortality seems to prevail in most of our

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large cities. London, last week, lost at the rate of 24 per 1000 per annum of its population; Dublin, 27; Edinburgh, 28; Birmingham, 29; Hull, 30; Glasgow and Southampton, each 33; Leeds, 35; Manchester, 36; and Liverpool, 37. Let us observe, by the way, that had the deaths in London been as numerous as those in Liverpool, they would have exceeded the actual number by 700, and there would have been a thorough panic.

We well remember that during the cholera epidemic of 1854 there was a general sense of *instability* in the intestines—if we may use such a word; that purgative medicines were apt to operate with unexpected violence; and that there was a curious train of nervous symptoms, accurately described by Dr. Babington and noticed by ourselves, to which many of the population were subject. It consisted in sudden awaking from sleep, with sense of sinking and malaise about the precordia.

So that there is much reason for taking for granted the existence of a "cholera atmosphere," and little reason against it. So far we may agree with the personages who write nonsense letters to the *Times* that there is an *occult* and mischievous quality of the air. (Great, by the way, are the virtues of a mysterious word. Had the writer merely said hidden, or unknown, or ill-understood, his sentiments would not have been made so impressive as by the use of the word *occult*, so dear to astrologers and alchemists and their modern imitators.) But there can be little doubt where the occult atmosphere is most intense; and that is in the swamps, and slums, and close courts, and stinking habitations, where organic matter festers.

So far, then, from the existence of an occult cholera atmosphere being any reason for sitting still with our arms folded, it is an additional reason for the vigorous use of the scrubbing brush, the scavenger's cart, the lime washer's brush, and every other instrument of cleanliness and disinfection. We are glad to learn that many of the metropolitan parishes, under the alarm created by the Southampton epidemic, are really bestirring themselves, and setting to work with house to house visitation, to inquire into the state of the drains, and the absence of sources of fetid effluvia. In the poorer districts, such as St. George the Martyr, described by one of our "Commissioners" in the present number, the work will be by no means easy, nor can the results be such as to satisfy the fastidious sanitarian. The Vestries may do much, backed by the magistrates, but the class of nuisances they have power to deal with is not half of what needs correction. There are the people with their dirty habits; and there are habitations which no effort can make decent or wholesome; and great as the powers of Vestries may be, they cannot pull down houses nor cause a single human being to wash his face or put on a clean shirt.

THE WEEK.

THE CATTLE PLAGUE AND EXPERIMENTAL RESEARCH.

Dr. John Ogle, in a letter to the *Daily News*, has drawn the attention of the Cattle-plague Commissioners to the benefits which might be derived from investigations into the nature of the disease carried on by skilled observers in different country districts simultaneously with those which are being now pursued at the Royal Veterinary College. He argues that it is certain that our investigations should be pursued on a large scale, and in various places contemporaneously, inasmuch as not only a very large number of facts are required on which to rest conclusions in such a matter, but also it is possible that the characters of this cattle disease may vary in different localities according to their breed, and the soil, climate, food, and other outward circumstances, in which the cattle and sheep may differ. Hence it appears imperative that we should multiply our *foci* of research, and instead of merely having observation carried on in London, to which place diseased animals would have to be removed from the country, that opportunity should be also afforded of examining the disease *ab initio* in the very pastures in which it arises, so that the incipient stages and their phenomena may be watched. The plan he proposes is that Government should employ the available Medical talent now to be found "hanging about" the metropolitan and provincial Hospitals, and after giving them an opportunity of qualifying themselves for their work by watching for a time what is going on at the Royal Veterinary College, should then send them to the various districts where the epizootic prevails. The subjoined statistics, lately published by the Privy Council, prove to demonstration that no expense should be spared by Government to arrive at the really best method of dealing with this fatal disease. We fear, however, that the authorities are not inclined to pursue a really economical policy in the matter. It is rumoured that the funds placed at the disposal of the Commissioners are totally inadequate as payment for the information required by the public. Parsimony at such a crisis is the most reckless extravagance, as the people of this country may discover when the plague has been established among their herds for years, as it was in the middle of the eighteenth century.

The following cattle plague returns have been issued by the Veterinary Department of the Privy Council Office. They do not profess to give the total number of cases which have occurred in Great Britain, but only those which have been ascertained from the official information received at the office from inspectors, whether appointed by the Clerk of the Council or by the local authorities. The divisions of England are those of the Census; —

	During week ending October 14.	During week ending October 21, Corrected.	Total cases reported from the commencement of disease. Attacked.	Killed.	Died.	Recovered.	Remaining.
1, Metropolitan Police District	153	194	3968	1342	2145	181	300
2. South Eastern Co.	225	154	3061	1111	1539	170	241
3. South Midland Co.	73	94	603	283	217	36	67
4. Eastern Counties	141	183	2788	955	1336	158	289
5. South Western Co.	17	11	113	49	44	7	13
6. West Midland Co.	31	9	169	61	89	3	16
7. North Midland Co.	8	32	91	48	36	3	4
8. North Western Co.	28	39	134	36	53	5	40
9. Yorkshire	26	39	137	44	59	9	25
10. Northern Counties	47	86	434	200	175	20	39
11. Monmouthshire and Wales	43	60	119	28	62	3	26
12. Scotland	257	328	2516	962	956	112	486
	1054	1729	14083	5119	6711	707	1546

THE ROYAL COMMISSION ON RIVERS AT OXFORD.

The members of the Royal Commission for examining the rivers of England—Mr. Rawlinson, C.E., Mr. Harrison, C.E, and Professor Way, with the Secretary, Mr. Lushington, are now sitting at Oxford. They hold public examinations of witnesses on these points:—The navigation of the river Thames as affected by locks, weirs, and mills; the contamination of the river by town sewage, and refuse from paper mills and other manufactories; the flooding of adjoining lands; water supply. The inquiry will take place by the permission of the mayor in the Council Chamber, and on Tuesday will begin at 1 o'clock. It is impossible to estimate too highly what benefit may accrue from the labours of practical men such as the present Commissioners.

THE PUBLIC SERVICES.

We have from time to time called attention to the state of our Naval brethren. That service appears to have become so unpopular with the Profession that the Department threatens to die out altogether, and the race of Naval Surgeons to become as rare as that of the Red Indians. We cannot say much for its sister ser-

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vice—the Army. An opportunity will be afforded by the authorities in February next, we understand, to our young Medical men for contesting for the honour of becoming members of the Army Medical Department. The opportune appearance of an Army Medical Blue-book at this time puts us in possession of all the material advantages and prospects offered to them. It contains a list of the officers of the Army Medical Department corrected to the 31st of March last. Now, there were at that date, exclusive of the Foot Guards, upwards of 100 Assistant-Surgeons of 1854 *unpromoted*. There are some 730 Assistant-Surgeons in all, and, if the promotions average eighteen per annum, a man may expect to attain the rank of Surgeon in forty years!

THE DRAINAGE OF BOURNEMOUTH.

Mr. Hawksley, the eminent engineer, has given in a Report on the drainage of Bournemouth, which has been printed by the Sanitary Commissioners of that place. Although dealing with so unsavoury a subject as sewage, the Report is decidedly rose-water in its character. The situation, the soil, the rainfall, and the absorption of rain-water by the sand, are eulogised in succession, and even the cesspools which exist are "less injurious" than at any other place that Mr. Hawksley has visited.

"They are described as being for the most part small cylindrical structures of brick-work about four feet in diameter and ten feet deep, built in the pervious sand, and in all practicable cases placed at a distance of fifty or sixty feet from the dwelling-houses to which they pertain. This considerable distance, and the peculiar nature of the soil, are sufficient to insure the oxidation of the organic matter held in solution by the infiltrating fluid, and as this fluid finds its way downwards to a great depth, the detrimental effects consequent upon the swamping of the basements of the houses by sewage-water do not appear to be experienced in Bournemouth."

The quantity of sewage produced is only a trifle of 100,000 gallons, which, as Mr. Hawksley observes, "is, therefore, extremely insignificant in its bulk, when compared with the volume of the ocean into which it may be very innocuously and very advisedly admitted, if only the situation of the outfall be judiciously chosen, and every cause of annoyance to the senses be avoided." Mr. Hawksley negatives any idea "of the uncertain project of the utilisation of liquid sewage," and reiterates the statement that the quantity of sewage is virtually insignificant, and that if carried far enough out its admixture with the existing currents of sea water would be of no consequence whatever. Then he makes a proposal to establish an expensive and odious nuisance in the shape of a "deposit and strainer house." "I have examined," he says, "the discharge at low water and during very hot weather, and I can find *nothing seriously offensive beyond some solid floating matters, corks, paper," etc.*

In order, then, to get rid of certain visible matters of no consequence from a sewage which by itself is inoffensive, he proposes to build this "deposit and strainer house," which would be a huge cesspool, and thus to accomplish a work which he has already shown to be superfluous. We must confess that the impression left on our minds by the perusal of Mr. Hawksley's report is one of entire dissatisfaction with the prevalent watercloset and sewer system, which certainly is a blot on our civilisation. The existence of waterclosets within houses; the effluvia which they give off if neglected; their efficacy in crowded houses in promoting the spread of typhoid and other zymotic diseases; their contamination of neighbouring water tanks; their connection with a system of public sewers, whence they inhale foul gases and distribute them over houses, spite of the "traps;" the existence of public sewers with intermitting flow and incessant deposit, which requires to be scraped out by hand labour; the necessity for sewer ventilators every 200 yards, as Mr. Hawksley affirms, in order that the sewer gases may not enter the houses; all these things make us crave for some better system, capable of being applied to a scattered village like Bournemouth (for it is no more), if not to crowded towns. Why does not some good genius bring Mr. Moule's earth closets to perfection?

FROM ABROAD.—PROSECUTION OF CHARLATANISM IN FRANCE—DISEASE A DIVINE DISPENSATION.

A scandalous breach of Professional decorum has just met with its fitting reward at the Correctional Tribunal at Lille. One Colandre, a diplomated Doctor, has of late been parading various towns in the North of France by sound of drum and trumpet, offering to perform the various operations of Surgery in the public market places; and had he really himself executed such operations it seems the French law would have been as inoperative as our own. Not liking to carry matters quite so far as this, he associated in his travelling booth with one Bennati, who, being totally unprovided with qualifications, brought them both within the province of the law. It was proved on the trial that this Bennati extracted teeth, performed various operations, and was, in fact, the leading man in the matter, the wretched Dr. Colandre acting as his assistant and signing his prescriptions. These facts proved, the law to meet the case was soon found, and the two accomplices were convicted under its provisions. Bennati was fined 1000 francs for falsely assuming to be a Doctor, 600 francs for having sold drugs, and 600 francs for selling secret remedies. The Doctor Colandre himself, notwithstanding his diploma, came off no better; for he was fined also 1000 francs for conniving at the illegal practice of Medicine on the part of Bennati, 600 francs for selling drugs, and 600 francs for selling secret remedies. Both worthies were further condemned in the costs of the trial. In the event of the fines not being paid, they were to be imprisoned for a year. We cannot but think that such a procedure as this must offer some discouragement to the progress of quackery, and is very superior to the impunity which would attend persons acting in the same manner in our own country. It may be replied that we would strike the Doctor from our Register, and that, we must admit, would indeed be an awful punishment; but even this would not reach his brother in iniquity.

Dr. Cotting read before the Massachusetts Medical Society, at its last annual meeting, a curious paper with rather a startling designation, viz., that Disease is a part of the Plan of the Creation, denying the accuracy of the popular idea that any departure from a condition of health is due to the infraction of some fixed law of health—sickness, in fact, constituting a distinct part of the plan of creation from the beginning, being the result of the operation of the Divine law. We have not yet seen his paper published in the *Transactions* of the Society, and take the following account of it from a recent number of the *Boston Journal*.

Dr. Cotting first has recourse to the palæontological museums in proof of his position, and in the records there preserved of restored injuries to the bones of the pre-Adamite denizens of our sphere, of caries and necrosis, of marks of extensive laceration recovered from, he finds irrefragible proof that life, taken in its widest sense, has always been exposed to casualties and disease, long before man, with his moral and intellectual responsibilities, was created. There is but one step in the argument from these facts to the conclusion that their existence must have been part of the plan of creation. So, also, Dr. Cotting shows, from the facts of disease in the living races of animals, that no infraction of law is to be charged on the unfortunate sufferers, who are by their very nature excluded from all accountability to laws of this kind. Passing to the diseases which affect mankind, he shows by numerous examples how difficult it is in many important instances to trace the prevalence of certain diseases to any specific violation of what we consider laws of health or moral law, or, in fact, to any specific cause. Take any of the epidemics which have devastated the earth, and how often does it happen that they

confound our conceptions of hygienic laws as well as our preconceived notions of their treatment? The fact of their prevalence under such circumstances, as well as the regularity of the phenomena which characterise any well-known disease —one of the exanthemata, for instance—he regards as unmistakeable evidence of design, as much so as the germination of a seed or the course of the seasons. This is further illustrated by other phenomena of diseases, such as the mysterious period of incubation of many of them, the inexplicable occurrence of metastasis, the changing features of acute rheumatism, the extraordinary susceptibility of some persons to certain diseases, and the equally extraordinary exemption of some from the usual consequence of exposure to others—the prevalence of certain diseases at certain seasons of the year, the geographical limits which enclose some, the unexplained variety in the type of well-known diseases as they appear from year to year, the general averages of sickness and mortality,—all these he deems proofs "that the idea of diseases must have originated in the Creator's mind, and its development have formed part of the Plan of Creation from the beginning."

The course of Dr. Cotting's speculations does not carry him to what would seem to be their natural conclusion, the inutility of Doctors; for although disease is thus preordained, he believes that a careful study of its working will give the power of guiding and modifying its influence; the action of the general laws of nature being, in fact, in various ways capable of control by the agency of man. The great point is, however, first the careful study of the natural course of disease.

"This doctrine being accepted, the proper acquisition of our art will demand of students, in the first place, a thorough knowledge of the body in its healthy condition, and secondly the investigation of the natural phenomena of disease *undisturbed by medication*, as a necessary preliminary to its proper management. It will require of them also a careful study of the operations of the mind as affecting the body, and their mutual reactions on each other, in health as well as in disease—health and disease being parts of one great plan, and often intricately involved in each other. In these directions Medical education has been deficient, and subsequent attention in after life remiss. Let coming students take warning from the deficiencies and failings of those who have preceded them. Let them thus, properly grounded, and not till then, proceed to study the effects of accepted remedial agents. Every step from such a base will be a true progress for themselves and their science, no disappointment or scepticism ensuing. Every advance in this way will be in the right direction."

The extent to which the author's theory renders the Physician an almost passive spectator may be seen from the following extract:—

"In the epidemics of 1847-48 we took care of over 300 cases of typhus without administering drugs. They were taken indiscriminately, including those in a dying state when first seen. The result was 31 deaths in 307 cases. In an epidemic of scarlet fever in 1848-49, out of 81 cases so cared for 77 recovered. With every attention to the comfort of the sick, and as thorough nursing as possible, the progress of the disease was as tolerable, its continuance as short as, and dangerous sequelæ less frequent than in other cases more 'actively treated.' In 1849 of 40 cases of measles 39 recovered. The writer sometimes takes care of the more painful diseases—rheumatism, for instance—without drugs. It requires greater patience and painstaking on the part of the Practitioner, but the result is satisfactory."

MEDICAL BENEVOLENT FUND.—The following resolution was passed at last Tuesday's meeting:—"The Committee of the Medical Benevolent Fund, assembling at their first meeting since the death of Mr. Newnham, beg to express their condolence to the family on the loss they and the Profession have sustained, and to record their sense of the valuable services given to this Society, through many years as Treasurer and Vice-President; services which so greatly augmented the funds of the Society, and thus extended the benefits it confers."

THE MEDICAL TIMES & GAZETTE SPECIAL REPORT

ON THE

EPIDEMIC OF CHOLERA:

WITH A PRACTICAL HISTORY OF THE DISEASE.

CHAPTER XV.

CHOLERA IN ENGLAND.

IN LONDON.

The return of the Registrar-General for the week ending Saturday, October 28, shows an increase in the number of cases of diarrhœa, and a few returns of cases of a true choleraic type. The facts are thus stated:—

The deaths registered in London during the week were 1377. It was the forty-third week of the year, and the average number of deaths for that week is, with a correction for increase of population, 1219. The present return exhibits an excess over the estimated number of 158.

Thirty-seven deaths were caused by measles, 5 of which occurred in the sub-district of Cripplegate. There were 60 from scarlatina, and 57 from typhus. Forty-eight fatal cases of diarrhœa were returned, the corrected average for the forty-third week in ten previous years being 30. In the ten corresponding weeks the number varied from 16 to 39. From these facts it is evident that there is at the present time in London a greater amount of fatal diarrhœa than has been usually found to prevail at the end of October.

Four deaths registered in the week are referred to cholera, of which cases the following are the particulars:—At 57, Frith-street, Soho, on the 22nd October, a widow, aged 48 years, "diarrhœa (5 days), partly in Paris and partly in London, Asiatic cholera (24 hours), exhaustion." The Medical attendant of this case adds on his certificate, that "the patient never passed into complete collapse; the secretions became natural, but having been previously out of health, she sank from exhaustion." At 8, Lower Pelliparroad, Woolwich, on 21st October, a private in the Royal Marines, aged 41 years, "albuminuria (7 weeks), choleraic diarrhœa (36 hours)." At 14, Buckingham-street, Marylebone, on 21st October, the son of a plaster moulder, aged 5 months, "choleraic diarrhœa (2 days)." At 1, Queen's-road East, Chelsea, on 27th October, a widow, aged 68 years, "choleraic diarrhœa (14 hours)."

The wife of a journeyman plasterer died at 3, Henry-street, Mile-end Old Town, from typhus; her child, three weeks old, died of bronchitis three days previously; and three other children of the family were taken to the Workhouse, ill with fever.

The annual rate of mortality last week was 24 per 1000 in London, 28 in Edinburgh, and 27 in Dublin; 37 in Liverpool, 36 in Manchester, 24 in Salford, 29 in Birmingham, 35 in Leeds, 23 in Bristol, 30 in Hull, and 33 in Glasgow. The rate in Vienna was 24 per 1000 during the week ending the 21st inst., when the temperature was 4·1° Fahrenheit higher than in the same week in London, where the rate was 22 per 1000.

IN SOUTHAMPTON.

Among the population of this borough (estimated to the middle of the present year at 53,001), 34 deaths were registered during the week ending last Saturday; of these 3 were referred to cholera and 9 to scarlatina. The annual rate of mortality during the week was 33 per 1000 persons living.

We are gratified at being able to state that no fresh case has occurred during the eight days previous to November 1.

IN WOOLWICH.

The epidemic is reported as having broken out at Woolwich during the past week. The first case occurred in the person of a police constable, who was seized with the malady at

3 a.m. on Thursday, October 26, while on his beat at the shipping wharf in Woolwich Arsenal. He was attended by Divisional Surgeon Dr. Stuart, and recovered. His case was followed by that of a Mrs. Sales, the wife of a contractor to the War Department. Her symptoms were very extreme, but she recovered. An hypothesis is afloat to the effect that the disease has arisen from the presence of putrid matter brought back from the northern outfall of the sewage.

We are indebted to Divisional Surgeon Dr. Stuart for the following interesting report. It supplies the Profession and the public with reliable information respecting cholera at Woolwich up to the 1st of this month (November) :—

After stating that he has had two cases of cholera in his own practice, and has heard that one or two more cases have occurred during the last few weeks. Dr. Stuart reports :—

"My first case was that of a police constable, who was seized while on night duty in the Royal Arsenal, his station being contiguous to the Plumstead Marshes and Southern Outfall Sewer. When called to him, at 3 a.m. on October 26, he was in a state of extreme collapse, with frequent vomiting and purging of a pale watery fluid; there were severe cramps in the abdomen, hands, legs, and feet; the breath was cold, the countenance anxious, and the eyes sunken. There was some lividity of face and hands, and the pulse was nearly imperceptible. Reaction was brought about after some hours, and a degree of secondary fever, with headache and heaviness almost amounting to stupor, followed. The urine was entirely suppressed for twenty-four hours. The patient is now slowly recovering. No cause can be assigned for the attack.

"The next day I was called at 4 a.m. to a lady in the parish of Charlton with precisely similar symptoms, but not so violent, assistance having been obtained earlier. This patient is, I am happy to say, recovering. No sufficient cause can be given for the attack.

"I may name as a coincidence, that on October 26 I was called to three cases of diarrhœa, all terminating early and well. No assignable cause for them could be discovered, and they are only worthy of notice inasmuch as in my own practice I have been remarkably free from cases of diarrhœa during the whole of the autumn, and I believe such has been the case generally in the town. I have had no fresh case since October 27."

REPORTS ON THE EXISTING CONDITION OF TOWN AND COUNTRY,

AND

THEIR STATE OF PREPARATION AGAINST THE INVASION OF CHOLERA.

(By our own Special Commissioners.)

No. II.—ST. GEORGE THE MARTYR, SOUTHWARK.

The parish of St. George the Martyr, Southwark, is not what in unctuous phraseology may be termed "a favoured spot." I suppose some people live in it of their own free will, but it is impossible to conceive any human being unless biassed by strong motives choosing it for a place to dwell in. However, the inherent vitality of the human race seems to sustain it even there, for its population is one of the densest in London, and the ragged dirty children that swarm to stare at a visitor in every court and alley, prove that the great law of reproduction goes on working in spite of dirt, poverty, and overcrowding as regularly, and perhaps even more abundantly, than in the sunny regions of Belgravia and Tyburnia.

I suppose few of your readers know more of St. George's, Southwark, than may be learnt by passing through the larger thoroughfares. So I may inform them that the greater part of the large area which the parish boundaries enclose is covered by a close network of courts and alleys, the houses of which are generally one or two stories high. Gardens and trees there are none—at least, I failed to discover any in the course of two somewhat lengthened peregrinations. The only mementoes of vegetable existence which catch the eye are the decaying cabbage leaves on every dust heap, if we omit the fungoid growths which a closer inspection might find in many a water butt, and on the damp rotten walls of some of the shanties. Many of the general features of the place resemble those which your Commissioner described last week in Bethnal-green. We have the same condition of roads converted by the late rain into swamps of greasy mud, interspersed with pools of black water. A good hard, firm, macadamised road is scarcely to be found in the parish. The pavement of the larger streets in many places is dilapidated and out of repair, whilst the courts and alleys can only be called paved by a charitable figure of speech. A central gutter leading to a drain, the trap of which may or may not be broken, as it happens, with on each side mud interspersed with round stones, constitutes the general footway of the Southwark courts. Many of the houses in the parish are built of wood, and have probably stood for a couple of centuries. In the larger thoroughfares, the space behind the houses of the tradespeople, which was no doubt at one time garden ground, is now converted into courts of small houses of one or two rooms each. These are let at rent varying from one to three or four shillings a week. A common privy and dustheap, the former not unfrequently without a seat and the latter always without a cover, stand at the end of the court, and are for the general use of the inhabitants. Fresh whitewash is now and then seen, but it is a phenomenon which attracts attention from its rarity. Against the walls of the houses, improvised mud heaps are common enough, and in most of the courts the ground floor is on a level with or below the pavement (?) outside. Various degrees of dilapidation in the walls and roofs are of course common. I say nothing of the broken windows, as from a sanitary point of view they might be considered useful. The greater number of the houses have each a water butt (although this is not constantly found), but the water butts are always without covers, some of them exceedingly filthy and coated, and the water in them has a prevailing colour of weak green tea with a minute addition of milk. It is but fair, however, to say that in some of the courts the authorities had been at work. Whitewashing and cleansing had been enforced; whilst in others, and these were the majority, the people had been promised that something was to be done. The general cry, however, was the same everywhere. "The landlord comes for his rent, and he don't care as long as he gets it; and when we complain he says, 'You need not stay without you choose,' and there's nowhere else to go to."

If it be a virtue "not to be given to change," the inhabitants of St. George's, Southwark, seem to possess that virtue in a high degree. The place has had an epidemic constitution for centuries. It was conspicuous in the plague years of the sixteenth and seventeenth centuries. In 1625 the inhabitants consented to a double poor's rate, as out of 1608 persons who died 912 succumbed to the plague, and the survivors were thrown on the public funds. In 1593, of 1112 buried 618 died of plague; and so on of the other plague epidemics. In the two last outbreaks of cholera the parish lost 1600 from cholera and diarrhœa; whilst in the last five years they have had 400 deaths from fever. In the last half of 1864 the parish sent 183 cases to the London Fever Hospital, "a considerably larger number than that sent in the same period from any other London parish or union." The crowding together of small houses began in Queen Mary's time, when the Archbishop of York sold Suffolk House (The Mint), which had been given him by the Queen, to certain persons, who pulled it down and built on the site "many cottages, on which they imposed great rents, to the increasing of beggars in that borough." The moral atmosphere of the place seems to be as unchanging

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as the physical. I would not recommend any respectable philanthropist with weak nerves to venture alone after dusk in some of the alleys of the Mint. He would be lucky if he escaped with lightened pockets. The police say this place is inhabited by persons who are known to subsist entirely by thieving. It was the last Sanctuary in London in which persons could not be arrested for debt, and where sharpers and bullies could defy the law and the constable; and it still retains its Alsatian reputation.

Thus much by way of preface. I shall now give you a more detailed account of one of my perambulations, copying from my note-book as I proceed. I may premise that I was accompanied by a friend who is eminently skilled in sanitary matters and thoroughly accustomed to such work, and by a policeman, who followed at a respectful distance as guide, and, if need be, guard. We marked out three districts for visitation—St. George's New Town, the Mint, and the district about Webber-street, which has lately become notorious as a fever-ground. Starting from the parish church, we walked along Church-street and down Kent-street to St. George's New Town. I may notice in passing that, wretched as is the appearance of Kent-street now, it was formerly the great thoroughfare by which travellers from Kent and the Continent arrived at the metropolis. We may fancy the gay cavalcade of Chaucer's pilgrims perambulating it on the fine summer morning, after lying at the Tabard hard by in the Borough, and the holiday appearance it wore when, decked with pennons and tapestry, it became the scene of the triumphal entry of Henry the Fifth after Agincourt—

"Alas, Moorfields are fields no more,"

and Kent-street is as unpoetical looking and dirty as the veriest slum in Glasgow or Wolverhampton. On our way along we visited various courts, in reference to which I have preserved the following notes:—

Unicorn-court.—A small court, with low houses; in a condition of reasonable neglect.

Bull's Head-court.—A row of shanties, consisting of one or two rooms each. We measured one of the rooms and found it nine feet square by seven feet high. It was inhabited by a woman and two children, rent 1s. per week. The privies common to the people in this court had no seats. An uncovered dust-heap stood at the end of the court, which, however, was stated to be emptied every week. The floors of the houses were on a level with, or below the ground. The paving of the court and some of the buildings were in a wretchedly dilapidated condition.

Providence-place presented a more decent appearance. We went into one of the houses. The woman told us that she had lived there for four years, during which the walls had not been lime whitened or cleansed. She paid 3s. a week rent.

We next visited Fox's-buildings, a wretchedly-paved alley. Accumulations of refuse and decayed vegetable matter lying about with quantities of mud. The water butts belonging to the houses are all uncovered, and the water of a greenish-white colour. The houses consist of four rooms; they are let for about 4s. 6d. each per week. No. 1 was rented by a sweep, who occupied the two rooms on the ground-floor. These were very filthy, and in one of them lay a bed-ridden old woman. The walls were grimed with dirt, and the house had no proper water butt. We went up-stairs to the floor above, which was let to a woman for 2s. 6d. per week. The scene we encountered here well-nigh defies description. There were two rooms, divided by a wall sodden with water which came through the roof. The water was pouring in at various places in such quantities that the two or three utensils belonging to the poor people were insufficient to catch it. The rooms were in the worst state of dirt and filth; the walls and ceiling covered with festering mould, and the floor rotten. On the floor in one corner was a man stretched on a heap of rags. The woman said he was twenty-three years of age; he was suffering from cough and spitting of blood, and had been ill some time. As if in grim satire, an old Christmas Carol was pinned against the wall. The only articles of furniture in the room were a wooden chair or two. Surely, not even the most hide-bound of Vestries would permit such horrors to exist if they were once brought to its knowledge. We met with nothing worse than this in Bethnal-green.

In *Red Cow-alley* we found the water butts uncovered; the water looked thick and coloured; there was, however, no sickness.

Henry-street and its offshoot *Wescot-street* came next. Here the scavenger had been long conspicuous by his absence. Some part, however, had been whitewashed recently. We examined one of the houses; the privy at its back was in a filthy state, and the stench from an untrapped drain made the place unbearable. The ground floor was a foot below the level of the road. Wescot-street is a long row of miserable houses, with a wide swamp of mud in front, separating them from a knacker's yard. The privies here are most foul; the water butts are uncovered. There appears to be no drainage in front of the row. Dust heaps with rotting vegetable matter complete the sketch. I may notice, however, that hard by is a school-house, clean and decent, where 165 children are taught under the superintendence of the parochial clergy.

In *White-street* we saw a well-paved court. (No. 17.)

Victoria-place.—Decently paved, but not too clean.

St. George's-square.—A row of ten houses, lately white-washed. A handsome, half-clothed, shoeless, and stockingless Amazon, with the mark of a recent fray in the shape of a patch of sticking plaster over her forehead, asked us if we had come to pull down their houses and turn them out. She said that the houses were being "done up." We looked into her room; the walls were filthy.

In *Angel-place* we were told that the houses were being repaired. At No. 17 was a filthy water butt coated on the inside. The people said that they never used the water for drinking purposes. It had the colour of green tea. The trap of the drain was broken, and smelt accordingly. The closet was filthy.

The general sanitary condition of the Mint was better than that of St. George's New Town. Thus, in one alley we found the pavement new, and that the houses had been recently repaired by order of the parish authorities. Still we observed dirt heaps, and here and there an untrapped drain.

We now retraced our steps, and walked through the district of which Webber-street is a main thoroughfare. Some of the streets and alleys here are complete swamps of mud. In a court in Webber-row the pavement was excessively bad; there was no proper water supply, but a single tap for several houses. There was an open dust-heap at the end.

In Webber-street we visited a house—No. 75—where there had been several cases of fever during the past summer. We found that it had been whitewashed and cleansed. The woman who inhabits it had lost her husband and mother from the fever. She said that it would have been purified before, but she could not get a place to which she could remove.

I was as much struck with waste of water in some places (where, as we were told, it is running all day long), as with the want of it in others. Let me add that my companion was made poorly by the stench of the untrapped drain in the yard of one of the houses, and quite ill by the fragrance of some blankets just washed and hung up to dry in the passage of one of the houses in the Webber-street district.

I fear I may have wearied your readers with this relation. I shall, therefore, merely add my general impression of what I saw in St. George's, Southwark. A great deal is included in the statement that a parish is very large, very populous, and very poor. These three conditions make it no easy matter for a vestry with the best intentions to institute measures of sweeping reform. The people are increasing rapidly, and over-

crowding whilst the present houses exist is inevitable. To put St. George's parish in a satisfactory condition would imply the pulling down and reconstruction of half of the houses in the parish. But still I think that the local authorities might do much; paving and cleansing are at least within their power. That something is being done, I have already said; but with an epidemic of cholera looming over their heads, they must redouble their efforts if they expect their parish to escape lightly. I know that their Medical Officer of Health, Dr. Bateson, is fully alive to the existing state of things, and is working hard to remedy it; whilst in the Vestry itself Mr. Rendle is making most disinterested and praiseworthy efforts to rouse that body to adequate action. But it is not only with dirt and with its accessories that the authorities have to contend. The habits of the people themselves are really the most formidable obstacle. External purity is not acquired in a generation. I saw much in my visits that convinced me that the best directed efforts must often fail, from the incorrigible filthiness and vice which are the offspring and the causes of extreme poverty. Still there were some bright scenes even in the alleys of St. George's, Southwark. A decent woman with her room and apparel neat, a bright fire, and her tea-table set out awaiting her husband's return, is a pleasant sight anywhere, but it becomes perfectly beautiful amidst the contamination and outside wretchedness of such a place as St. George's New Town or Webber-row.

REVIEWS.

Introduction to Modern Chemistry, Experimental and Theoretic. Embodying Twelve Lectures delivered in the Royal College of Chemistry, London. By A. W. Hofmann, LL.D., F.R.S., V.P.C.S. London: Walton and Maberly. 1865.

This little work is the production of a great master in chemistry. In its preface we find the following remarks by the author:—

"During the lengthened period which he has passed in tuition at the College of Chemistry, the task imposed on him has been to hold the balance fairly between the old views and the new; between authorised conceptions, evidently on the wane, and novel generalisations still awaiting final proof; so that his teachings may have sometimes almost seemed to resemble those dissolving scenes, which, at a certain moment, present two landscapes, one in the act of melting away, while the other is unfolding itself to view.

"It will be readily understood that a printed record of such discourses, though frequently and earnestly solicited by pupils, could scarcely have possessed any permanent value had it been produced amidst the doubts, and reflected the half-truths, of a period so eminently transitional. It will also be felt that its publication has become more opportune, now that a consistent body of doctrines, novel, yet based on irrefragable fact, can be put forth as undoubtedly permanent.

"It will be apparent from the above remarks that this work is of an essentially general and introductory character, designed to elucidate the leading principles of chemistry."

From this account our readers will perceive the great interest which attaches to the "Introduction." From a supposed total ignorance of the nature of chemistry, the pupil is led on step by step, under the guidance of a modern philosopher, to an acquaintance with the salient characters of chemical phenomena and the fundamental laws of their production. The well-trodden paths, almost universally followed but a few years since, through this vast expanse of knowledge are passed by without heed or comment whenever they deviate from the track along which the pupil is borne. In pursuing this line of conduct Professor Hofmann has our fullest approbation. To keep to a philosophical course through the domain of chemistry for the first time is quite hard enough in itself, without having, in addition, the work of examining the advantages or disadvantages of deviations therefrom.

In lectures one, two, three, and six we have an account of the demonstration, by experiments suitable for the lecture table, of the quality and volumes of the constituents of *hydrochloric acid gas*, *water gas* (steam), *ammonia gas*, and *marsh gas*. The importance, according to modern views, of giving the student a positive knowledge of the nature of these bodies we learn in this passage in the fourth lecture:—"The weight and volume ratios represented by the formulæ of hydrochloric acid, water, ammonia [and marsh gas], HCl,H_2O,H_3N, [and H_4C], are not merely interesting in themselves, but acquire a still deeper significance when it is found that they are types or models, representing as many groups of compounds, each cast, so to speak, in the same mould, and governed by the same structural law, as its generic prototype." So far, therefore, the author has felt, it is plain, the necessity of *demonstrating*, as far as practicable, each new fact adduced. To follow out such a method through a whole course of lectures would be of course impossible. This part of the work is illustrated by some excellent woodcuts of apparatus, in some instances several times repeated. In the selection of his experiments and in the text, our author's admirable expository powers are strikingly displayed.

Chemical symbols and notation occupy the greater part of lectures four and five. Their use and value are illustrated by their employment in expressing the facts of chemical combination and resolution with which the student has been made familiar. We must object to the author's treatment of this part of his subject. The symbols of chemistry were invented to express the combinations of bodies *by weight*. Thus H and Cl were chosen, not as abbreviations for hydrogen and chlorine, but to represent the combining weights of these bodies, 1 and 35·5, and they are still used for this before all other purposes by every chemist. The progress of science has shown that these and certain other symbols of combining weights are also symbols of equal gaseous volumes, because the combining weights of such bodies have the same volume. Not only, however, are the greater number of elementary bodies unknown as gases, but several of those which are thus known have not combining weights measuring the same as those of other elements. Now, Dr. Hofmann, in his advocacy of the unitary or one-volume system, has introduced chemical symbols as representations of the weights of the *same volume* of their respective elements. In consequence of facts, however, when he comes to the elements unknown as gases, and to phosphorus, arsenic, cadmium, and mercury, whose vapour densities are exceptional, he is obliged to use their symbols as expressive, not of their volume weights, but of their combining or atomic weights—a matter, we take it, not a little confusing to the student.

On the subject of chemical formulæ and equations, on the other hand, our author's remarks are so excellent that we cannot refrain from making a somewhat full extract on their value:—

"Of the value of such symbolic formulæ we have already had many examples; and if they possessed no other capability than that, already known to us, of tersely embodying the elementary structure of particular compounds, they would deserve to rank among the chemist's most powerful instruments of *research*.

"Instructive, however, as individual formulæ are—shortly as they sketch, so to speak, the portrait of each compound, and vividly as they impress its salient features on the mind—their value becomes still more conspicuous when they are studied in contrast with each other, and employed as instruments of *classification*. By comparing the formula of any given compound with each of the typical formulæ in succession, the group to which the compound belongs is speedily revealed; and from the known chemical characters of the group, the probable properties of a newly-introduced member may be forecast, so as to shape out an appropriate course for research, and not seldom to anticipate its results.

"But it is, perhaps after all, as a *language*—as an instrument of *record*, rapidly written, rapidly read, and capable of presenting collectively to the mind extensive concatenations of fact that words could only convey piecemeal—it is probably in this, which may be termed its *short-hand* application, that the value of chemical formulæ is, in the practical cultivation of the science, most conspicuously manifested.

"Nor is it for practical purposes only that chemical formulæ are thus valuable. In the hands of the chemical philosopher they become the expressions, at once concise and comprehensive, of chemical laws—the abstract representations of definite proportionalities—which are transformed into statements of actual facts, when the symbols are replaced by the concrete values for which they stand.

"For all these purposes chemical symbols may be handled like ordinary algebraic expressions. . . . . .

"In this manner we may construct chemical equations, by

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aid of which the most complicated chemical reactions may be rapidly traced out through all their conceivable permutations; each possible chemical change thus set forth suggesting, perhaps, an experiment. On the other hand, the worthlessness of particular schemes of research may be often perceived beforehand, or the fallacies of some too hasty generalisation detected without difficulty by merely subjecting the anticipated reactions to the searching test of a symbolic investigation."

Lecture seven treats of the relations of the peroxides of nitrogen. We felt considerable astonishment at finding on its first page the statement that (ordinary) nitric acid contains anhydrous nitric acid and *water*, and that it has been *dehydrated*,—an astonishment which will, we are sure, be shared in by most chemists of the new school, with whom adherence to facts is before everything, including supposed simplicity of exposition.

Lecture eight is on systems of measures and weights.

Lectures nine and ten are engaged with speculations on the constitution of matter. By them we learn that Dr. Hofmann remains a believer in atoms in the sense attached to them by Dalton. We find, however, in his remarks nothing to show how we can conceive that there are such atoms as he supposes, either of hydrogen or of nitrogen in ammonia, since we have in ammonia the properties neither of the one nor the other, or why we should do so. As Gerhardt has so pressed upon the attention of chemists, a formula—as that, for example, of ammonia, H_3N—can express only facts concerning its formation, resolution, or other changes; for of the constitution of bodies, in a chemical sense, we can know nothing. But Dr. Hofmann has always adopted what we may call mechanical notions of chemical phenomena, not only in his reasonings upon them, but also in his diagrammatic illustrations and in his models contrived to show imaginary movements and alterations in atoms. On page 170 we have an illustration of the injurious effects on the mind of applying mechanical reasoning to chemical phenomena. Dr. Hofmann is there treating of what he calls the *atom-condensing* power of bodies. Our readers may remember that *two* measures of ammonia gas resolve when subjected to a series of electric sparks into *three* measures of hydrogen and one of nitrogen. Well, it is explained to us on this page that the three volumes of hydrogen are condensed into *one* volume by the nitrogen! To say that four volumes of gas are condensed into two, or that two volumes of ammonia yield three of hydrogen, that is, half as much again, is to state an interesting fact; but why we are to suppose that the hydrogen is condensed into a third of its original bulk, while the nitrogen remains uncondensed, or how we are to conceive two volumes of a gas, which we know to be ammonia, to be half condensed hydrogen and half nitrogen, we are at a loss to understand.

In lecture ten there is introduced a diagram of the "Quantivalential Equilibrium of the Nitroxygen Series." Upon its value, or upon the judgment in introducing it into one of the introductory lectures to a course on chemistry, we shall not attempt to decide. We merely want to know how to interpret it. For instance, nitrous oxide (or laughing-gas) is represented by the formula $N^{III}_2O^{II}$; and what does this mean? Certainly, O^{II} means that the atom of oxygen is equivalent in saturating or displacing power to *two* (II.) atoms of hydrogen. Therefore the nitrogen which combines with it to form laughing-gas is, by the principles of modern chemistry, even as set forth in this work, equivalent to *two* atoms of hydrogen,—that is, each N is here equal to one atom. The arguments to show that N in N_2O has the same atomic value as H in H_2O are numerous, but they would be out of place here. Suffice to say, they have a tacit acceptance by all chemists. Yet we have here a symbol, N^{III}, for the nitrogen which makes it of the value of *six* atoms of hydrogen. Our readers, even though not familiar with recent chemical philosophy, will see the inconsistency of representing the value of a body as three times that which, according to the fundamental notions of the system in which such representation is made, it must be made out to be.

Lecture eleven treats of the determination of the atomic weights of the non-volatile elements, and lecture twelve is occupied with the discussion of combinations of these elements.

Dr. Hofmann has happily introduced into his language the word-building characteristic of his native tongue, but how far it was wise to coin such terms as "crith," "chemism," "molar," "ponderal," "quantivalence," "quantiquivalential," we hesitate to say.

We have pointed out some defects in this work to which, considering the great weight of its author's name, we have felt it a real duty to call attention. But, in spite of these, it is a most valuable and elegant little *brochure*, and must prove of the greatest service to the student of chemical philosophy.

The Principles and Practice of Medicine. By J. Hughes Bennett. Fourth Edition. Black, Edinburgh. 8vo. Pp. 1021.

Compendium der Practischen Medizin. Von Dr. C. F. Kunze. Erste und Zweste Auflage. Erlangen: Enke. 1865.

Compendium of Practical Medicine. By Dr. C. F. Kunze. First and Second Editions. Erlangen. 8vo. Pp. 400—388.

These books are representative books; they are each capital in their way. We might fearlessly put either of them into the hands of the student; and yet, although their subjects are almost identical, still the books themselves differ *toto cœlo*. Each of the books is exactly what it is described in its title. Dr. Bennett professes to teach principles as well as practice; Dr. Kunze professes to give a practical compendium. Both of them have succeeded.

At the commencement of a new academical year it is not inappropriate to give the student a few hints as to the kind of treatises which he should consult. We can imagine that a young ardent student, whose only object is to acquire Medical knowledge as quickly and as well as he can, will read with disappointment the first sentences which we have written. He will say, "Here are two books, both on the practice of Medicine, and both capital, and yet differing widely; which am I to buy?" We would say to him, "If you are in the first year, do not buy either of them. Stick to your anatomy and chemistry, and do not attempt to learn practical Medicine. If more advanced, buy a work like Dr. Bennett's, which will explain the principles of Medicine to you, which will probably quicken you into a love of science which you have never yet experienced, and which will make you feel that our Profession is indeed a noble one. But if you have already mastered the principles of Medicine, and wish to learn how to apply those principles to actual practice; if you are in the daily habit of observing patients at the Hospitals or at their own homes; if the foundations of science have already been carefully laid, and nothing further remains but to build up art upon it, then purchase a treatise like that of Kunze. In the English language there is none which we can recommend more strongly than that of Dr. Tanner, which we reviewed in a recent number."

Dr. Bennett's work commences with an able introduction, in which, among other topics, he insists much upon the manner of clinical teaching; and those who have participated in the benefit derived from the conversational method of Dr. Bennett will agree that there are few who have a better right to make themselves heard on the subject. Dr. Bennett's written approaches as nearly as possible to his oral teaching. He is not content with giving a definition of each disease, and then in the old orthodox manner detailing its pathology, symptoms, diagnosis, prognosis, and treatment; he tries as much as possible to introduce the bed of the patient into his book. Let us take an instance.

At page 357 he begins to treat of diseases of the circulatory system. In a couple of pages he puts the student in possession of the necessary data for appreciating the ordinary value of objective cardiac symptoms. Then he goes on to speak of pericarditis. He does not even define the meaning of the term, but he opens his note-book and extracts a typical case. Then follows a short commentary of the case, not of the disease. Then another well-written case, this time complicated with endocarditis; another commentary. A case of pericarditis with double pneumonia, adherent pericardium, thickening of aortic valves, and sudden death; acute pericarditis supervening on phthisis. An interesting case of ascites, with adherent pericardium and atrophied heart—lastly, a case of rheumatic pericarditis. By the time that the student has mastered these cases he knows a good deal of pericarditis, and is very anxious to know more. He now finds an able description of the disease in the abstract, and he has this advantage—that the teacher can refer him to one of the previous cases as an instance of the truth of what he is telling him.

But Dr. Bennett is not only an admirable teacher, he is also an original investigator. He rejects the cellular pathology which has lately been so popular, and holds that "vital action, so far from being exclusively seated in the cells, is also intricately associated with the elementary molecules of

the organism."—P. 121. He has long held that there is nothing specific in cancer. Malignancy—*i.e.*, a tendency to recur after removal and to wear away the strength—may be observed in any variety of tumour. From the so-called "cancer" there exudes a juice which infiltrates surrounding tissue with living molecules, capable of generating growths like that from which they sprang.

The evident deduction is, that Surgeons should not refuse to remove a tumour merely because they believe that it is malignant.

In his present edition, Dr. Bennett publishes a letter from Velpeau, which we must accept as absolutely conclusive evidence of the curability of cancer by operative interference.

Every one knows how Dr. Bennett has interested himself in the treatment of pneumonia. He does not believe that disease has changed its type; he does not believe that inflammation can be cut short. He regards the old antiphlogistic treatment as fundamentally wrong. He furthers the natural progress of the disease, and supports vital strength. At page 690, he says—"During the period of febrile excitement, I content myself with giving salines in small doses, with a view of diminishing the viscosity of the blood. At the commencement of the treatment I order as much beef-tea as can be taken, and as soon as the pulse becomes soft, nutrients and from four to eight ounces of wine daily. As the period of crisis approaches, I give a diuretic, consisting of half a drachm of nitric ether, and sometimes ten minims of colchicum wine three times daily, to favour excretion of urates. But if crisis occurs by sweat or stool, I take care not to check it in any way."

In Dr. Bennett's book there is a great tendency towards generalisation. In Dr. Kunze's, on the other hand, there is an attempt to tabulate diseases as much as possible. In the latter there are chapters, divisions, sections, and paragraphs, the intention evidently being that there should be no difficulty in finding the place which treats of the disease for the moment under consideration.

However, the classification does not altogether please us. For instance, "progressive muscular atrophy" is classed along with chlorosis, scurvy, scrofula, diabetes, rheumatism, and other blood diseases; while septicæmia seems to be omitted altogether; pyæmia appearing under the head of "phlebitis."

It will, perhaps, give our readers a fair idea of the style of book if we translate literally what Kunze says upon this "progressive muscular atrophy"—"l'ataxie locomotrice progressive"—of which we heard so much some time ago. The italics are Dr. Kunze's:—"Progressive Muscular Atrophy-Anatomy.—Some of the groups of muscles, especially those of the upper extremities, shrink in size, become withered, and pale. Microscopically the transverse, and later also the longitudinal striæ appear ill marked, and the muscle cylinders are first filled with fine fatty molecules, and later with drops of oil arranged like a string of pearls. Fatty tissue is also deposited in the interstices of the muscular fibrillæ, and at length nothing is left of the original muscle but a *fatty detritus*.

"Although Cruveilhier found in one case that the anterior roots of the spinal nerves were atrophied while the central end was intact, and Leubuscher in his case was even able to demonstrate a spinal affection, still the majority of observers are of opinion that the muscular affection is primary.

"Diagnosis.—The disease usually commences in the right arm (deltoid) or in the muscles of the thumb or interossei. At first there is a feeling of weakness of the affected muscles, later a complete loss of power in them. In the site of what was once a bellying muscle there is now a depression covered over with loose skin. Even strong electrical currents fail in producing muscular contraction, while slight stimuli, such as blowing on the skin, produce a peculiar twitching of the fibrils.

"Treatment.—Only in those cases where but a few muscles were attacked has electricity succeeded in restoring muscular action. Where the disease is more widely spread, the patient is certain to lose by degrees all power of motion. Lately good results have been obtained from nitrate of silver (Wunderlich, Vulpian). The first author gives $\frac{1}{10}$th of a grain thrice daily; the second gives ½ gr. twice or three times a-day. A few days after the commencement of the treatment improvement was evident even in those cases where the disease was far advanced. The sense of touch became more acute, the knowledge of the situation of the limbs more exact, sensibility to pain and to change of temperature almost normal. The constant shooting pains ceased, motion became more free and stronger, and the incoordinated nature of the movements disappeared entirely. Constipation ceased, the appetite increased, the body became better nourished. That the nitrate of silver really entered the blood was proved by its presence in the urine (Schmidt's J., 117, 1)."—P. 555.

In this description there is perhaps not much accurate pathology, and but a meagre list of symptoms. Still the disease is easily enough recognised, and, as practical Physicians, we seize upon the fact that nitrate of silver has undoubtedly and unintelligibly proved beneficial where other means have failed. We turn to Dr. Bennett's book, and we fail to find this fact. We even fail to find a description of progressive muscular paralysis as a pathological entity. But there we learn what Kunze does not teach us: we learn the principle upon which the atrophy depends and the errors into which we may fall in observing it. We should be better pleased with Kunze's practice were he more sparing of the lancet, drastic purges, and hunger diet. It may be, however, that the hardy foresters and countrymen with whom we may meet in a little German town require a different treatment from the wan population of a huge city. The book is very creditable to its author and valuable to the Profession.

Dr. Bennett's book is one which very few men could write, a book which any man might be proud of having written. We shall only make one stricture. Here and there crops out a spirit of combativeness which is not exemplary. There is one great German pathologist of whom Dr. Bennett seems particularly jealous. Let him be content. It is possible to be fervent admirers of Virchow while we also appreciate Bennett.

Handbuch der Anatomie und Mechanik der Gelenke, mit Rücksicht auf Luxationen und Contractionen. Von Dr. Ph. Jak. Wilhelm Henke, Prosector und Privatdocenten in Marburg.

Handbuch der Lehre von den Knochenbrüchen. Von Dr. E. Gurlt, Privatdocenten der Chirurgie an der Königlichen Universität zu Berlin.

It has been a subject of remark that some of our countrymen of scientific eminence, while exploring the workings of German labourers in the mine of scientific observation, have occasionally picked up pieces of the genuine metal and have forgotten to acknowledge the source of the discovery. In happier times, before the difficult heights of German literature were as familiar to the steps of the Englander as the beaten tracks of Alpine explorers, it was easier to decorate the learned brow modestly with leaves plucked from the German tree than it is at the present day. In the works the titles of which form the heading of the present notice might then have been found a secluded nook whence, from amongst much that bears a familiar aspect, some valuable specimens might have been transferred to the private museum for the astonishment of the untravelled natives.

Both with the modest title of Handbook, the first-named work is contained in a compact volume, while the latter presents two somewhat ponderous tomes, to be followed by a third in due course of lucubration.

With characteristic strivings after the elementary principles (*grundregel*), Dr. Henke reduces the various kinds of true joint movement to three primary linear motions, viz., 1, the sliding motion upon parallel planes; 2, the turning motion describing a segment of a circle round a central fixed point both vertically and horizontally (*rotation*); and 3, the screw motion, which is produced by a combination of the other two. The plane or surface indicated by a point moving in these produced lines is also of three kinds, corresponding to these movements, viz., a simple onward sliding or flat surface,—a surface of rotation described both vertically and horizontally round a central axis—and a screw surface, such as is shown by an inclined plane bent round a cylinder.

These correspond pretty closely to the forms of joint less abstractedly described by English anatomists as the arthrodial; the diarthrosis rotatorius, and enarthrodial or ball and socket; and the ginglymus or hinge-joint.

That the joints usually called ginglymus really move, not in a rigidly angular manner, but with the obliquity of a screw surface, has been habitually remarked by English anatomists, and is especially exemplified in the case of the humero-ulnar or trochlear joint. But, in truth, joints rarely present the pure types above indicated; and, as the author remarks in succeeding sections of his book, are usually constructed for combinations of these movements. One of the principal joints

in the body—for example, the knee-joint—possesses both the sliding and the turning movement, the latter including to some extent in the bent position the horizontal turning motion round a vertical axis, which by English and French anatomists is called *rotation*, as well as the vertical motion round a horizontal axis in the condyles, producing flexion and extension.

By the German anatomists the mixed articulations which possess intervening fibro-cartilages fixed to the bone surfaces are called *half-joints*, while those in which they are separated on each side from the bones by synovial membranes are called *double-joints*. *Cylinder-joints* and *saddle-joints* are other useful names employed by the author which carry their own meaning.

The chapters on the combinations of different joint movements, and the action of muscular power upon them through the bone levers, are full of suggestive remarks which space will not allow us to notice.

In the section upon the structure and development of the joints it is remarked that joints in the fœtus are at first pure synchondroses. In those which become complete joints, *diarthroses*, a loosening and absorption of the connective elements of the cartilage takes place so as to form in one or more planes a smooth, gliding surface, while in the *synarthroses*, fibrous tissue becomes abundantly developed in the intercellular stroma. In that upon the mechanism of luxation is to be found the practical remark which, though not original, is too frequently overlooked by Surgeons in reducing dislocations, viz., that the displaced bone can in many cases only be brought into its normal situation by transmitting it again in a reverse direction through the abnormal positions or course it has traversed during and after the injury, under the influence of external force or muscular action.

The mechanism of the different joints of the trunk, head, and extremities, and the effect of dislocations, disease, and injuries upon them, are all treated of at length, the whole being illustrated by woodcuts and lithographs, the truth and accuracy of which cannot by any means be spoken of in the same commendatory tone which may fairly be bestowed on the text, and the style of which can only be justified on the score of cheapness and economy.

In his so-called Handbook, Dr. E. Gurlt has really produced a monument of patient industry in the accumulation of cases and the description of specimens of fracture to be found in the different museums and private collections in Germany, France, and the three kingdoms on this side the Channel. And though the dates of these stop short on the eve of commencement of the American civil war, an event prolific in new methods of treatment of fractures, both simple and compound; and though some of the improved methods of treatment practised during the last few years in this country are also omitted, yet the logical method, completeness, clear arrangement, and copious material of the first, and the direct practical tendency of that part of the second volume which has come already to hand, are entitled to high commendation. From three museums in Berlin; from Breslau, Halle, Jena, Marburg, Giessen, Würzburg, Braunschweig, Frankfort, Dresden, Erlangen, Vienna, Tübigen, and Strasburg; and from those of the College of Surgeons, St. Bartholomew's and Guy's Hospitals, in London; the College of Surgeons and University museums, in Edinburgh; the College of Surgeons and Richmond Hospital, in Dublin; and from many private collections; statistics, descriptions, and, in numerous instances, drawings neatly executed in woodcuts have been taken. The illustrations of simple fissure, multiple, commuted, and displaced fracture are very numerous and good. Among the general signs of fracture, the different sources and kinds of crepitus are fully and completely considered, as well as the symptoms or "subjective signs" experienced by the patient. The causes of fracture, including fragilitas and mollities ossium, malacosteon, the alterations effected by age, fatty degeneration, and cancerous disease, are all treated at length with intra-uterine fracture and fracture from muscular action.

The section devoted to the healing process in complicated fractures, in those into joints, those of parallel bones and the separation of epiphyses is treated in a novel manner, and illustrated profusely and well. Many useful remarks are found under the head of "Temporary Appliances for Removing the Patient (Transport)."

The various kinds of bandages and splints are fully considered (including the paper and paste splints of the Belgian Surgeons), and their shortcomings and advantages well weighed, although, as before alluded to, the various ingenious extension apparatus of the American Surgeons are conspicuous by their absence. Amazing industry is shown in getting together the particulars of the numerous fracture beds and frames, with the names of their inventors and dates of publication, among which are some for providing against motion of fractured bones on shipboard.

In the very full division of the first volume given to the the causes, pathology, and treatment of ununited fracture, we have again to notice the shortcoming of a very meagre mention of the valuable mode of treatment followed of late years in this country with much success—viz., that of uniting the cut ends of the bone after resection by wire sutures. The first attempt of this kind (unsuccessful) is attributed by the author to J. Kearney Rodgers, of New York, in 1826. To B. Langenbeck, of Berlin, he attributes the first experiment of fixing the ends of the bones with a steel screw, and to Dieffenbach the first employment of ivory pegs, apparently suggested by the experiments upon animals' bones made by Flourens and others.

A statistical table of no less than 484 cases of united fracture variously treated is given in the first volume, and another of 149 cases of faulty union with treatment for deformity.

The first part of the second volume is devoted to fractures of the spine, the ribs, the sternum, the hyoid bone, and the laryngeal cartilages. A statistical table of 270 cases of fracture of the spine, of which 217 were fatal, and another of 105 cases of fracture of the sternum, are drawn from various sources—English, American, and Continental.

REPORTS OF SOCIETIES.

WESTERN MEDICAL AND SURGICAL SOCIETY.

FRIDAY, OCTOBER 20.

Mr. G. POLLOCK, President, in the Chair.

MR. TURNER exhibited a

PHOTOGRAPH OF THE FACE OF A WOMAN

which in two or three weeks' time became covered with a thick crop of short and white downy hair. The body and extremities became also covered. The face had the appearance of being painted. She is 42 years of age, and is suffering from carcinoma of the breast.

Dr. MORELL MACKENZIE brought forward two cases of what he termed

SPURIOUS DIPHTHERIA.

One case was that of a man, aged 31, whose uvula, pharynx, tonsils, epiglottis, ventricular bands, and vocal cords were covered with a thick, white, opaque membrane. On the artificial or natural separation (by coughing) of the false membrane the surface was seen to be inflamed, and marked by bloody lines and points. The patient had complete aphonia and a croupy cough. The false membrane has been present in the throat at least four months. The patient declared that he had never had syphilis, nor were there any evidences of the previous existence of that disease. He had not been confined to his bed for a day since his throat was bad. He felt slightly weak, but the principal inconvenience was the loss of voice. There was no albumen in the urine. Dr. Andrew Clark had made a microscopic examination of some shreds of the membrane and declared it to be "crupous lymph." Dr. Mackenzie said that the case presented all the local and pathological features of diphtheria, and that the absence of severe constitutional symptoms alone differentiated it from true diphtheria. Indeed, had the disease occurred in a child, it is probable that the presence of the false membrane in the larynx would have given rise to constitutional fever. In the second case, a lad, aged 17, has both tonsils, uvula, and posterior wall of the pharynx covered by a membrane looking like wash-leather, and at least one-sixth of an inch in thickness. He had never had syphilis. His throat had been "bad" eight months, and had been under observation one month. Dr. Mackenzie said that in the first case caustics aggravated the disease. and led to the rapid reproduction of the false membrane. The membrane (since the discontinuance of local treatment) was slowly clearing away. Cod-liver oil and quinine were being given internally. Such cases as these, he considered, went far towards proving that diphtheria, croup, and aphthæ were but varieties of the same disease agreeing in their pathological features, but differing in severity, and modified by the age and constitutional peculiarity of the patient, the surface affected and by the presence or absence of epidemic influence.

MEDICAL REPORT OF THE THIRTY-FIFTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

HELD AT BIRMINGHAM FROM SEPTEMBER 6—13.

[*From our Special Correspondent.*]

(Continued from page 404.)

SECTION OF ECONOMIC SCIENCE AND STATISTICS.

ON THE VITAL STATISTICS OF BIRMINGHAM AND SEVEN OTHER TOWNS.

By Mr. W. L. Sargant.

[The importance of Mr. Sargant's paper to the whole of the Medical Profession is such that it would be an absolute loss to our readers not to lay it before them in its entirety.]

"I propose in this paper to give a short account of the vital statistics of Birmingham. The tables in the appendix contain, 1st, the population since 1801, with the absolute increase, and the rate of increase in each decennial period; 2nd, the numbers living at the date of the last census, at different ages; 3rd, the density of population, the death rates and birth rates; 4th, the death rates at different ages; 5th, the excess of such death rates over those of the whole country; 6th, the numbers who die from phthisis, cholera, and other diseases; 7th, the proportion of deaths from each cause to deaths from all causes.

But since an array of figures without any standard of comparison is of little value, I have added the same statistics for seven other great towns, as well as for England and Wales. I have selected Wolverhampton and Sheffield as hardware towns; Manchester and Leeds as textile towns; Liverpool as a great seaport; London as the metropolis; and Bristol as having many of the characteristics of London.

That part of my paper which relates to the causes of death would have been impossible without the use of a recent report of the Registrar-General. That volume, which is entitled 'Supplement to the 25th Report,' supplies for each district, during the ten years 1851-60, the percentages of deaths at different ages and from different causes. We had the absolute numbers before; we now have the rates; an addition which will be appreciated by all who have busied themselves with this topic. Any one may now ascertain with ease and certainty the registered mortality of any district, for all ages, and for each age; and by running his eye down the columns may pick out the healthy and unhealthy districts, so far as the register can determine the facts. He may also, with the same facility, find the causes of death in each district and for each age.

As regards the population of the great towns, I need scarcely say that we have no exact information before 1801. I have met with some scattered notices, however, in 'Eden on the Poor,' and in Dr. Price.

I find that in 1752 Norwich had more inhabitants than any of our now greatest towns. It had 36,000 souls; whereas twenty years later Manchester, including Salford, had only 27,000, Birmingham had little over 30,000, and Liverpool had less than 35,000. It appears that in less than a century Liverpool, Manchester (with Salford), and Birmingham taken together have grown from 92,000 to a million and a quarter, an increase of 13 to 1.

The number of houses chargeable to the window and house tax in 1781 were, in Liverpool, 3974; Bristol, 3947; Manchester, 2519; Norwich, 2302; Birmingham, 2291; Newcastle-on-Tyne, 2219; Sheffield, 2092.

Some persons have held the paradoxical opinion that our great wars with Napoleon immediately increased our wealth and population. It is quite true that simultaneously with these wars there was a sudden advance in the prosperity of England; but this, I imagine, was caused by the rapid progress of manufacturing industry, which was retarded but not stopped by the drain of the war. The table before me shows that population increased much faster after the peace than before it.

The highest rate of increase for all England was that between 1811 and 1821; but in the great towns of my table the highest rate was that between 1821 and 1831—viz., 40 per cent. The increase in Birmingham was 41 per cent., while that of Liverpool, Leeds, and Manchester was still higher.

The lowest rate of increase for all England was that between 1851 and 1861. The lowest rate in the great towns was in the same period, having been only 20 per cent., or half that of 1821-31. Birmingham increased 27 per cent.; Sheffield, 31 per cent.; but Manchester only 13 per cent., and Liverpool 18 per cent. Remembering that free trade was producing its full effects during the whole of the decade, the results are not what we might have expected. Some allowance, however, has to be made for the fact that the limits of the towns remain unchanged, and that, therefore, an overflow has taken place into the surrounding country.

The rates of increase in Birmingham at each period were,—1101-11, 17 per cent.; 1811-21, 23 per cent.; 1821-31, 41 per cent.; 1831-41, 27 per cent.; 1841-51, 27 per cent.; 1851-61, 27 per cent. The three last decades had the same rates of increase, but the absolute increase was about 40,000, 50,000, and 63,000.

Comparing 1801 and 1861, Liverpool was 5½ times as great; Wolverhampton, 5; Manchester, 4½; Birmingham, Sheffield, and Leeds, 4; Bristol, 2½; while London was nearly three times as great in 1861 as in 1801.

My Table P. gives the ages of the people. These vary a good deal in the different places, though not so much as some would anticipate. First, as to children under 5 years old. In the three hardware towns these bear a higher proportion to the whole population than they do in all England. They stand highest in Wolverhampton, and next in Sheffield. As to the last, the fact is accounted for by the prosperity of Sheffield from 1851-61, which caused an increase of 37 per cent., which must have been supplied by a large immigration of young and marriageable people.

The case of Wolverhampton gives me the opportunity of pointing out an important distinction.

My first table, O., was compiled from the census, where the natural limits of the towns are taken; and Birmingham, for example, includes not only the parish, but also Edgbaston, and the part of Aston which is within the borough. My other tables are compiled from the Registrar-General's reports, where the limits adopted are those of the Poor-law Board. In the large towns generally these limits are much narrower than those of the census: this is especially the case as to Birmingham, Sheffield, Manchester, Leeds, and Liverpool; and as it is the suburbs which are cut off (the places of residence of the wealthier classes), the effect is to exaggerate the rates of mortality.

The case of Wolverhampton is the reverse of this. In 1861 the population of the borough was 61,000; the population of the registration district was 127,000. The death-rate, therefore, is that of Wolverhampton borough plus a large circuit around it.

Bristol varies in the opposite direction. The registration district in 1861 contained less than half the population of the borough. It did not include the town population of St. Philip and Jacob, amounting to 31,000, nor the suburban population of Clifton. From recent returns we know that while the death-rate of the registration district of Bristol was nearly 27·1000, that of the borough was only 23·1000—about the same as that of London.

My Table P. enables us to trace the course of migration of the people, which, as we know, takes place from the country into the towns. In the earlier periods of life, the proportion of the sexes is not disturbed by it. Under 5 years old, for example, the greatest variation is from an excess of 2 per cent. of boys in Liverpool, to a deficiency of 2 per cent. in Bristol. From 5 to 10 years old, the limits of variation are about the same; but from 10 to 15 years old the variation is greater, being from an excess in Liverpool of 5 per cent. of boys, to a deficiency in Leeds of 6 per cent. At 15 to 20 the variation again enlarges, being from an excess of 15 per cent. of females in Bristol, to a deficiency of 5 per cent. in Wolverhampton. The variation reaches its maximum at 20 to 25, being from 24 per cent. excess of females in Bristol, to 2 per cent. deficiency

in Sheffield. In the textile towns, Manchester and Leeds, there is a large excess of females from 15 upwards, the largest excess being that in Manchester, from 20 to 25.

In Birmingham (parish) the proportion of the sexes at each age is nearly that of England and Wales, as might be expected in a town where the excess of females of all ages is rather less than that of England and Wales. Of the two other hardware towns, Sheffield has more males than females, and Wolverhampton has the same, but even in a higher proportion.

The vital statistics of some districts are much disturbed by the number of female servants kept. A popular periodical lately pointed out that in Bath one-fourth of all the women were in service; that in St. George's, Hanover-square, taking men and women together, three out of five were in service; while in Bethnal-green only five or six per cent. of the women were in service. Now, female servants to a great extent come into towns from the country; only the healthy ones come; when they fall ill, they often return to the country to die. They swell the census, but many of their deaths fail to appear in the register of mortality.

My Table P. enables me to trace also the course of the immigration. I will compare London with the whole country. I find that London has a female excess of 13 per cent. against 5 per cent. for England. From birth to 15 years of age, the difference between London and England is small. From 15 to 20 years of age there is in England an excess of females of 2 per cent.; in London there is an excess of 14 per cent. From 20 to 25 years of age there is in England an excess of females of 12 per cent.; in London there is an excess of 20 per cent. At the higher ages this variation between England and London gradually diminishes, though at every age, up to 85, London has a greater excess of females than England has. The figures confirm the statement that there is a large immigration into London of girls, many of whom return to the country in later life.

If we turn to the tables of mortality we find a confirmation of the opinion that many of the young women leave London to die. The recorded female death-rate of London under 10 years of age is higher than that of England; from 10 to 15 it is lower for the ten years; from 15 to 25 it is decidedly lower for the ten years; from 25 to 35 it is lower; after 34 it is higher again. That is, the registered deaths in London sink very much at those ages at which it is believed that domestic servants retire into the country to die.

On these grounds I maintain that the mortality of the male population is the safer test of the healthiness of a district.

My Table R. gives the ages at which the deaths of the different towns take place. As to the country at large, the figures must modify an opinion commonly held as to the proportion of male and female mortality. It is well known that there are more male than female deaths on the whole; but it has been commonly said that from puberty to middle life females die faster than males. This is nearly true; but is only a part of the truth. These figures show that the great difference between the sexes is from 15 to 20 years of age, when the excess of female deaths is 11. From 20 to 25, the figures indicate a small excess of male deaths. However, I do not regard this as conclusive, because we know that unmarried women over 20 frequently put themselves down as under 20; and that this inaccuracy is extensive enough to be decidedly felt in the Census. If, then, we take the larger division of 20 to 35 years old, we find that during these 15 years the male and female deaths are just equal. It appears, then, that in the 5 first years of life there is a large excess of male deaths; that from 5 to 10 years the male excess is very small; that from 10 to 15 the male excess is decided; but that at 15 the tide turns, and that until 20 the female deaths are largely in excess; that from 20 to 35 the male and female deaths are equal; that after 35 the male deaths are again in excess.

Tables T. and V. give the causes of death. There is, I am aware, great difference of opinion as to the best classification of disease; but I can only follow that which I find in this Report of the Registrar-General.

Of all the diseases to which a separate column is assigned, the one, I presume, about which there can be the least dispute is cancer. The number of deaths it causes is small, being only about 1 per cent. of all deaths; but it is twice as great among females as among males.

The uniformity of the number in different places is remarkable. In the whole of England and Wales, out of 10,000 persons living, 2 males and 4 females die of cancer each year. The same number of males and 4 females die of it each year in Liverpool, Manchester, Leeds, and Wolverhampton. In Birmingham and Sheffield there are also 2 male deaths, but 5 instead of 4 females. In London, again, there are 2 males, but 6 females; in Bristol there are no less than 4 males and 6 females. Possibly the excess in these towns is caused by the influx to the Hospitals of patients from a wider neighbourhood.

At a meeting of the British Medical Association lately held in Leamington, there arose a discussion on the question whether cancer was a local disease, or whether it was a result of an ill condition of the body. If it were a result of ill condition, we should find more of it in an unhealthy place than in other places – more in Liverpool than in the whole of England and Wales. But, in fact, we find that out of 10,000 persons living, the same number die in Liverpool that die in the whole country.

Of all the deaths that occur in the whole country, if we set aside those from unspecified "zymotic diseases," the highest number is that of lung diseases—viz., 14 per cent. Brain diseases come next, with 12 per cent.; then phthisis, with 11 per cent.; heart diseases and dropsy, 11 per cent.; cholera and diarrhœa, 5 per cent.; typhus, 4 per cent.; scrofula, 4 per cent.; stomach and liver disease, 4 per cent.; violent deaths 4 per cent. as to males, and 2 per cent. as to females.

We find, as to lung disease, contrary to our expectation, that it prevails more among males than females, as 33 to 27. Even taking phthisis with lung disease, there are still more male deaths than female. The fact that in Birmingham there was an excess of male deaths over female, from this cause, led Dr. Greenhow to conjecture that the peculiar trades of the town injured the lungs of the males more than of the females. But this table shows us that the male excess in Birmingham is no greater than the male excess of the whole country. The same is true of Sheffield and Wolverhampton and also London; and the excess is still greater in Bristol. On the other hand, in Liverpool, Manchester, and Leeds, the male excess, though considerable, is less by about one-fourth than in the hardware towns.

In phthisis there is, through the whole country, an excess of female deaths of one in thirteen, or nearly 8 per cent.; but in all the towns I am considering, except Wolverhampton, there is an excess of male deaths. In Birmingham the male excess is no less than one-fourth, and in London it is even one-third.

Yet, taking the two sexes together, phthisis prevails less in several great towns than elsewhere. In Birmingham, for instance, the female deaths from phthisis are fewer by 30 per cent. than they are on the average of the country, and even the male deaths are rather fewer. The worst towns in this respect are London, Bristol, Liverpool, and Manchester, which are nearly as bad as the whole country. The best is Wolverhampton.

Diseases of the brain cause rather more deaths than even phthisis. But they do not prevail most where many persons would have expected. They are considerably lower in London than in the whole country; they are very high in Leeds, and decidedly high in Sheffield. In Birmingham and Liverpool they are somewhat lower than even in London.

Heart disease and dropsy have many deaths attributed to them, but fewer in the great towns generally than in the country at large. London approaches the general rate most nearly.

I come now to cholera and the cognate disorders—diseases which, from their suddenness and their prevalence at certain seasons, attract public attention. It is remarkable that all the deaths from cholera, diarrhœa, and dysentery, taken together, are throughout the country fewer than one-twentieth of all deaths. But in the great towns they are far more, being in Liverpool, Birmingham, and Leeds from one-eleventh to one-twelfth of all the deaths in those places respectively. There are fewer in London and Wolverhampton, and in Bristol as few as in the whole country.

It is worthy of notice that in London and in Bristol the same old custom prevails of casting away all refuse and ashes at intervals of a few days, instead of allowing them to accumulate for months.

Typhus, as we shall suppose, is more fatal in the great towns than in the country generally. The worst place in this respect is Wolverhampton, but Liverpool and Sheffield are nearly as bad, and Manchester approaches these two. Leeds and Birmingham are considerably better. Bristol, in spite of its narrow streets and "backs," stands very well; and in London (the whole metropolis) there is rather less typhus than

in the whole country. Here again we have London and Bristol, with their frequent scavengers, standing at the head of the list.

The deaths from typhus are only about 1 in 25 of all deaths.

The deaths from scrofula and its cognate diseases are about as numerous as typhus; they are numerous in the great towns.

The worst town is Leeds, with a number not very far from twice as large as that of the whole country. Liverpool is nearly as bad. Then come, in order of descent, London, Sheffield, Manchester, and Bristol. Birmingham is better than Bristol, though decidedly worse than the whole country. Wolverhampton is actually better than the whole country, as about 15-16.

The only other column I will make use of is that of deaths by violence. I am surprised to find the greatest proportionate number in Bristol; but this is probably owing to the fact that the registration district is only a small part of the town, and includes, I believe, the docks and the "frost." Liverpool is the next worst; then come Wolverhampton, Manchester, Birmingham, and Leeds; London and Sheffield have the smallest number.

If, then, we compare Birmingham with the other great towns, we find that, as to deaths from lung disease, there are five towns worse than Birmingham, and two (London and Sheffield) better; that as to phthisis, five towns are worse, Leeds is the same, and Wolverhampton is better; that as to brain disease, six towns are worse, and London is a little better; that as to cholera, etc., three towns are worse, Sheffield is the same, and three towns (London, Bristol, and Wolverhampton) are better; that as to typhus, five towns are worse, while London and Bristol are better; that as to "other zymotic diseases," four towns are worse, and three (London, Bristol, and Leeds) are better; that as to scrofula, etc., six towns are worse, and Wolverhampton alone is better; that as to deaths by violence, four towns are worse, and three (London, Leeds, and Sheffield) are better.

As regards all deaths from whatever causes, five of these towns are more than Birmingham, Bristol is about the same, and London appears decidedly better.

As I have already remarked, however, the figures given do not indicate the mortality of the entire towns, but only of the Poor-law districts known by the names of the towns. The borough of Bristol, *e.g.*, contained, in 1861, a population of 154,000; the registration district contained only 66,000 (less than half), though there is not nearly so great a difference in the other towns. If we take the boroughs, we approach much nearer to the natural limits of the town, and we get the means of a fairer comparison with London, of which the boundaries are very wide.

Ten Years' Death Rate.

	Liverpool.	Manchester.	Salford.	Leeds.	Birmingham.	Bristol.	Hull.	London.
In Registered District .	33	31½	28½	28	26½	26½	24½	23½
In Boroughs	30	29½	26	26	25	23	24	23⅔

We see that the registration district of Bristol has a death-rate much worse than that of London, but that the city (or borough) of Bristol has a death-rate rather better than that of London.

Comparing the registration districts, Liverpool is much worse than Manchester; comparing the boroughs, there is little difference between them. The registration district of Birmingham has the same death-rate as that of Bristol; the borough of Birmingham has a far worse death-rate than the borough or city of Bristol.

No doubt there are other demerits to be taken into account, in making a final comparison of the mortality of two places. A fast-increasing place has many children, and, therefore, many deaths; and I have elsewhere shown reasons for believing that, comparing Birmingham with London, a part of the Birmingham mortality is accounted for in this way. It has been proved, also, that the deaths are more numerous among the working classes than among the middle and upper classes, and this is especially true of children. But the metropolis has a far greater proportion than is found in Birmingham, of persons of the middle and upper classes.

Another difference arises from the number of female servants kept in one place and in another, because a large part of these go away in case of illness, and die elsewhere. Besides that, they are generally in the prime of life, and of more than average healthiness. On this ground, I contend that the true mortality is best ascertained by comparing the deaths of males. In some cases, the situation of workhouses and of Hospitals modifies the returns.

Taking all these circumstances into account, I have maintained in another paper, and I still maintain, that though the death-rate of Birmingham appears in the register as 27 per 1000, while that of London appears as 24 per 1000, the true death-rate of Birmingham is considerably less than that of London."

Discussion.

Dr. Farr eulogised Mr. Sargant with regard to his paper, remarking that it was in consequence of a suggestion made by that gentleman that the Registrar-General was induced to make an alteration in the form of his returns.

Professor Rogers said the result of his experience was, that the poverty, disease, and crime in a large town usually centered in small property belonging to corporations, and asked whether there was any property so held in Birmingham. A fact in point was that Holywell-street, in London, was the property of a college in Oxford.

Mr. J. D. Goodman, in answer, said there were only two corporations in Birmingham who were large property holders. These were the governors of King Edward's School and Lench's trustees. Being a member of both these bodies, he could say that, with a few exceptions arising from peculiar circumstances, the whole of their properties were held on lease for 100 years.

Mr. Edwin Hill said that, in his opinion, one of the vital elements of improvement in the object under discussion was the adoption of the model lodging-house system. These houses had already done much good, and would do still more, if public attention was called to them. (Hear, hear.)

Mr. Pare asked whether in Birmingham the water supply was good, and whether it was supplied regularly and universally by night and day.

The President said the members were very much indebted to Mr. Sargant for his most interesting and useful contribution. He thought it was a question worthy consideration of how much of the superior healthiness of a town was dependent upon its natural situation. He was of opinion that a great deal depended upon this, and that Birmingham was a case in point. (Hear, hear.) He was sorry to differ with Mr. Hill upon the subject of model lodging houses, but he thought they were inadequate to the object for which they were intended, because they were to an extent charitable institutions—charitable to this extent, that if a man ought to get seven per cent. interest upon his money, and was content to forego the remaining three, he was giving the rest away. (Hear, hear.)

Mr. Sargant, in his reply, thanked Dr. Farr, with whom he had on many occasions had to differ in public, but never in private, for his kindly remarks; and in reply to Mr. Pare, said that the supply of water was good and continuous, but not universal, inasmuch as some persons preferred using pumps, which in towns were objectionable.

ON THE ADMISSION OF ILLEGITIMATE CHILDREN INTO WORKHOUSES AS A MEANS OF PREVENTING INFANTICIDE.

By Edward Vivian, M.A.

Mr. Edward Vivian read a paper on this topic, having given notice of his intention to bring before the guardians of the Newton Abbot Union a formal resolution relative to the admission of illegitimate children into workhouses, as the means of preventing infanticide. He was desirous of obtaining an expression of opinion from that section upon the course proposed. That a discretionary power be given to Boards of Guardians to admit illegitimate children into the workhouse, without the mothers being necessarily also an inmate, the cost of maintenance being recoverable from one or both of the parents; that it should be the duty of relieving officers to promote the obtaining of orders of affiliation, and to endeavour to ascertain the parentage of all cases of illegitimate children, so as to prevent the burden from falling upon the union, or exclusively upon the mother, in consequence of lapse in the statutory time for making the application under the present law. The former of these objects was prohibited by the order of the Poor-law Commissioners, all relief given to the child being regarded as given to the mother, and no able-bodied pauper being entitled to relief excepting in the workhouse. The course recommended in the second resolution was prohibited by the Poor-law Amendment Act, which rendered it penal for any Poor-law officer to interfere, directly or indirectly, in obtaining an order of affiliation. In the exercise of those discretionary powers, the guardians would avail

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themselves of the deterring influence of the workhouse in all cases in which circumstances rendered it desirable and would require the presence of the mother, so long as her services as wet nurse were required for her own or other infants as at present, but they would be enabled to release her, if suitable employment could be obtained, without the burden of her child and the consequent temptation to neglect or infanticide. The system would be intermediate between a foundling Hospital, with the temptation which secrecy affords to immorality, and the cruelties which the children now suffer when put out to private nurses. His attention had been specially called to this subject from having been one of the magistrates who committed Winsor and Harris, for the murder of the child of the latter, near Torquay. As very erroneous statements had been made relative to the characters of these two women and the inference as to the morals of our rural populations, he might add that Winsor, instead of being an average specimen of the wives of respectable agricultural labourers, had been notorious as the keeper of a brothel, of which two of her daughters by a former husband were inmates; whilst, on the other hand, Harris (the mother), although having had another illegitimate child by the same father, a small farmer in the neighbourhood, several years before, had so far regained her character as to have lived in the service of a highly-respectable lady at Teignmouth for nearly four years, her conduct during that time having been regarded as irreproachable. The best way of carrying out these suggestions was a question for the Legislature, but he would suggest that powers be given to the Poor-law Board to relax the present law.

The President asked if it was Mr. Vivian's idea that in every case the assistance was to be given to mothers of illegitimate children, and only in special cases to mothers of legitimate children?

Mr. Vivian said a discretionary power to guard against that would be given; and no doubt the Board of Guardians would carefully exercise that power.

Dr. Heslop doubted if infanticide was more prevalent now than it was in former years. Greater attention had latterly been directed to it; and remarkable cases had latterly aroused public notice. He thought that the number of deaths in the foundling Hospitals were shocking to contemplate, and it was a question in his mind if these Hospitals were not a disgrace to their humanity and civilisation. His own opinion was that no legislative enactment would ever cure the evil; and he believed that it was time a definite declaration was given to the public sentiment in regard to that blemish, of having given birth to illegitimate children—a crime which was, in the eyes of those who had studied the question, a great deal less than that of others, although it was visited with far greater social punishment.

After some further remarks from Mr. R. Biggs, Deputy-Coroner for Somerset, who pointed out the great difficulty—the, indeed, impossibility—of obtaining or procuring a conviction against the mothers,

Sir J. Browning said he was opposed to weakening the maternal responsibility.

The President said the first thing they had to consider was the point: had there really been the increase in infanticide that was generally supposed? He imagined that there was one thing which contributed greatly to the present feeling on the subject, and that was one of their periodical panics. (Hear, hear.) He referred to the panic in London in reference to garrotting; and, in regard to the causes which operated on the female mind in reference to their illegitimate children, he believed the principal one was the trouble and expense of bringing up their children. As to the remedy, he agreed with one of the speakers that there was a failure of justice, and it was most desirable that guilty parties should not escape punishment.

The following papers were also received as read in this Section:—"Statistics of Pneumonia," by Professor Bennett; "Suggested Improvements applicable to the City of London and other Towns to Improve Health and Preserve Life," by G. B. Galloway; "On the Duration of Life, the Prevailing Diseases, and the Causes of Death of Potters," by J. T. Arlidge, M.B.

With this concluding notice we have placed before the reader a full and correct report of all the Medical work of the British Association for the Advancement of Science for the year 1865. It remains for us only to add, that Medicine, as in past years, stands most favourably by the side of the sister sciences.

Postscript.—The subjoined abstract of a paper read in Section D, Zoology, was omitted in our previous report:—

ON THE EXTERNAL FORM OF THE HAND AND BRAIN OF THE ORANG (S. SATYRUS).

By Dr. Crisp, M.D.

The injected brain of an orang, and the hand of this animal, formerly belonging to the Linnean Society, and believed by Dr. Crisp to be the largest ever seen, were exhibited. The measurements and weights of both organs were compared with those of man, and the differences pointed out. The direction of the medulla oblongata and the greater comparative weight of the brain of the young monkeys at birth, who, unlike the human infant, were at once active and intelligent, were matters that were thought to have not been sufficiently considered by former investigators. Professor Huxley had often in his lectures enunciated almost as an axiom that "there was less difference between man and the anthropoid apes than between these and the lower monkeys." Dr. Crisp said he thought his discovery of a penis bone in the anthropoid apes (the existence of which Professor Huxley had denied) was alone sufficient to disprove this conclusion; but he hoped hereafter to adduce abundant additional evidence of the falsity of this inference.

GENERAL CORRESPONDENCE.

CHOLERA IN GERMANY.

LETTER FROM DR. ALTHAUS.

[To the Editor of the Medical Times and Gazette.]

SIR,—As Germany has, up to the present time, not been included in your able reports on the progress of the present epidemic, I beg to send you the following notes:—In Berlin, Vienna, and other large towns, no case of cholera has as yet occurred. But the disease has been imported into the very heart of Saxony by a few travellers who left Odessa some weeks ago, when cholera was at its height there. These gentlemen, a few days after having arrived at Altenburg, a small town near Leipzig, fell ill and died with all symptoms of cholera. Several of the inhabitants of Altenburg were subsequently affected, and died, and the disease then spread to Werdan, a neighbouring town, which is in railway communication with Altenburg, and where the epidemic has assumed comparatively large proportions. Up to October 20, there had been 149 cases of cholera at Werdan, of which 52 proved fatal; and, according to the latest reports, the epidemic is by no means decreasing. This insulated outbreak of cholera in a previously healthy country, and which is clearly traced to persons coming from a centre of infection, must prove an important link in the evidence already accumulated to prove the contagious nature of the disease. I am, &c.,

October 30, 1865. JULIUS ALTHAUS, M.D.

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of the gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, October 26, 1865:—

Charles Kelly, Market Deeping; John Coyte Bailey, Plymouth; George Redford, Normanton, Yorks.; Charles William Huet, Southgate, N.; Disney Thorp, Maldon, Essex; Griffith Williams Roberts, St. Asaph; William Harris Butler, Old Charlton, Kent; Robert Fullarton Scott, Calcutta; John Babington Williams, Monkton, Kent; Frederick John Burge, Jun., Hammersmith.

The following gentlemen, also on the same day, passed their First Examination:—

John Waller Melson, Queen's College, Birmingham; Frodk. Boultbee Lardner, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CHAPMAN, Mr. J., has been elected Dispenser to the Reading Dispensary.

CLEMENT, GEORGE, M.R.C.S. Eng., has been elected Junior House-Surgeon to the Royal Infirmary and Dispensary, Manchester.

CROYDON, Mr. E. H., has been appointed Dispenser to the North Staffordshire Infirmary, Etruria, Stoke-upon-Trent.

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DUNSMURE, JAMES, M.D. Edin., has been elected President of the Royal College of Surgeons of Edinburgh for 1865-66.

GAIRDNER, JOHN, M.D. Edin., has been elected Treasurer of the Royal College of Surgeons of Edinburgh for 1865-66.

HICKMAN, WILLIAM, M.B. Lond., has been appointed Surgeon to the Western General Dispensary.

INGLIS, ANDREW, M.D. Edin., has been elected Librarian of the Royal College of Surgeons of Edinburgh for 1865-66.

IRVINE, JOHN W., L.R.C.S. Edin., has been appointed Assistant Medical Officer to the West Derby Union Workhouse.

LEY, H. ROOKE, M.R.C.S. Eng., has been appointed Medical Superintendent of the Salop and Montgomery Counties Lunatic Asylum.

PHILIPS, ALFRED, M.R.C.S. Eng., has been elected Assistant House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital.

RAMSAY, ROBERT, M.D. Glasg., has been appointed one of the Honorary Physicians to Erith House Institution, Torquay.

RUTHERFORD, WILLIAM, M.D. Edin., has been appointed Assistant to the Professor of the Institutes of Medicine in the University of Edinburgh.

SIMSON, JAMES, M.D. Edin., has been elected Secretary of the Royal College of Surgeons of Edinburgh for 1865-66.

TAYLOR, FREDERIC, L.R.C.P. Lond., has been appointed Medical Officer for the Woodstock Union Workhouse.

DEATHS.

BRUCE, JAMES, late of the Bengal Medical Service, at 24, Queen-street, Edinburgh, on October 27, aged 66.

DELVAUX, PROSPER.—Dr. Prosper Delvaux, Professor of Legal Medicine in the University of Brussels, and Medical Jurist to the Brussels Courts of Justice, has just died, at the age of 42.

DIX, WILLIAM, M.D., at Long Buckby, Northamptonshire, on October 29, aged 78.

FRASER, HUGH, late Surgeon 1st Battalion 60th Regiment, at Brunswick Cottage, Sydenham-hill, on October 23, aged 72.

HANBURY, WILLIAM, L.R.C.S.I., Staff Surgeon, at Netley, Southampton, on October 28, late of the 33rd Regiment.

JONES, THOMAS S., F.R.C.S. Eng., at Minster place, Ely, on October 26, aged 77.

MURRAY, WILLIAM, L.R.C.S. Edin., at Newcastleton, Canonbie, N.B., on October 17.

SCOTT, NATHANIEL G., M.R.C.S. Eng., at Wappenham Rectory, Northamptonshire, on October 27, aged 25.

VERLING, Dr. R. H., at Richmond-terrace, Wexford, on October 17, aged 70, late of the 44th Regiment.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Great Ouseburn Union.—Mr. Henry Langdale has resigned the Second District; area, 11,401; population, 2118; salary, £20 per annum.

Redruth Union.—Mr. Michell has resigned the Redruth District; area, 7775; population, 16,324; salary, £40 per annum.

Shardlow Union.—The Kegworth District is vacant; area, 8470; population, 2899; salary, £32 per annum.

APPOINTMENTS.

Birmingham Parish.—Joseph F. Jones, M.R.C.S.E., L.S.A., to the Fifth District.

Ellesmere Union.—John F. Churchill, M.R.C.S.E., L.R.C.P., L.S.A., to the Overton District.

Milton Union.—Henry Penfold, M.R.C.S.E., L.R.C.P. Edin., L.M., to the Rainham District.

Scarborough Union.—Charles Arthur, M.R.C.S.E., L.S.A., to the Scalby District.

Stoke Damerel Parish.—James E. Bennett, M.R.C.S.E., L.S.A., M.D. St. And., to the St. John's District. George T. Robston, M.R.C.S. Edin., L.S.A., to the Tamar District.

THE Committee of the Medical Benevolent Fund beg to acknowledge with thanks a most liberal donation of £300 received at their meeting on Tuesday, October 31, with the accompanying letter addressed to the Treasurer:—"A Medical man (M. C. R.) who desires to be unknown, grateful for the many blessings attendant upon the practice of his Profession, has the pleasure to present the enclosed three notes to the Treasurer of that real charity, the Medical Benevolent Fund. The amount to be distributed by the Committee as they think best." They desire, also, to inform the generous donor that they have devoted £200 to the annuity fund, and the remaining £100 to the general fund.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN, 53, BERNERS-STREET, W.—An ordinary general meeting of this Society was held on October 25 last, when were elected B. G. Babington, M.D., and Charles Hawkins, Esq., Vice-Presidents of the Society, also John Scott, Esq., of Harley-street, a Director, to fill up vacancies in the list of officers. The Treasurer's accounts for the first six months of the year were also read, from which it appeared that eighty persons, widows and orphans of deceased members of the Society, had received relief, ordinary and extraordinary, to the amount of £1177 10s. during that period.

ROYAL COLLEGE OF SURGEONS.—The primary examinations in anatomy and physiology for the diploma of membership of the College commences this day (Saturday), and it is stated that the numbers are slightly in excess of the last November examinations.

LORD PALMERSTON'S funeral was attended by Drs. Watson and Protheroe Smith, Mr. Paget, and Dr. Drage, the Medical attendants of the late Premier.

MEDICAL STUDENTS.—The number of gentlemen now pursuing their Professional studies in this metropolis, including those studying for the diploma in dentistry, amount to 1016, being an increase of forty-seven over the number of last year.

AID TO HOSPITALS.—The annual collection was made at all the churches and chapels in Birmingham on Sunday last in aid of the funds of the General Hospital of that town, and produced the munificent sum, from nine places of worship, of £1265. The sums varied from £231 down to £100, which latter sum was subscribed at the Jews' Synagogue. The Rev. Robert Moore, M.A., Canon of Canterbury, who died lately, worth £250,000, has bequeathed to the Canterbury Hospital, the Canterbury Dispensary, the Maidstone Infirmary, and the Maidstone Ophthalmic Hospital, £100 each, free of legacy duty. His total legacies to charities amounted to £800. Sir John Henry Palmer, Bart., of Carlton-park, Northamptonshire, has also bequeathed £100, free of legacy duty, to the Infirmaries at Northampton and Leicester.

THE SURGICAL AID SOCIETY.—The annual meeting of the friends and supporters of this useful charity was held on Friday, Oct. 27, at the Mansion House. The Lord Mayor took the chair. The Report stated that during the past year 304 cases had been relieved by the Society, by supplying Surgical appliances, at a cost in many instances of £5, and some of £20, the expenses of which placed it entirely out of the power of the recipients to provide for themselves. During the three years of its existence 680 cases have been relieved, but the committee regretted that the state of the funds compelled them to refuse relief to many most distressing and deserving cases. The Report closed with an earnest appeal to the benevolent public for extended pecuniary support. The financial statement showed the total income of the year to be £377 15s. 9d., and the expenditure £341 16s. 1d., leaving a balance of £35 19s. 8d.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Mr. Spencer Wells's "Cases of Ovariotomy in Private Practice" will be continued next week.

Our present arrangements do not allow us to insert births or marriages.

Mr. G. Gross.—The suggestion is a good one, and shall be considered.

Dr. Keith, Aberdeen.—The cases shall appear shortly.

Trichina Spiralis.—A set of specimens may be had by application to Messrs. Churchill, price 6s. 6d.

Erratum.—In our report of the President's remarks at the last meeting of the Pathological Society (see p. 456) the word "typhus" was unfortunately printed for "phthisis."

In our Obituary Notice of the late Dr. Herbert Barker, we omitted to state that Dr. Wharton, Physician to the Bedford Infirmary and Fever Hospital, was called to Dr. Barker after the second visit of Dr. Murchison, and continued to give an anxious attention up to the hour of his death.

Atom.—The writers in the *Times*, who do so much to advance the good of their species by their comments on practical Medicine, have been making a display of their scholarship by attributing to Lord Palmerston the phrase "fortuitous concourse of atoms." The origin of this is found in "Cicero de Naturâ Deorum," in which book various adherents of the Epicurean, Stoic, and Academic schools hold a discussion as to the nature of the gods. The Epicurean Velleius holds that the construction and government of the world would be a task incompatible with the repose and felicity of Divine personages, and believes that the world is, as it were, self-arranged in space. "In hac immensitate latitudinum, longitudinum, altitudinum, infinita vis innumerabilium volitat atomorum; quæ, interjecto inani, cohærescant tamen inter se, et alias alias adprendentes continuantur; ex quo efficiuntur hæ rerum formæ et figuræ." An antagonist speaker sums up this doctrine:—"Esse corpuscula, quædam levia, alia aspera, rotunda alia, partim autem angulata; curvata quædam et quasi aduncæ; ex his effectum esse cœlum et terram, nulla cogente natura, sed *concursu quodam fortuito.*"

The Degeneracy of Vaccine Lymph.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A good deal is being said of the degeneracy of vaccine lymph. I have been out of the way of vaccinating, having declined midwifery for many years. The occurrence of an epidemic of small-pox in this neighbourhood has caused scruples in many parents as to the protection of their grown-up families by their infantile vaccination. This circumstance has given me the opportunity of some present experience, which is at your service if you choose to make use of it.

I have revaccinated some numbers, ages varying from thirteen to twenty and thirty; the lymph taken from healthy infants vaccinated by myself. The pustules on the eighth day in each case were perfect, as in my early days nearly half-a-century ago. In several of the adults the effects have been most virulent (the exception has been a true vaccine pustule). In some the puncture inflamed the second day, advancing to fifth or sixth, then dying away; others from the fourth or fifth day, advancing to the eighth, forming a spurious pustule, with intense inflammation of the arm, pain and swelling in the axilla, and febrile disturbance.

I am, &c.

Macclesfield, October 26. F.R.C.S.

The Type of Disease.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Dr. Bree, in an excellent criticism on Dr. Stokes' address at Leamington, seems to have some erroneous notions as to the views the Medical public generally entertain with regard to the "change of type theory" he so succinctly and with much force repudiates; but I think that were he to inquire of more recent authorities he would find that Copland, Watson, Wood, Christison, and Graves by no means rule the roast, and that their opinions are not generally adopted; nor do I believe that inflammatory disease is generally combated by antiphlogistics, even amongst Dr. Bree's respected country Practitioners, whether the type be sthenic or otherwise. Although the main point of my letter is to show that there do yet exist cases of inflammatory disease which can alone be successfully treated by the active management our misguided parents uniformly adopted, what the type of disease was is of but small moment compared with that which now exists; and the question that in my mind arises is, whether, in the present state of our knowledge of the subject, and the varied conclusions authorities arrive at, and the very various results of the same treatment of the same disease in different individuals, we are justified in assuming that a type of disease does exist. Would it not be truer and safer to speak of the "type of an individual disease" than the "type of disease generally?" Is it not a fact that Todd was more in vogue than at present, and that his followers, horrified at the energetic treatment of their fathers, determined to make restitution for their misdeeds, and with more zeal than discretion rushed into the equally fatal extreme of poisoning by alcohol? And now, perforce, are we merging into the golden age of "discriminate mediocrity." Most of us feel that in the treatment of half-a-dozen fever cases each case may require a very different amount of stimulating treatment, if stimulants at all are needed; that A, with pneumonia, will be grateful to you to-day for the ℥x. of blood, and that B to-morrow, with same lesion, will give you his benediction for the beef-tea and Burgundy you enjoined him to take; and so on through an eternity of disease. One day our nerves are shocked to read of a fever terminating successfully with the valuable aid of milk and water, and next the most marvellous performances by a provincial total abstainer, till we are drawn to exclaim with Dr. Bree's student friend, "Well, really, I don't know." And is it not because we don't know—that is, have not arrived at the right means of separating by analysis the incipient sthenic case from that of lower type—that all this contradictory, chaotic state of things exists; and so long as we go to the bed-side of a patient possessed with one idea of treatment for an inflammation, so long shall we fail to discriminate the real type of individual cases. Dr. Bree tells us he has bled; but infers that he sinned in doing so, and that he never intends to fall again into the same error. May he not occasionally sacrifice a patient to a principle?

Two cases have within the last two or three years occurred in my practice more than suggestive of the necessity for depletory measures in some exceptional cases of acute disease, extracts of which I give from my note-book.

J. H., aged 11, parents scrofulous, complained of intense frontal headache, much flushed and distressed, pulse frequent, bowels constipated, with great difficulty overcome by purgatives, extreme intolerance of light, delirium, unconsciousness, and a complete train of brain symptoms came on, which report says were but temporarily relieved by leeches. About the fifth day of the disease, without evident cause, a copious purging supervened, consisting of about three pints of serum faintly tinged with feculent matter. This continued for three or four days, when, fearing prostration, I ventured to give a single stimulating astringent dose, which checked the flux, but aggravated the now somewhat relieved symptoms, when happily Nature, better friend to J. H. than was my art, or rather artlessness, again assumed her prerogative. Enormous purging continued for several days, the acute symptoms the while subsiding. The patient, although milk and water was the only diet, was not extremely debilitated, and made an excellent convalescence. From note-book I see it remarked, "The purging seemed to consist of a passive filtering of serum from the blood, unaccompanied by abdominal pain, tenderness, or even flatulence." It was, in fact, Nature bleeding its patient about twice daily, and thereby effecting a cure.

The second case was G. T., aged 61, emaciated-looking, but in reality wiry, weighing but 7½ stone. Suffered from acute pleuro-pneumonia; expectoration purulent and hæmorrhagic; case appeared hopeless; no nourishment could be taken in consequence of the most aggravated vomiting. About the fifth day of the disease, in consequence of most acute pleuritic pain, almost in despair I took from the arm ℥xx. of blood, which relieved him immediately, from which time he made a tolerable convalescence so far as the lung was concerned, when my attention was directed to the eye. The conjunctiva, cornea, and iris soon became acutely inflamed, nor did the usual remedies relieve it. The lids became granular, the vision almost gone, and the pain remained intense for two or three weeks, the health otherwise pretty good, when, irrespective of treatment, a diarrhœa came on, and in a few hours the pain finally took its departure, and after two days of purging not a trace of granular conjunctiva remained, which to me appeared most singular, never having seen it otherwise than a chronic condition. Since this time, although the eye is permanently damaged, the patient has continued robust and well. Here, then, is the second case in which Nature outwitted the Doctor, but taught him, I trust, a useful and practical lesson. I am, &c.

October 25. RUSTICUS.

COMMUNICATIONS have been received from—

T. S.; HARVEIAN SOCIETY; EPIDEMIOLOGICAL SOCIETY; Dr. S. W. J. MERRIMAN; Mr. CHARLES J. FOX; Dr. D. MACLOUGHLIN; Mr. A. F. SWITZER; Dr. W. RUTHERFORD; Dr. W. N. BROADBENT; Dr. J. COOMBS; ODONTOLOGICAL SOCIETY; Mr. ARMSTRONG TODD; MEDICAL SOCIETY OF LONDON; Dr. ALFRED WHITTLE; MICROSCOPICAL SOCIETY; F.R.C.S.; Dr. J. J. HARDESTY; ETHNOLOGICAL SOCIETY; Mr. R. GRIFFIN; ANTHROPOLOGICAL SOCIETY; SENEX; Dr. J. B. BENNETT; WESTERN MEDICAL AND SURGICAL SOCIETY; PHARMACEUTICAL SOCIETY; APOTHECARIES' HALL; RUSTICUS; Mr. D. O'BRIEN.

BOOKS RECEIVED.

Diarrhœa and Cholera: their Origin, Proximate Cause, and Cure. By John Chapman, M.D. London: Trübner and Co.

*** Dr. Chapman makes out a very pretty *à priori* case in favour of the treatment of diarrhœa and cholera by means of his spinal ice-bag. He may have hit upon an useful, and, for aught we know, the most useful means of controlling these diseases yet discovered. But we must wait for the results of experience.

Journal of the Scottish Meteorological Society for the Quarter ending March, 1865. Edinburgh: W. Blackwood and Sons.

*** There will be found in this number a translation from the *Comptes-Rendus* of some interesting remarks by M. Becquerel on the Influence of Forests on Climates.

A Dictionary of Science, Literature, and Art. Part V. Edited by W. T. Brande, D.C.L., and the Rev. G. W. Cox, M.A. London: Longman and Co.

Homburg and Nauheim: being Part of the Baths of Germany, France, and Switzerland. By Edwin Lee, M.D. Third Edition. London: John Churchill and Sons.

On the Efficacy of the Bromide of Potassium. By S. W. Duckworth Williams, M.D. London: John Churchill and Sons.

Cases Illustrative of the Pathology of Dysentery, with Remarks. By Dr. Chuckerbutty.

On the Purification of Water and Air. By H. B. Condy. London: J. W. Davies, Princes-street, Soho.

On the Os Penis of the Chimpanzee. By Edward Crisp, M.D.

The Thirty-fifth Annual Report of the Belfast District Hospital for the Insane Poor. 1865.

Second Annual Report of the Argyll District Asylum for the Insane. 1865.

Report of the Pennsylvania Hospital for the Insane for the year 1864.

The Annual Report of the Health of the Parish of St. Marylebone. 1864. By John Whitmore, M.D.

Journal de Medicine Mentale. Par M. Delasiauve. Tome 5. Nos. 5 et 6. Paris: V. Masson et Fils.

Journal de Medécine Mentale. No. 7. Juillet, 1865. Paris: V. Masson et Fils.

APPOINTMENTS FOR THE WEEK.

November 4. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

6. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Address by the President. Dr. Fredk. J. Brown, "On Epidemic Cerebro-spinal Meningitis at Rochester."

MEDICAL SOCIETY OF LONDON, 8 p.m. General Meeting for Alteration and Revision of Laws. Dr. Althaus and Mr. Leonard Clark, F.R.S., "On Degeneration of the Posterior Column of the Spinal Cord."

ODONTOLOGICAL SOCIETY, 8 p.m. Meeting.

7. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ETHNOLOGICAL SOCIETY OF LONDON, 8 p.m. Report on the Ethnological Papers read at the Meeting of the British Association in Birmingham. Capt. L. Wildman, R.N., "Notes on the Manners and Customs of the People about Little Popo, on the Bight of Benin." Dr. Cullen, "On the Darien Indians."

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

8. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

MICROSCOPICAL SOCIETY, 8 p.m. Jabez Hogg, Esq., F.L.S., etc., "Further Remarks on the Vegetable Parasites Infesting the Human Skin."

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m. Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

10. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

EXPECTED OPERATIONS.

St. Peter's Hospital for Stone.—The following Operation will be performed on Tuesday at three o'clock:—

By Mr. Armstrong Todd—Recto-vesical Fistula (two cases).

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LIEBIG'S FOOD

FOR INFANTS AND INVALIDS.

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1 lb. Tins, 1s.; 3 lb. Tins, 2s. 6d.; 6 lb. Tins, 5s. each.

*** Other Preparations, announced as improvements on, or superior forms of, Baron Liebig's Food, being sold as "Liebig's Food," the attention of the Medical Profession is directed to the following

LETTER from BARON LIEBIG.

"*To the Editor of* THE LANCET.

"SIR,—Two preparations have lately been introduced into the trade, and offered for sale, as improvements upon my 'soup for infants.' I have had specimens of these preparations sent to me, and the result of my analysis of them is anything but satisfactory. According to the directions accompanying them, it is impossible that the nourishment can be contained in them which in any way supplies the place of the mother's milk or satisfies the requirements of the infant.

"I am induced to make these remarks in order that the non-success of these so-called 'improvements' may not be attributed to the incorrectness of the principles I have inculcated,—principles which have stood the test, in Germany, during the last eight months, of many hundred cases.—I am, &c., JUSTUS V. LIEBIG.—Giessen, June, 1865.

AGENTS.

London .... Barclay and Sons.	Edinburgh.. T. and H. Smith; Raimes and Co.	Dublin .... Apothecaries' Hall.
Bath ..... Walker and Co.	Huddersfield. W. T. Bygott.	Ryde, I. W. .... H. Dixon.
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Glasgow..... Apothecaries' Hall.		

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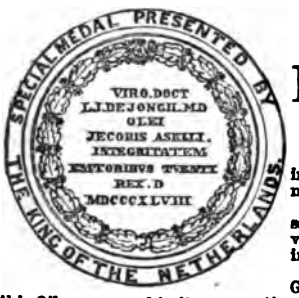

SELECT MEDICAL OPINIONS.

Sir HENRY MARSH, Bart., M.D., Physician in Ordinary to the Queen in Ireland:—"I consider Dr. de Jongh's Cod-liver Oil to be a very pure Oil, not likely to create disgust, and a therapeutic agent of great value."

Dr. BARLOW, Senior Physician to Guy's Hospital:—"I have been well satisfied with the effects of Dr. de Jongh's Cod-liver Oil, and believe it to be a very pure Oil, well fitted for those cases in which the use of that substance is indicated."

Dr. LANKESTER, F.R.S., late Lecturer on the Practice of Medicine, St. George's School of Medicine:—"I consider that the purity and genuineness of this Oil are secured in its preparation by the personal attention of so good a Chemist and intelligent a Physician as Dr. de Jongh, who has also written the best Medical Treatise on the Oil with which I am acquainted. Hence I deem the Cod-liver Oil sold under his guarantee to be preferable to any other kind as regards genuineness and medicinal efficacy."

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EARL RUSSELL sent to the College of Physicians a communication received by him from Manilla (where Cholera has been raging fearfully), to the effect that, of all remedies tried, Chlorodyne was the most effective.—See "Lancet" and "Brit. Med. Jour.," Dec. 31, 1864.

TOWLE'S CHLORODYNE.

OF KNOWN COMPOSITION.

For Formula, &c., see back Numbers.

Price per fluid ounce—1 oz., 1s. 6d.; 2 oz. 2s. 6d.; 4 oz., 4s.; and 8 oz., stopped, 8s.

SEA-SICKNESS—DIARRHŒA—DYSENTERY.

MR. TOWLE, New York, July 20, 1865, S.S. "Pennsylvania."

"SIR,—Your Chlorodyne deserves the attention of the Medical Profession. It presents peculiar claims to our notice in sea-sickness. For the voyage out, I have found it a most reliable and safe sedative for this distressing affection in many hundreds of cases amongst those of our fellow-countrymen who have left our shores for foreign or colonial climes. It is also very effective as a remedy in severe cases of diarrhœa and dysentery, and ought to be included in the scale of medicines for passenger ships. I have prescribed the Chlorodyne as prepared by you with great benefit, in persons of very weakly constitution or towards the close of lingering cases. In no instance of Professional treatment have I ever found it to be injurious to the patient.

"Very sincerely, THOS. FORSTER KER,

"Surgeon to the National Steam Navigation Company's S.S. 'Pennsylvania.'"

Sole Manufacturer—A. P. TOWLE, STOCKPORT-ROAD, MANCHESTER.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES

ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

LECTURE II.

(Continued from page 413.)

Now, the chief question with regard to this reflex or inhibitory paralysis is, does it depend on an influence exerted on the tissue of the nervous centres, or on excitation of the vaso-motor nerves of their blood-vessels, by which the latter are thrown into a state of anæmiating spasm? The latter is the view maintained by Brown-Séquard. It has in its favour the possibility of explaining on known grounds the occurrence of the paralysis; but against it there are considerations which seem to me greatly to preponderate. It is difficult to conceive that a spasm of remote origin should be limited to such a very small extent of vessels as would be contracted in some instances —*e.g.*, palsy of one-sixth nerve, ptosis of one eyelid. Spasms produced by reflex excitation tend mostly to assume a diffuse character. It is almost impossible to believe that a spasm of vessels should be so persistent as the hypothesis requires. In some instances it would be necessary to suppose that the anæmiating spasm had continued for weeks or months. Moreover, we know from the results of embolism that any arterial obstruction continued above a few days in the brain is followed by degeneration and decay of the tissue. This would certainly have occurred in some of the cases which were of long standing if the palsy had depended on anæmia of the nervous tissue. Now, even supposing the excitation to remain in operation all the time, there is no doubt that the muscular contractility would, sooner or later, become exhausted, and the contraction therefore gives way to dilatation. Bernard says expressly that reflex actions of the vaso-motor nerves are manifested by contraction of the vessels followed by dilatation. Besides, on Brown-Séquard's view the cessation of the irritation ought always to be followed speedily by cessation of the paralysis, the vessels again admitting blood into the previously anæmic part; whereas we know that in many cases the paralysis continues long, or even does not come on at all, until after the irritation has ceased to act. Not only so, but a curative effect is sometimes produced by a stimulation of a different kind, as the interrupted current, which would tend to contract vessels. Again, if it be admitted that a nervous centre may be functionally paralysed from such causes as catarrh, over-exertion, insolation, etc., a considerable argument is supplied for the view that a similar state may be induced also in a reflex manner. If, as I shall presently show, neuralgic pain is to be regarded as a condition akin to paralysis, we have in the very frequent instances of reflected pains we meet with examples of morbid action closely allied to inhibitory. In these, however, it can hardly be thought that the nervous centre affected by the primary irritation is necessarily anæmic. Moreover, it may be remarked that the same cause which gives rise to inhibitory paralysis may also produce very different effects, as tetanic spasm, which certainly does not depend on an anæmic state of the centre.

Assuming, then, that in reflex or inhibitory paralysis, both in its more and less typical forms, the essential change is in the cells of the nervous tissue itself, and not in the vessels, we will proceed to consider some other instances of this kind of disorder. Dr. Watson refers to the production of amaurosis without visible change in the eye in consequence apparently of irritation of the dental nerves, the blindness ceasing after the extraction of some teeth which had grown irregularly. He quotes from Mr. Laurence an interesting case in which the extraction of a carious tooth with a splinter of wood projecting from one of its fangs, procured the restoration of the sight of the eye on the same side, which had been entirely lost for thirteen months. Improvement in vision commenced immediately, and recovery was perfect by the ninth day. It is impossible that the complete amaurosis in this case could have been due to retinitis, as this would have certainly taken a much longer time to subside, and would assuredly, after lasting so long, have left behind irreparable damage. It is worth remarking for future reference as to the nature of neuralgia, that the amaurosis was attended with severe pain in the same side of the head and face. This I interpret as another paralytic phenomenon. Deafness is certainly a rarer result of inhibitory irritation than amaurosis, but the following case appears to be an example of it. It is related by M. Vautier, "Ann. par Jamain," 1861, p. 90. A lady, aged 54, spare and of a nervous temperament, was attacked about four months before he saw her with pain radiating into almost all the teeth, as well as into the muscles of the anterior and left side of the head. The eye of this side was in an almost constant state of lacrymation, and she had become completely deaf of this ear. She was sleepless and without appetite. After the extraction of the left wisdom tooth, which was a little loose and painful, the deafness immediately ceased, and the neuralgia disappeared. The rapidity of the change proves, I think, that the deafness was not the result of inflammation or any structural change in any part of the organ, but a nerve-disorder homologous to the existing neuralgia. It appears to me somewhat remarkable that while reflected pains are so abundantly common, anæsthesia or numbness of like origin is decidedly rare. Both in the more acute and chronic forms of paraplegia produced by cold and wet, Graves states that there is much less impairment of sensation than of motion, and the loss of sensation is never so complete as in paraplegia from disease of the spine. The much greater tendency to impairment of motor than of sensory power in almost all kinds of nervous diseases, organic as well as inorganic, is a remarkable and unexplained fact. Schuh observes that motor nerves require for the exercise of their function a much greater perfection of structure than sensory do, and the restoration of the integrity of the nerve is less easily affected.

Morbid impressions conveyed from the internal organs are well known to produce depressing effects on the nervous system, just as *per contra* impressions of an opposite kind are attended with a sense of satisfaction and "wohlsein." It is known to physiologists that the cravings of an empty stomach are much better appeased when some solid, though innutritious material, as earth or sawdust, is mixed with the liquid oil or honey on which some savage tribes are at times reduced to feed, than when the latter are taken alone. On the same ground the Canadian "voyageurs" tighten their famine girdles to the last holes when the vacuum so abhorrent to nature generally is felt and there is nothing to fill it. In a case under my own care sensory paralysis was the result of gastric irritation. A female, aged 32, had been ailing a long while. She suffered with stomach disorder of sub-inflammatory character, marked by anorexia, pain after food, and vomiting directly after eating. There was also severe headache, extending from the forehead to the back of the head, constant and not affected by position. Attacks occurred two or three times a week or oftener, in which the left side of the face, and tongue, and left arm became numb, the numbness beginning in the tips of the fingers, and extending upwards to the face, lips, and tongue. At these times her speech became thick, and continued so for an hour. Under treatment directed to relieve the inflammatory condition of the stomach the reflected disorder diminished considerably. The numbness of the thigh which occurs in some cases during the descent of a calculus from the kidney to the bladder is another instance of inhibitory anæsthesia.

More frequent than disorders of the sensory nerves are those where the intellectual centres are affected. Mr. Langston Parker says, "In some persons where the powers of the mind are naturally acute they are singularly depressed after a full meal; some lose the faculty of thinking at all, others become deficient in judgment, and in others again memory is quite lost." I was called to the case of a gentleman in the course of last year who was suffering from a sub-acute inflammatory affection of the stomach, who completely lost the faculty of memory after taking a teacupful of food, yet this patient was remarkable for his mechanical genius. A less portion of food did not impair his mind, which invariably became more powerful and clear from leeching or fomenting the epigastrium. Mr. Grantham relates a case (*Brit. Med. Jour.*, June 7, 1862) in which a man, aged 48, who died with symptoms apparently of cancer of the stomach, had been subject to paroxysms of violence, both mental and bodily, occurring more or less after dinner and supper. These exacerbations had gradually increased in severity from the commencement. The following case has been kindly communicated to me by Dr. Palmer:— Mrs. H., aged 50, has had a large family; still menstruates occasionally. Is temperate and regular in her habits, taking only two or three glasses of ale daily. Is subject to tremor of hands and tongue when fatigued or excited at any time; is

rather dyspeptic. October 28 complained of pain of back and sleeplessness and general debility, but appeared perfectly rational, saying that the cause of her not sleeping was that some actors had been sitting up late in the next house, singing and making a noise. I really thought it was true until her children assured me it was a delusion. As usual when anything ails her, she is in a tremor all over; tongue clean, pulse weak but not hurried, skin perspiring, bowels well open. Complains of pain and fulness of right side in region of liver, which she says feels swollen; the extent of dulness has increased. Is quite cheerful and happy. No cause for this attack discoverable. Ordered full stimulating diet and tr. opii ♏xv. 3tis hôris. Next day pain of back was gone; other symptoms were worse; she was weaker and sick; saw cats, dogs, fires, etc. Still answers questions apart from the delusions quite rationally. Still smiling and merry, Not an hour's sleep last night. It was determined to try the plan fully, so the doses were doubled. Next day, gets worse and worse; has more delusion, but is as happy as ever. Next day, condition same; rather more pain in right side. The plan was now changed, her meat and stimulus were discontinued, and 3 grains of calomel were given. In three or four hours after taking the pill the delusions began to abate; three or four hours later the bowels acted freely (they had been confined for three days before); very soon after she fell asleep, and slept for six hours continuously, having had practically no sleep for five nights. On awaking the delusions were all but gone, and she speedily got quite well. In this instance the depressing and disordering influence of the loaded state of the liver and bowels on the hemispherical ganglia is plainly apparent. The disorder was of the nature of a paresis, but cannot be attributed to anæmia of the centres. Dr. Tilbury Fox records a case in which symptoms identical with those of delirium tremens were brought on by exposure to cold and wet. The patient was a perfectly temperate man, aged 45, but he seems to have had an hereditary predisposition to cerebral disorder. Here also the nervous disorder was evidently of paralytic character, the functional power of the brain was evidently impaired, and the same is true of the following instance. A lady, who had been a very excellent and affectionate mother, displayed unequivocal symptoms of moral insanity. She continued in this state some time, and was at length restored by having a great number of stumps of decayed teeth extracted, which, however, did not seem to have caused any marked pain. In his excellent paper on the symptomatology of worms, Dr. Heslop describes headache and giddiness as prominent symptoms. The headache is almost constant, and sufficiently severe, without being excruciating, to render life, if not a burthen, at least unhappy. The giddiness is so severe that the patient often staggers about like one intoxicated, and when this symptom is present to a less degree there is still almost continuously a sense of confusion and insecurity which renders walking a serious effort. Both these symptoms indicate plainly a state of depression, of partial paresis, of some of the encephalic centres. The influence exerted by the uterus on the nervous centres, even on those of the highest order, is very considerable, and from the great variety of the effects produced demands specially to be noticed here. In some cases the gravid condition of the organ evidently causes derangement and depression of one or more parts of the nervous system. Thus it may produce severe frontal neuralgia, gastric hyperæsthesia of the most intense kind, chorea, hemiplegia, paraplegia, deafness, amaurosis, or a state of complete cerebral torpor in which the patient appears like a living automaton, and all indications of mind are in abeyance, or insanity. Instances of all these various forms of disorder are given by Dr. Lever in his paper in "Guy's Hospital Reports," vol. v., 1847. The histories of several of the cases seem to make it highly improbable that the manifold symptoms could depend on anæmia of the nervous centres produced by arterial spasm. This conclusion is strongly supported by the fact that the same condition sometimes acts as a beneficial stimulus, improving a naturally irritable temper, and invigorating general or particular nutritive actions. Dr. Churchill states that pregnancy occasionally relieves mental derangement, and mentions having seen a lady who was in a state of confirmed melancholia, which disappeared entirely on her becoming pregnant. Asthma sometimes disappears during pregnancy, and digestion is occasionally more vigorous then than in the unimpregnated condition. I am acquainted with one remarkable case in which albuminuria, which had existed for at least fifteen months before pregnancy, ceased during its continuance, at the same time that the health improved and the body gained flesh, which had been observed in former pregnancies. Here there can be no question that a beneficial influence was exerted on the renal plexus—an event which is the more remarkable, as the exact converse is the more ordinary occurrence.

(To be continued.)

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.

By GEORGE HARLEY, M.D., F.R.S.,
Fellow of the Royal College of Physicians, Professor in University College, and of University College Hospital.

Lecture X.

DIABETES MELLITUS—GLUCOSURIA—SACCHARINE URINE—ITS NATURE AND RATIONAL TREATMENT.

(Continued from page 492.)

Pathology.

We shall now take examples of diabetes due to *diminished assimilation*, and for this purpose select two cases from Hospital practice, for the reports and analysis of which I am entirely indebted to the combined labours of our clinical clerk, Mr. Joseph Thompson, and my class assistant, Mr. J. S. Cluff.

One male and one female patient are again selected, and that too of as near as possible parallel ages to the preceding cases of the disease by excessive formation, so that the comparison of the results may be facilitated.

Fredk. F., aged 16, admitted into University College Hospital on October 15, 1864. Father and mother both living and healthy; family history generally good; no history of phthisis. Present illness commenced about a fortnight after last Easter (March 27), when patient first noticed that he made a great deal of water—six or seven pints daily—was very thirsty and drank much. His appetite was also very great; says "he used to eat anything that came before him." Has been treated dietetically, and, his father being a butcher, has had plenty of animal food. He improved for a time, but soon fell off again, and has been gradually getting worse; is much emaciated; used to weigh 105 lbs., but now only weighs 75 lbs.; skin very rough and dry; bowels regular; chest sounds healthy; no pain, cough, or night sweats.

The diagnosis of the case being of diabetes from mal-assimilation, the patient was placed on ordinary diet, including common bread, eggs, and a pint of beer; while to improve his general health a mixture with phosphoric acid and strychnine was ordered.

The patient's temperature was noted three times a day from October 19 to November 3, and found to average 97½° F., being three degrees below the ordinary standard.(a)

November 25.—Patient looks better. Says "he feels himself much improved; is not so thirsty; and makes less water." Goes home into the country to-morrow.

The following table shows the results of the analysis.

Date, 1864.	Quantity of Urine in cub. cent.	Reaction.	Sp. gr.	Quantity of of Sugar in grammes.	Urea.	Weight in pounds.
October 21	3480	Neutral.	1040	218·00	—	75
,, 26	5457	,,	1037	286·10	—	77
,, 28	7000	Acid.	1033	280·00	—	77
,, 31	6200	,,	1034	281·18	—	80
November 4	6508	,,	1037	260·8	—	78
,, 7	6660	,,	1037	281·16	39·960	80
,, 9	6700	,,	1036	341·6	40·200	80
,, 16	6840	,,	1036	348·12	44·460	79
,, 18	5860	Neutral.	1034	322·17	41·020	79
,, 22	5790	,,	1033	246·5	49·215	79
Received urine from the country:						
December 2	6300	—	—	187·29	—	84
,, 22	5735	Feebly acid.	1035	248·8	57·35	87
1865.						
January 26	5890	Acid.	1036	294·5	44·17	90
February 22	5270	,,	1035	263·5	—	90
April 11	5580	,,	1031	134·2	40·65	90

During the first few days after the patient's admission into the Hospital the quantity of the urine was greatly diminished,

(a) Rosenstein was, I believe, the first to mention that in diabetes the temperature of the body is below normal. (*Virchow's Archiv.*) I find, however, that this is only invariably true in that form of the complaint arising from mal-assimilation.

but as he became accustomed to the change, it again rose to its average, and there remained until tinct. of cannabis Indica along with four drops of laudanum three times a day was administered (November 16), when it immediately fell 1000 cub. cent. in the twenty-four hours. The quantity of sugar eliminated also decreased, but of course, in consequence of the nature of the case, not to any marked degree. The patient, since his return to Nottinghamshire, has still continued the use of the remedy, the effects of which will be best appreciated if I quote a passage or two from the last letter he wrote to Mr. Joseph Thompson, dated April 10, 1865:—"I have sent you another sample of my water. . . I am a great deal better in health and strength, and my weight is 90 lbs. without my clothes. I am still taking Dr. Harley's medicine, and with thanks," etc., etc.

The rapid improvement which took place in this case when the diabetic system of treatment was discontinued, and the patient was put back to ordinary food, is not a little remarkable. The improvement cannot be attributed to the change of air or mode of life, for as we see it continued just the same when the lad had returned to his own home and former avocations. This is a most instructive case in more respects than one, for had the patient been treated by the ordinary routine system, the more sugar he passed, and, consequently, the worse he became, the more restricted would have been his diet; and I have little hesitation in saying that had such a line of treatment been pursued it is highly probable that ere now the case might have terminated fatally, for, as before said, at the time the lad came to the Hospital he was but a shadow of his former self, having lost 30 lbs. in a few months.

I have now to contrast a case of diabetes arising from malassimilation in a female with that from excessive formation in the lady's case previously cited. The nearest in age happens to be a very bad case—I may say a hopeless one, for the disease was much too far advanced before the girl came to the Hospital to render it probable that she will ultimately recover.

Sarah F., a milliner, aged 27, single, was admitted into University College Hospital on January 23, 1865. Has been an out-patient under Dr. Harley since December 9, 1864.

History.—Father died of "dropsy;" mother living (aged 72), has always had good health; has five brothers and sisters all healthy; no history of phthisis in the family. Patient states that until the last twelve months she has always enjoyed very good health; about this time (twelve months ago) she began to feel weak, and had a general feeling of *malaise;* she lost her appetite, and since last August (when she weighed about nine stone) has lost three stone weight. Three or four months ago, a few days after receiving a great mental shock, she first noticed that she made a great deal of water (five pints in twenty-four hours); she could eat nothing at this time, but was excessively thirsty, and used to drink large quantities of milk and toast water; lived chiefly on slops, arrowroot, &c.; took no solid food whatever; says "she has not moisture enough in her mouth to swallow." Her appetite since she has been an out-patient has materially improved. Still thirsty. Patient is tall, but very thin; skin dry, harsh, and rough; lips dry; flush on cheeks; no cough or night sweats; does not sleep well of a night, but has no pain; bowels very costive, will not act without medicine. Has not menstruated since last August, but up to that time her courses had come on too frequently—every fortnight or three weeks irregularly. Urine very light coloured; sp. gr. 1041; no albumen, but abundance of sugar.

Put on ordinary bread diet, including chop, beef-tea, milk, custard pudding, brandy ʒij.

Before coming under Dr. Harley's care the patient had been treated dietetically.

From December 12 until February 10, the patient took fifteen minims of tincture of cannabis Indica three times a day. She left the Hospital and became an out-patient again at her own desire.

Date.	Quantity.	Sp. gr.	Reaction.	Sugar.	Urea.	Weight.
	c. c.			grms. grs.	grms. grs.	lbs.
Dec. 10	3720	1037	Acid	186·00=2883·00	53·80=833·90	81½
,, 12	3642	1037	Neutral	214·20=3320·10	58·27=903·18	83
,, 16	3562	1036	Acid	178·25=2762·87	60·30=934·65	85½
,, 23	3720	1035	—	150·80=2337·40	—	—
Jan. 4	3825	1040	Neutral	161·45=2502·47	—	86
,, 7	2790	1038	Neutral	116·25=1801·87	—	—
,, 17	2945	1032	Acid	98·16=1521·48	55·95=867·22	—
Feb. 7	3088	1038	—	138·0 =2139·00	—	—
,, 10	3317	1034	—	144·50=2239·75	—	—
,, 18	2697	1039	—	134·10=2078·55	—	87
March 6	3100	1033	Acid	129·15=2001·32	—	—

Mr. Cluff informs me that in both this and the preceding case the analyses were always made on a sample of the forty-eight hours' urine, consequently the results are of double value. No one will, I think, venture to say any of these cases have been selected on account of their being favourable specimens for treatment, for in reality they were just the reverse. Both of the two last cases had been considered perfectly hopeless by their respective Medical attendants, and yet we see that under a different line of treatment they both improved. The first one may ultimately get well; the last I am not sanguine about, notwithstanding that the strength of the patient has considerably improved. When first brought to the Hospital, the girl was so weak as to require to be allowed a seat during her examination; whereas at her last visit she said she was able to walk to the Hospital, a distance of more than a mile; but even that distance seemed to knock her up. There are three bad features in her case:—Firstly, the want of appetite; secondly, the excessively costive bowels; and thirdly, the large amount of urea passed considering the small quantity of food taken.(b) These four last-mentioned cases, I think, clearly illustrate the difference between diabetes resulting from *excessive formation*, and diabetes arising from *diminished assimilation*. I have only now once more to remark that as far as dieting is concerned, the treatment of the two classes of cases is diametrically opposite. The chance of success will therefore be in direct proportion to the correctness of diagnosis.

It ought always to be borne in mind that there are such things as *acute*, as well as, *intermittent diabetes*. First, as regards the acute form of the disease.

Acute Diabetes.—Two remarkable examples of this kind are reported by Dr. Noble.(c) One case was that of a boy aged 17, who died three days after the disease was discovered, and only a few weeks after he first felt ill. The other, a young lady, who died on the tenth day after the nature of her malady had been diagnosed.

Intermittent Diabetes.—In some patients, again, the peculiar condition of body inducing saccharine urine is not in constant operation, but comes and goes at irregular intervals. A well-marked case of this kind occurred in the practice of Dr. Ramsbotham, of Amwell-street, the particulars of which he has kindly furnished to me. They are as follows:—

"A lady, aged 72, applied to me in September, 1860, in consequence of sore tongue and intolerable thirst, which at that time had existed for several weeks. The peculiar smell of the breath and increased quantity of the urine (four or five pints each day), induced me to suspect diabetes. On examination, I found the specific gravity to be 1044, obtained a deep brown colour on boiling with caustic potash, and a copious red precipitate with sulphate of copper and potash. I gave mineral acids, with generous diet, omitting, as far as possible, all farinaceous food. By the end of a fortnight the specific gravity of the urine was under 1020, and without a trace of sugar. At the end of another fortnight the specific gravity became again 1044 and the urine loaded with sugar. This intermittent state continues up to the present period. The specimen of urine for the last twenty-four hours (November 26, 1861) has a specific gravity of 1018, and does not contain sugar."

Diabetes complicated with Other Disease.

Having already seen how saccharine urine is frequently the result of other affections, I have now to point out how other diseases frequently arise from the want of stamina induced by the diabetic diathesis. This is more particularly the case with that form of affection resulting from defective assimilation, in which, to use an insurance office expression, "it is a bad life." As I said before, Prout used to say of all diabetic patients, that they perpetually stood on the brink of a precipice. That statement, though still perfectly true, has been fortunately stripped of some of its terrors, since physiology has taught us that, under judicious treatment, the life of the diabetic may be made little inferior to that of patients labouring under other chronic affections. Forewarned in this disease is truly forearmed, so if the patient neglects the warning he has but himself to blame for it.

Some few affections seem to be the direct effects of an excess of sugar in the circulation, others the indirect result of the low condition the excess induces, rendering the body unable to resist

(b) I have since heard from Mr. Clarke, of Gerrard-street, that this poor girl subsequently died while under his care, the most striking feature of her case being the impossibility of getting the bowels to act.

(c) *Brit. Med. Jour.*, Jan 17, 1863.

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the inroads of disease. Thus Mr. France has called attention(d) to the frequency with which cataract is met with in the diabetic, and relates cases of its occurrence at an early age—30, and even 19 years. The characters of these cataracts are peculiar,—Firstly, they are symmetrically developed on both sides; secondly, the lenses are increased in the antero-posterior diameter, so as to interfere with the free play of the iris; thirdly, the opacity attacks different strata of the lens at once; fourthly, the colour and bulk of the lens denotes its soft consistency; and, lastly, they do not come on till after the renal malady has existed for some considerable time. Moreover, the eye ought in no case to be interfered with, unless the patient is completely blind, as these cases are not good for operation.

The cause of these cataracts has been well explained by Dr. Richardson,(e) who was able to produce them artificially in animals. They arise from a physical cause—osmose—a tendency to equalise the density of the fluids in the lens with those exterior to it,—in fact, the imbibition of sugar and the transudation of liquid from the lens. Chloride of sodium and other saline solutions produce the same effect. They are not, indeed, true cataracts, and the proper treatment is to cure the diabetes, not to extract the lens, which will become quite right of itself when the quantity of sugar in the circulation is reduced.

Cases of diabetes are occasionally complicated with albuminuria. In some instances the kidney disease supervenes in the course of the diabetes. One such case has already been mentioned; another occurred to myself. The diabetic patient, a man forty years of age, was suddenly attacked with albuminuria and dropsy after exposure to cold and wet. The albuminuria, after a time, gradually disappeared; the dropsy likewise diminished, but the saccharine state of the urine remained. On the other hand saccharine urine occasionally makes its appearance in the course of albuminuria. This I have frequently seen; but then, the diabetic condition was not only trifling, but merely temporary, so that little importance need be attached to it. It may, however, become permanent, in which case, especially if the patient is aged, great fears for his safety are to be entertained. I shall presently relate a fatal case of this kind; meanwhile, I may mention a most interesting one which recently occurred in the practice of Dr. Eastlake. The patient, a young gentleman aged 12 years, had resided for a time at Calcutta. His urine, when I examined it, was four ounces in quantity, had a specific gravity of 1012, was highly albuminous, giving a copious precipitate with heat and nitric acid, either separately or combined, and contained a considerable quantity of sugar. The urine, when boiled with potash, became brown, and gave off the odour of glucic and melassic acid. With sulphate of copper and potash, on the other hand (it mattered not which of these solutions was added first), a fine mauve, instead of a blue, liquid was obtained. On boiling, the mauve, as is usual in those cases, changed to a purple, then to a red, and lastly, a considerable quantity of sugar being present, a precipitate of the reduced oxide of copper was thrown down.

On questioning the patient and friends closely regarding the origin of the disease, nothing more could be elicited than that his legs began to swell about two years ago, and that on his urine being tested, it was found to be albuminous, there being not the slightest history of nephritis, either with or without scarlet fever.

On carefully examining the abdomen the liver was found to be enlarged (3½ inches perpendicular to nipple), and tender on pressure. This led me to the idea that the albuminuria was secondary to the hepatic affection. As regards the sugar, I may mention that it does not seem to have been discovered until the patient came under the care of Dr. Eastlake, which was some weeks previous to our consultation.

The reason why I said that when sugar permanently appears in the urine in the course of albuminuria fears for the safety of the patient are to be entertained, is because it generally indicates a loss of vital energy, which, sooner or later, leads to a fatal termination. Dr. Quain has communicated to me an interesting case of this kind. The sugar first appeared three years after the albumen. The amount of the urine passed shortly before the patient's death being ten pints, and the specific gravity, in spite of the albumen, 1035.

It may be laid down as a rule, as I have elsewhere(f) pointed out, that the supervention of permanently saccharine urine, even when the amount of sugar is very small, in the course of *any chronic disease*, is invariably to be regarded as a most unfavourable symptom. It is not at all improbable that cases of albuminuria and diabetes may be met with in the human subject when these morbid affections are the simultaneous result of nerve lesion. The reason I think so is, that I, like every other experimental physiologist who has worked much at this subject, have occasionally induced both albuminuria and diabetes in puncturing the fourth ventricle of animals. This accident has generally happened when the injury to the nerve substance has been made too high up.

A curious case of cancer of nearly all the viscera, conjoined with albuminuria of one kidney and saccharine urine of the other, has been reported by Dr. Gibb,(g) the history of which is as follows:—

A woman, aged 55, had been affected with cancer of the uterus for four years, and three years before two operations were performed for its removal. The disease, however, returned, and destroyed the neck of the uterus, the anterior wall of the vagina, and posterior part of the bladder, the urine dribbling from this general cavity for upwards of a year. She died on October 13, the left leg being in a state of gangrene. On examination after death, the lungs, pleura, and bronchial glands were found affected with cancer, the former containing distinct tuberculous masses as well, some as large as an egg. The liver weighed four pounds, and contained a number of circular cancerous tubercles. The spleen also contained a cancerous nodule. The right kidney weighed, with the fluid contained in its dilated pelvis, seven ounces and three-quarters; the left, much smaller, weighed, with its fluid, three ounces. From both extended dilated ureters filled with urine. The urine in the larger kidney was of the specific gravity of 1026, feebly acid, and contained sugar, as proved by the usual copper and other tests; that in the left was of the specific gravity of 1015, neutral, and contained much albumen. The condition of the urine had unfortunately not been previously ascertained, as none could be obtained from the bladder during the last nine months of the patient's life.

(To be continued.)

(d) *Dub. Hosp. Gaz.*, May 1, 1859, p. 136.
(e) *Med. Times and Gaz.*, March 31 and April 21, 1860.
(f) "On Jaundice and Diseases of the Liver," p. 70.

(g) Path. Soc. *Trans.*, 1859.

ORIGINAL COMMUNICATIONS.

CASES OF OVARIOTOMY IN PRIVATE PRACTICE.

By T. SPENCER WELLS, F.R.C.S.,
Surgeon to Her Majesty's Household, and to the Samaritan Hospital.

(Continued from page 466.)

Case 3.—Old-standing Disease of both Ovaries—Pelvic Adhesions—Three Tappings—Ovariotomy—Death in Thirty-one Hours.

In January, 1860, I was consulted by a married lady, 52 years of age, whose abdomen was as large as that of a person in the seventh month of pregnancy. A large cyst on the right side extended up to the lower edge of the liver. In the centre, the upper part was half way between the umbilicus and the sternum. On the left side, a semi-solid tumour, apparently a mass of small cysts about the size of a cocoa nut, extended up to the false ribs. The fundus uteri was felt very distinctly just above the symphisis pubis. On vaginal examination, the uterus was felt to be pushed upwards and forwards by a smooth, elastic tumour, which pressed the rectum closely against the sacrum. The uterine sound passed to four inches. The uterus could be moved by it, but not easily, and the motion of the uterus did not affect the retro-uterine tumour. The catamenia were regular; clots passed occasionally, but there was no menorrhagia. Micturition was sometimes interfered with.

I found that she was married when 30 years of age, but had never been pregnant. She had occasionally slight dysmenorrhœa and leucorrhœa, but nothing of consequence. Dr. Whitehead, of Manchester, by whom she had been advised to consult me, informed me by letter that in 1857, about two years before her first visit to me, he had detected "abdominal tumefaction, a diffuse hypogastric roundness with fluctuation, and deeply behind the pubes a tumour the size of an egg, and another, apparently distinct and of large dimensions, higher up on the left side. The post-pubal tumour was continuous with a mass which occupied the hollow of the sacrum, pushing the uterus forwards. The cavity of the uterus at that time was 3½ or 4 inches in depth, and the sound,

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passed upwards, could be felt in the post-pubal tumour through the abdominal wall." The patient was under homœopathic treatment for a year, and at the end of that time Dr. Whitehead added, "I then found the abdomen much larger and the general health not so good. Seven months ago I removed by paracentesis 12½ pounds of fluid, and there has been no perceptible reaccumulation until within a few days of this date (January 17, 1860). It seems to have followed on an accession of subacute inflammatory action in the lower tumour, which was very tender on slight pressure. The fluid removed was limpid, quite colourless, sp. gr. 1005, only slightly albuminous, had no deposit, and presented nothing remarkable under the microscope."

The general health being pretty good, the patient was advised to temporise. I saw her again in May, much better in general health, but with little or no change in the tumour. She was on her way to Kreuznach, and I saw her on her return in August. Her health and spirits were improved; the tumour unaltered; but there had been no appearance of catamenia since going to Kreuznach.

I did not see her again till June, 1861, as she was on her way to the Pyrenees. There had been no return of the catamenia. If there was any alteration in the tumour, it was only in the pelvic portion appearing to have ascended a little into the abdomen. I saw her in September, on her return from Barèges and Cauterets; but as there was no re-accumulation of fluid, there was no necessity for any Surgical interference. In May, 1862, Dr. Whitehead found it necessary to tap her; but only three quarts of fluid were obtained. Great pain in the abdomen and left hip followed, with great swelling of the left leg. As this attack was passing off I went to Southport and met Dr. Whitehead and Dr. Longton there in July, 1862, to consult as to the propriety of ovariotomy. But we unanimously agreed that there was no such danger to life or suffering caused by the tumour as would render the operation justifiable in a case so unfavourable as regards the connexions with the uterus and pelvis. In September, 1863, Dr. Whitehead wrote:—"About seven weeks ago she had a violent fall forwards, which was followed by serious symptoms, and it appeared doubtful for a time if she could rally, on account of extensive peritoneal disturbance and excessive vomiting. It now appears that the sac must have been ruptured, that the effused contents are being absorbed, and the sac itself shrinking." A year later (August, 1864) she called on me on her return from Vichy. The pelvic portion of the tumour was unaltered, and I still advised delay in any Surgical interference until some urgent symptom required relief. In November, Dr. Whitehead wrote that the abdomen was larger than it had ever been. "The increase is chiefly on the right side, occupying the situation of the cyst supposed to have been burst." On December 10, 1864, I met Dr. Whitehead at Southport, with Dr. Longton, tapped this cyst, and removed seven pints of fluid. The uterus, the pelvic portion of the tumour, and the hard tumour on the left side still retained the positions described at my first examination in 1860. Considerable relief followed; but in May, 1865, Dr. Whitehead wrote—"The abdomen is larger than at any time previously. She says she feels herself quite useless; whereas without this bulk she could enjoy life and be useful. She is bent on getting rid of the burthen." She came to town, and as I was very doubtful as to the possibility of removing the tumour, Mr. Fergusson and Mr. Paget saw her with me early in June. Her account of herself and her strong desire for relief, although it was fully explained to her that the attempt to remove the tumour might fail, and the risk was well known to her, induced us to yield to her wishes, and I performed the operation on June 8. Dr. Whitehead, Dr. Ritchie, and Mr. Hey, of Leeds, were present. I had the kindest and most able assistance of Mr. Fergusson and Mr. Paget, and Mr. Clover administered chloroform. Having made an incision in the middle line, and increased it until it extended from one inch above to six inches below the umbilicus, and separated some very extensive adhesions to the abdominal wall, two cysts were seen with a deep sulcus between them. That to the left was thin and transparent; that to the right thick and opaque. I tapped the thick cyst, and several pints of thick, dark, viscid fluid escaped; then some pints of clearer fluid escaped on tapping the other cyst; and on attempting to withdraw the emptied cysts coils of intestine and layers of omentum had to be separated from the upper surfaces and from the sulcus between the cysts. This was done with very great care by the fingers without dissection. Then both cysts were found to adhere very strongly, not only to the abdominal wall on each side, but all round the brim of the pelvis, and deep into the fossa between the uterus and rectum, as well as to the posterior surface of the uterus. All these adhesions were gradually broken down; and, after emptying a cyst quite low down behind the uterus, the whole of both cysts were removed. Both Fallopian tubes were tied about an inch from the uterus, and the tumours were cut away. The end of the ligatures were brought out through the lower angle of the wound. The peritoneal cavity and pelvis having been carefully sponged out, the wound was united by seven deep sutures. Very little blood was lost—Mr. Fergusson said not more than a wineglassful in the whole operation.

The following account of the tumour is by Dr. Ritchie:—

"After the evacuation of twenty-one pints of fluid the tumour weighed about two pounds, and may be best described as a double multilocular cyst. There were three or four large loculi and many smaller ones. There were, however, no grape-like bunches of cysts projecting into any of the larger cavities. The largest cyst was capable of containing seven to eight pints of fluid, it was almost isolated, adhering to the remainder of the tumour by an isthmus about half an inch in breadth. It appeared that this cyst was, in fact, a second ovarian tumour arising from the opposite ovary, and adhering to its fellow as the result of inflammation. The cyst appeared to be simple; it was, however, marked with traces of inflammation, and it was considerably torn. In the remainder of the loculi—viz, those springing from the right ovary—were a number of dendritic growths.

"The interesting points about this tumour are,—1st. That both ovaries being diseased, dendritic formation was present. 2nd. That only one of the tumours contained those dendritic formations, the other being apparently simple."

Very little need be said as to the progress after operation, except that sufficient opium was given to relieve pain, and that she passed a very fair night. Dr. Whitehead, who remained till the next morning, was disposed with me to look hopefully towards a successful result; but during the forenoon the power of the heart began to fail, and she died thirty-one hours after operation.

An examination was made twelve hours after death, by Drs. McNab and Ritchie, who reported as follows:—"The body was still warm. A few vibices marked the abdominal wall. Rigor mortis was considerable. On cutting into the abdomen a quantity of fetid air escaped from the peritoneal cavity, and the intestines were found moderately distended with fluid. The peritoneal surface of the wound was agglutinated; even around the ligatures the wound was closed, so that there was no free communication between the abdomen and the external air. About two quarts of bloody serum were sponged out of the abdominal and pelvic cavities; there was no clot whatever. The intestines were everywhere marked with signs of commencing inflammation, vessels being minutely injected. The coats of the intestines were everywhere intact, and at the point where adhesions had been separated the coats were rather thicker than elsewhere. The intestines were glued together in a single mass by old adhesions, some of which had evidently been slightly disturbed at the operation; but there was no tearing of normal structures. The uterus was high; quite out of the pelvis. In its fundus was a nodule the size of a small plum, which had rather the appearance of scirrhus than of simple fibroid. Both Fallopian tubes were tied about an inch from the uterus. The ligature on the right side also included a part of ovarian cyst wall, which was evidently only a small portion of a large cystic tumour, most of which had been cut away. Both ureters were normally situated; but from the high position of the uterus they passed below that organ. The right ureter did not appear to have been closely attached to the cyst which was removed, as no distinct marks of ruptured adhesions could be made out.

"The lungs were healthy; the heart adhered closely over its whole surface to the pericardium, the adhesions being evidently of some standing. The heart was perfectly empty; its tissue was very friable. The muscular wall of the right ventricle was only one and a-half lines thick, the rest of the wall being made up of fat. There was no muscular tissue to be made out by the naked eye in the wall of the left ventricle. It appeared as if the whole wall, which was about a quarter of an inch thick, was made up of fatty tissue."

The remark about the right ureter was made because I had requested that special attention should be given to it, as it appeared to me at the operation almost impossible to separate the adhesions without injuring the ureter.

(To be continued.)

ROUGH NOTES OF THE CHOLERA EPIDEMIC AT THE GOVERNMENT PRISON, GIBRALTAR.

By JOHN E. GROSS, M.R.C.S.L.

The interest which attaches at the present time to the subject of cholera may, perhaps, render acceptable the following rough notes of a very severe attack of this epidemic through which the prisoners under my Medical charge have just passed.

The history of the present outbreak of the epidemic at Gibraltar is briefly as follows:—The 2nd Battalion of the 22nd Regiment arrived here from Malta on July 10, when some few cases of cholera had already occurred in the Lazaretto there, though it had not shown itself among the inhabitants. The men landed in perfect health, and were encamped on the sandy isthmus which connects the Rock with Spain, always hitherto found to be a healthy spot. Nine days after the men landed, and about fifteen after leaving Malta, the first case occurred in a soldier, and proved quickly fatal. Twelve days more elapsed before another case, when a soldier and a woman of the regiment were attacked. From this time six or seven other cases occurred among the troops up to August 15, when it broke out in the civil population. On August 24 the Spanish authorities shut us in by a cordon. This had the effect of throwing large numbers of the poor out of employment, and caused much distress, necessitating the establishment of a soup-kitchen for the distribution of food. But the worst effect of the cordon was the depression of spirits which it caused amongst the inhabitants, and an immediate increase in the number of attacks took place.

The prisoners, however, were, from their position, unaffected by these measures, and continued in unusually good health till the beginning of September, when several cases of diarrhœa occurred. There had hitherto been a most marked absence of the usual summer diarrhœa this year, and I never recollect so little sickness among the men. The first case of cholera appeared on September 6, in an old and infirm man, and proved rapidly fatal, and up to October 9, when the last death occurred, I have had seventy-eight cases, with fifty-three, or nearly 68 per cent., fatal cases. Two-fifths of these were fatal within eight hours from the time of seizure (several living only five hours). Three-fifths died within twelve hours. Of the fifty-three fatal cases, 34 per cent. occurred in old or weakly men. Eleven per cent. of the prisoners in custody at the time of the outbreak were attacked. Three relapses or second attacks occurred to patients in Hospital, already convalescent from previous attacks of cholera, and all proved fatal. I also lost two nurses (a third was attacked, but recovered), fine, healthy men, the predisposing cause in the first man being neglected diarrhœa, and in the second man depression of spirits, caused by the death of the first nurse, who was his great friend. This man had already been a nurse at Millbank through an epidemic of cholera there.

I am unable to give with certainty the exact statistics for the rest of the population on the Rock, but I believe now (October 19) there have been 1050 attacks, and 560, or 53·33 per cent., fatal cases, a proportion of about 5·25 per cent. of attacks to the total population.

The percentage of attacks to population is thus greater amongst the prisoners, and this I believe to be entirely attributable to the panic which seized the men after the first case occurred; for, in addition to their peculiar position, the anxiety and dread lest they should be seized with cholera, and never reach home again and see their friends, was so strong a predisposing cause that it required but a trifling exciting cause to develope an attack of cholera of the most virulent type. That the situation of the prison was not the great cause is, I think, proved by the fact of the great good state of health maintained by the men under ordinary circumstances. Since the epidemic of 1860 (which was a trifling one compared with this) the drains were set in order, and fever and dysentery have been unknown amongst us. The water drunk by the prisoners is from the same source as the water supplied to the troops.

The prison had been twice before visited by epidemic cholera. In September, 1855, when 24 cases occurred, of which 10, or 42 per cent., were fatal; and in September, 1860 (which I witnessed), when there were 24 cases, and 13, or 54 per cent., fatal. In this epidemic of 1860 there was much more sickness amongst the men, more premonitory diarrhœa, etc, though the cholera itself was not so severe. Since then, however, the sanitary condition of the prison has been vastly improved, and, considering the site, made as perfect as can be, as has been shown by a striking alteration in the general health of the prisoners. During the month of September, when the cholera prevailed in the prison, the weather was very uniform,—the barometer high, the thermometer 75°, not varying more than 2° in the twenty-four hours. The wind all the time blew from the East, and the upper part of the Rock was shrouded in a heavy mist,—our dreaded "Levanter," as it is called here. A dry thunderstorm, with much thunder and lightning, occurred on the night of September 4-5, and once again after a few nights, and was in each instance followed by great general increase in the number of cases. The development of ozone which must then have taken place has been supposed to have a contrary effect.

Certain peculiarities in the symptoms appeared to me to distinguish this epidemic from the former one I saw here, and also from the epidemic which I witnessed in Cambridgeshire in 1853-54.

First, and chiefly, the intensity of the poison. In the worst cases it was of a most virulent type; the patient appeared wholly prostrated; there was but slight cramp, little vomiting, and nothing like the old cholera vomit one was accustomed to see, when the patient appeared to have a force-pump in the stomach, and without any effort would fill a hand basin at once.

Secondly, in the marked presence of (to me) a new symptom—viz., most urgent dyspnœa: 55 per cent. of my fatal cases had it. A most severe fixed pain at the pericardium, and often between the shoulders, was complained of, accompanied by severe and increasing dyspnœa, not occurring after the lapse of any fixed time from the commencement of the attack. This was invariably a fatal symptom. Being, most unfortunately, without assistance during the most busy period of the epidemic, and obliged to be constantly in Hospital, I had not the opportunity I desired to make a post-mortem examination of all these cases, which presented all the symptoms of embolism. However, in the three post-mortems I made, I found in one a large, firm, white clot (the size of a large walnut) in the right ventricle, and clots of the same character in the pulmonary arteries; in the other two (one had small clots) the right side of the heart was gorged with black thick fluid blood (the left side empty), while the lungs were pale and anæmic. In many cases there was little purging and vomiting; in many no premonitory diarrhœa. In several cases the stomach appeared to have been paralysed for hours before the attack commenced, for food taken twenty-four and thirty-six hours before was rejected wholly unchanged. The collapse, too, was often great, when the stools were still fæcal. The cramps were very severe in many cases, and the perspirations profuse, but none of these symptoms appeared to bear any definite relation to the time or profoundness of the collapse. In the cases which recovered, great irritability of the stomach generally remained for some days, and nothing could be retained, the vomited matters containing much bile. I only observed the secondary fever in one or two cases. In two cases the muscles of the neck and jaw were affected by cramp, and one man was quite unable to open his mouth. Contrary to general experience, the few last cases which occurred were most rapidly fatal, and the epidemic appeared to cease as suddenly as it began.

Spasmodic movements after death were considerable in some cases, in one occurring in the masseter and facial muscles; in others in those of the extremities, much increased if the limb was touched; the hands were opened and closed, the legs raised, and the arms flexed across the chest.

If it is correct, as has been stated, that only 14 per cent. recover in severe epidemics of cholera, one consolation remains to me that my recoveries amount to 32 per cent.

The treatment I pursued was the stimulant plan, recommended by the Government Inspector who visited us in England, as in this, the third time of using it, I have been satisfied with it, and have not tried any other plan, for when the prostration was so great and the progress of the case so rapid it appeared to me that the indications were to rouse the patient, and, if possible, keep him alive, if I may so express it, while the poison worked itself off. Every other conceivable plan of treatment was employed by other Medical men here, I believe, as salines, calomel, and opium; warm baths and even bleeding by leeches I heard of. I used warmth by hot water tins and abundance of blankets, brandy and water (in some cases a wineglassful of pure brandy every fifteen minutes, which has been found useful in India), or

champagne. Either cold or tepid water to drink, as much as desired, and the thirst appears insatiable. Ice was nearly always craved for and freely given, apparently with much relief to the thirst, and in some instances to the vomiting as well; and for medicine, a teaspoonful of the following mixture every hour, half hour, fifteen or ten minutes, according to the urgency of the case:—℞. Chloroform, ♏80; camphor, gr. 80; sp. vini rect., ʒxiv.; syrupi, ʒij. M. This was the formula given by the Government Inspector, and is a good diffusible stimulant, with the advantage of being a small dose and less likely to be immediately rejected. Turpentine stupes were applied to the abdomen and calves of the legs with relief to the pain. In some cases I used lint steeped in chloroform, but the burning pain of the application appeared to be greater than was compensated by the relief it afforded afterwards, and this was also the case when the chloroform was mixed with oil.

During the period of the epidemic I had also 71 cases of choleraic diarrhœa, of which 3, or 4·22 per cent., were fatal. The patients gradually sank after some days. These cases were treated by the ordinary chalk mixture, with ammon. sesquicarb., gr. viij., and tinct. opii., catechu, and zingiber, in each dose, and occasional doses of chlorodyne. Now that the epidemic has ceased, several cases of simple diarrhœa of the most intractable character have occurred, placing the patients at last in great danger from the extreme exhaustion which the long-continued diarrhœa and incessant vomiting produces.

I have little more to add than to express my hope that these few facts may be of some service to those who may have to treat cases of cholera, and may assist those who, with greater experience and more knowledge, are endeavouring to throw some light on the nature and origin of this terrible disease.

Gibraltar.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF TRAUMATIC TETANUS TREATED WITH PURGATIVES — SUBCUTANEOUS INJECTIONS OF MORPHIA, AND INHALATIONS OF OXYGEN GAS—RECOVERY.

(Under the care of Mr. PAGET.)

PHILIP M., coal-heaver, aged 45; says that he has never suffered from any serious illness; always been temperate in his habits, but, in consequence of being out of work, has undergone some privation of late. On May 10, whilst filling a jug with water, it broke, and caused a lacerated wound of the radial side of the forefinger of the right hand. In consequence of profuse hæmorrhage, he applied for relief to a Surgeon, who dressed the finger. The wound suppurated, but was said to be doing well. On the 22nd, he found he could not move his jaws as freely as usual, and complained of uneasiness about the throat. The next day he was hardly able to open his mouth, and he felt pain in the back and loins. The Surgeon who was attending him advised him to apply for admission into the Hospital. He did not come till the 25th, when his state was as follows:—A well-nourished man, with florid complexion; risus sardonicus fairly marked. Jaws can only be separated a-quarter of an inch; not more than the tip of the tongue can be protruded. Drinks fluids with comparative ease in consequence of some of the teeth of the upper jaw being lost. Muscles of the neck rigid, especially the sterno-mastoidei; arms freely moveable; muscles of the abdomen and loins firmly contracted; lower extremities stiff; skin acting very freely; bowels confined; urine scanty, passed with difficulty; pulse 65, full, soft; respiration laboured; no cough or expectoration; complains of thirst. Says he has had no spasms, but feels great pain in the neck, loins, and lower part of the sternum.

In consequence of the extreme suffering he endured, one-third of a grain of acetate of morphia in solution was injected subcutaneously. This amount was repeated twice or thrice in the twenty-four hours for the next fortnight. Calomel, gr. iij., with jalap, gr. xij., were given at once, and followed four hours afterwards with a similar dose. These means failing to relieve the bowels, an enema was administered, which had the desired effect. Throughout the course of treatment the bowels were kept freely open, calomel and jalap, with enemata of soap and water, or the compound senna draught being the remedies employed.

The patient, in addition to the above treatment, inhaled oxygen gas mixed with about three times its volume of air. During the first day he took about fifteen gallons of pure oxygen (diluted with air). This caused some bronchial irritation, so that he began to cough and expectorate. The sputa, at first pale, frothy mucus, became subsequently highly tinged with blood, and continued in this condition for more than a week. Altogether 450 gallons of pure oxygen were consumed by the patient. The inhalation continued over the space of three weeks. Not more than forty gallons in the twenty-four hours were used during any part of the time. Great faith was placed in the oxygen by the patient. He frequently expressed himself as much relieved by it.

The bronchitic affection soon disappeared after the discontinuance of the oxygen.

During the first week of the disease, all the symptoms increased in severity, but after that they became stationary for a few days, and then very gradually subsided.

Brandy, beef-tea, eggs, and milk were given freely throughout the whole course of treatment. He was able to take fluids remarkably well. At the end of five weeks he was allowed to get out of bed for a short time daily, and was discharged cured nine weeks after the date of his admission.

ABERDEEN ROYAL INFIRMARY.

EXOPHTHALMOS—ENLARGEMENT OF THYROID GLAND — DEATH — AUTOPSY — AFFECTION OF CERVICAL SYMPATHETIC.

(Under the care of Dr. ARCHIBALD REITH.)

THE following case is, we believe, the first of the kind—at least in this country—in which disease of the cervical sympathetic has been actually demonstrated. It thus has very great value, and we give it therefore in detail, with the interesting remarks appended to it by Dr. Reith, in whose practice the case occurred.

Andrew G., aged 24, unmarried, a millworker, was admitted into St. Paul's ward on November 14, 1864.

Previous History.—Very little information can be obtained regarding his previous history. He appears to have lived alone, and to have had his wants supplied by a neighbour. His neighbour says that he has been affected with protrusion of the left eye as far back as she can remember, but that otherwise he seemed to enjoy good health. A few weeks ago he fell down in what are reported as fits, the nature of which cannot be made out. For the last ten days he has been complaining of violent pain in his head, sometimes in front and sometimes behind. The pain was so great as on several occasions entirely to deprive him of sleep. He has of late been affected with sleeplessness, independent of headache.

Present Condition.—Body well nourished; hair dark; iris blue. The left eye protruded very much, and seems to be larger than the right. The left lower eyelid is affected with ectropion, caused, it is supposed, by a burn. Right eye normal. Vision unimpaired. Nothing abnormal can be detected in any other part of the body. Tongue dry and brown; thirst not excessive. Complains of a slight headache over the right side of the brow. Bowels regular.

The above symptoms were noted in the admission-room before he was put to bed.

November 15.—This morning the right eye was observed to be nearly as prominent as the left, and in addition there was a considerable amount of effusion underneath the conjunctivæ of both eyes, which were much congested. The eyeballs were motionless, but vision was not lost, the patient being able to distinguish objects. Pupils dilated. He has complete power over the eyelids, but cannot close them over the eyes. There is no paralysis of motion or sensation in any part of the body. Hearing, articulation, and deglutition perfect. He answers questions readily but slowly, and seems to have difficulty in recalling past events. Intelligence otherwise good. He has complained very much all night of severe pain in the back of the head and of stiffness in the neck. The neck is very much swollen and œdematous behind. There is also slight œdema of the ankles. Pulse 100, full, and regular. The carotids pulsate normally. Tongue dry and brown. No eruption of any kind on the skin, which is re-

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markably pure and white. Nothing abnormal in the respiratory or circulatory systems. Urine sp. gr. 1060, dark brown, transparent, strongly alkaline, giving an ammoniacal odour and reaction when heated; no excess of uro-hæmatin; no albumen or sugar; slight deficiency of the chlorides; deep violet tint with Trommer's test.

16th.—He died to-day at 12 o'clock, just before the visit. I had intended to ask Dr. Wolfe to make an ophthalmoscopic examination of the eyes, but the patient died before opportunity was given. There was very little change in his condition, and no further examination of the chest was made. The pulse rose in frequency towards the end.

Autopsy, Twenty-two Hours after Death.—The following is the report of Dr. Beveridge, pathologist to the Infirmary:—Eyes very much protruded, the eyelids not closing over them, the right eye with effused coagulated blood under the upper eyelid; slight œdema of the neck behind, and of the lower limbs, but no tumour noticeable; cicatrices as of old scrofulous abscesses under the jaw and on the left side of the neck; veins of the scalp much gorged with blood, bleeding profusely when cut; veins of the diploë of the upper and back part of the cranium also gorged; frontal sinuses very large, extending over the roofs of both orbits, and separating the plates of bone there to the extent of a-quarter of an inch, but otherwise healthy and containing a very small quantity of mucus; veins of the surface of the cerebrum distended, especially on the upper part of the hemispheres, and on the left side; brain firm, weighing forty-five ounces, studded with bloody points especially on the left side; ventricles filled, but not distended, with clear serum; choroid plexus not injected; walls of the ventricles firm; pineal gland very firm and hard, but not altered in structure, its pedicles extended very conspicuously over the inner aspect of the optic thalamus, and blended with the crura of the fornix, close to the copora albicantia; cerebellum, pons, medulla oblongata, and spinal cord healthy; right orbit with veins much congested; a small quntity of half-coagulated, grumous-looking blood effused at the fore part of the orbit above the eyeball; eye and optic nerve healthy. Left orbit healthy; both eyeballs at the extreme fore part of the orbits; glands of the neck somewhat enlarged, hard, but not adherent, and not pressing upon the vessels or nerves; large veins nearly empty; vasa vasorum of the large arteries finely injected, especially of the common carotid; thyroid body about half as large again as usual, the enlargement being almost entirely produced by the lateral lobes extending upwards by the side of the thyroid cartilage, but not pressing either backwards or outwards, and, therefore, not pressing on the vessels or nerves, and not forming any marked external tumour. Mouth, larynx, trachea, pharynx, and œsophagus healthy. Pericardium containing about 3 oz. of pale albuminous serum, but without any trace of disease. Heart weighing 10 oz., presenting a whitish spot of small size and irregular form on the fore part of the right ventricle; right cavities filled with coagulated blood; cavities and valves healthy. Pleuræ healthy. Right lung weighing 33 oz.; left, 26 oz.; both, but especially the right, œdematous, the cellular tissue containing a considerable quantity of serum oozing freely from it when pressed; no trace of inflammation or of tubercle. Peritoneum and alimentary canal healthy. Liver large, weighing 64 oz.; lobules dark and congested in the centre, but otherwise healthy. Spleen large, weighing 20 oz., much loaded with blood; splenic pulp very friable, breaking down with the least force. Kidneys pale; right weighing 6 oz.; left, 5½ oz.; tubes and pyramids somewhat separated by whitish deposit, but to no great extent; surface smooth. Large veins of abdomen nearly empty. Sympathetic nerves of both sides, but especially of the left, large; the middle and lower cervical ganglia of the left side much enlarged, very firm, and hard. Middle cervical ganglion thick in length, varying in width from ⅛ in. to ¼ in.; lower cervical ⅛ in. long, nearly uniformly ¼ in. wide; the connecting cords correspondingly enlarged. Of the branches those proceeding from the middle cervical to the inferior thyroid artery, and those from the lower cervical to the vertebral artery, were much more enlarged than the remainder, which varied little from the normal size. Under the microscope the ganglia seemed loaded with granular matter, obscuring to a great extent the appearance of nerve tubes and cells, and resembling more than anything else the aspect of a lymphatic gland in the early stage of tubercular deposit. Dorsal, lumbar, and semilunar ganglia of nearly the natural size. On the right side the middle and lower cervical ganglia, especially the latter, were enlarged, firm, and hard, presenting appearances similar to those of the left side, but not to such an extent. The cellular tissue surrounding the ganglia of both sides was thickened and hardened.

Clinical Remarks by Dr. Reith.—The singular triple combination of symptoms constituting Graves's disease is by no means an uncommon occurrence. Interesting as it is to the physiologist as well as to the pathologist, its nature has given rise to much discussion, inasmuch as the post-mortem examinations of patients affected with it have not tended to unveil the obscurity which surrounds it. When we reflect that the essential feature of the disease is the existence in the same individual of a triad of symptoms apparently unconnected with each other—namely, palpitation, enlargement of the thyroid gland, and protrusion of the eyes, we cannot be surprised at the great difference of opinion which prevails regarding its pathology. The difficulty is not diminished by the circumstance that, in some cases, one of the above symptoms is wanting, and that the affection occurs in stout as well as in anæmic persons. But whatever may be the primary cause, it is evident that those theories which refer the symptoms to anæmia and chlorosis, to pressure on the veins by the enlarged thyroid gland, or to venereal excess and disordered sexual function, are untenable, on the following grounds:—

1. Many of the patients are neither anæmic nor chlorotic; on the contrary, some are well-coloured, and even plethoric.

2. In not a few instances, especially in men, the thyroid gland is but slightly enlarged.

3. One of the three most prominent symptoms is often absent, or but slightly manifested. Thus there may be palpitation and goitre without proptosis, palpitation and proptosis without goitre, goitre and proptosis without palpitation.

4. The symptoms succeed each other in different orders in different individuals.

5. Patients affected with debilitating discharges are not subject to this disease.

6. The cardiac murmur at the base of the heart, when present, differs from that of anæmia.

7. Considering the rarity of the disease compared with the number of persons addicted to venereal excess, we can scarcely regard such excess as having any connexion with it. There is, however, an undoubted relation between it and disturbance of the female sexual functions.

The opinion, first promulgated, I believe, by Trousseau, and now shared by Begbie, Fletcher, Laycock, etc., that the true cause of the disease is a neurosis of the cervical sympathetic nerve,—is the one most consistent with our present physiological knowledge. The striking resemblance between the effects of artificial lesion of the sympathetic and the symptoms of Graves' disease fully justifies the inquiry as to the probability of a morbid lesion of the same nerve being the *fons et origo mali*. The connexion of the sympathetic with the heart and the thyroid gland may be considered as satisfactorily demonstrated; and as excitement of the female sexual organs influences, by reflex action through the ganglionic system, both the heart and the thyroid gland, there is ample reason for assuming that a lesion of that system itself would operate directly upon the organs connected with it. I am not aware that any post-mortem examination has yet thrown light upon the condition of the sympathetic in Graves' disease, and, consequently, Trousseau's opinion, however probable, requires confirmation. The case just recorded will therefore be of interest.

The case, it will be seen, differs somewhat from the usual appearance of Graves' disease. Instead of both eyes protruding at one time, there is an interval of a good many years between the protrusion of one eye and that of the other. Again, there is no history of palpitation. It should be remembered, however, that, when the patient was seen, his memory seemed entirely confused, and evidently could not be trusted, although he was otherwise perfectly conscious of his condition. But whether palpitation existed or not, there can be no doubt that the case belongs to the same category as Graves' disease. There are some slight modifications, and its true place would probably be among the cases called "*fruste*" by the French. At the autopsy the various organs were found exactly as they have been found in Graves' disease—in a state of passive congestion. After a most careful dissection, nothing was found which would account for death except venous congestion of the viscera, and for this there was no apparent cause, unless we recognise as morbid the condition of the sympathetic. On the left side the trunk of the nerve and its two upper ganglia were considerably enlarged, while the inferior ganglion was not only enlarged, but hardened, so as to feel like cartilage. On the

right side the nerve preserved its original appearance, but its inferior ganglion was in a similar condition to that of the left side. In addition the cellular tissue surrounding each inferior ganglion was thickened and hardened. Here, then, were alterations perceptible even to the unaided senses, sufficient, I believe, to account for the symptoms observed during life. For if we admit, with most physiologists, that the simple division of the cervical sympathetic is followed by a peculiar train of effects referrable to the eye and the blood-vessels of the head, we must infer, also, that a morbid action in the same nerve will be followed by a corresponding train of symptoms. And this is what was observed in the present case. The trunk of the left nerve was enlarged, and the inferior ganglia of both sides presented such alterations that the whole substance of the nerve must have been implicated; and we can hardly suppose such to take place without serious interruption to its functions. The question then arises, What was the nature of this alteration? The microscopical appearances were far from decided, the only thing noteworthy being condensation of the ganglion cells, with an immense quantity of granular matter. It is thus very difficult to form a positive opinion. I have no doubt that the enlargement of the trunk and two upper ganglia on the left side was due to hyperæmia; but how it was induced is not at first sight clear. There was evident structural change in the inferior ganglia; but this had no special characters. Notwithstanding the apparent obscurity, I think we have sufficient data for a satisfactory, though I admit not conclusive, explanation. It is well known that syphilitic deposit may take place in the nerves and other tissues of the body of an albumino-fibroid description. This deposit, however, is not to be distinguished by its character from an ordinary inflammatory exudation, and the inference of syphilis can be drawn only from the presence of similar deposits in large quantities in other organs, the previous history, etc. In like manner a tuberculous deposit may occur, not distinguishable from an inflammatory exudation, and only assumed to be tubercular from the existence of undoubted tubercle elsewhere. This is what, I believe, took place in the above case. The ganglia were altered in structure, and the alteration presented no special character. When we consider, however, that there was extensive tubercular infiltration in the cellular tissue of the neck, that there was enlargement of the cervical glands, and that the neck from ear to ear was covered with scrofulous cicatrices, the assumption is warranted that the ganglia of the sympathetic were involved in a similar manner. There is no reason why the sympathetic nerve should not be subject to the same morbid lesions as other organs, producing effects proportional to the important part it plays in the economy, and I think that the explanation of the present case just given is, at least, fairly admissible. The nerves appear to have been involved by contact with the surrounding infiltrated tissue. This induced hyperæmia and then hypertrophy of the trunk above on the left side, and hyperæmia alone of the trunk on the right side, where the morbid action was evidently recent. The hypothesis just started receives confirmation from the condition of the sympathetic nerve and ganglia in various diseases. Rokitansky says, "There might, however, be a true hypertrophy of the ganglia, an aggregating of new ganglion cells; although of it also we lack proof from facts. I have met with a case of general emaciation combined with an eminent degree of hypochondriasis, in which the central abdominal ganglia were considerably enlarged." And, again, "More important instances of hyperæmia are found in the sympathetic system; its central ganglia became congested in the course of general acute processes of low type (dyscrasisch), which become localised in those structures to which the ganglionic nerves are distributed, especially in the mucous membrane and follicular apparatus of the intestines. The congestions of the ganglia just mentioned in the early stages of ileotyphus (typhoid), in the course of cholera and cholera-typhus are of this class." The same writer further states that exudations are not uncommon in nerves, these exudations involving the surrounding cellular tissue. The anatomical condition of the lower cervical ganglia and left sympathetic in this case, is quite analogous to Rokitansky's description, and may be set down to a low exudation, probably tubercular. This would lead us back to the blood as the ultimate cause of the disease, but it is probable that in all disorders depending on a constitutional diathesis, the blood and the vaso-motor system have a mutual action and reaction on each other, and that whether the one or the other be the primary seat of the morbid change, both come to be simultaneously affected. Begbie holds this view, but thinks that the *primum mobile* is the blood, at least in Graves' disease.

There is an apparent discrepancy in this case between the physiological and pathological results of lesion of the sympathetic. Section of the nerve causes falling in of the eye, contraction of the pupil, and dilatation of the bloodvessels; irritation of the nerve produces the opposite effects, protrusion of the eye, dilatation of the pupil, and contraction of the bloodvessels. In this patient there were two of the symptoms of irritation, proptosis and dilated pupil, with one of the symptoms of paralysis, dilatation of the bloodvessels. Belladonna exercises a similar action, causing dilated pupils (irritation) and enlargement of the bloodvessels (paralysis), although it is maintained that in the first instance the bloodvessels are contracted. Two explanations may be given of this anomaly. In the first place, the primary contraction of the bloodvessels caused by irritation of the nerve, as in the first action of belladonna, had been followed, according to the laws of stimuli, by an excessive reaction. Again, Brown-Séquard concludes, from observations made by himself, Bernard, and others, that there are two kinds of influence exerted by the sympathetic and the nervous system generally. By the one, when the sympathetic is excited the bloodvessels contract, and by the other they enlarge in consequence of a greater attraction for arterial blood developed in the tissues. Which of these two explanations is correct it is impossible at present to say. Claude Bernard endeavours to make out that there are two sets of fibres sent out from the oculo-spinal tract of the cord, one set, which he denominates oculo-pupillary, affecting the eye and the pupil, and the other, vascular calorific, specially affecting the bloodvessels, and that either set may be affected independently of the other. Reflex actions on the vaso-motor nerves cause a momentary contraction of the bloodvessels, which is followed by their dilatation. If these views be correct they may assist in throwing light on the subject, but it is evident that the cause of enlargement of the bloodvessels and consequent congestion is still obscure.

Various opinions have been entertained regarding the cause of the exophthalmos, but most writers consider it entirely the result of venous congestion and post-ocular serous effusion. This was the actual state of the right orbit in this case. But there was no such effusion, and much less congestion existed in the neighbourhood of the left eye, which was more prominent than the right. Supposing that the right eye had originally been protruded in consequence of congestion and serous effusion, it seems to me that, after the lapse of so many years, the eye would have recovered its original position in the absence of any mechanical perpetuating cause, as tumour, etc. Now, exophthalmos is often not present, or, if it is, not nearly to the same extent as here, in cases of extreme venous congestion, as in strangulation. While, therefore, congestion may assist in the production of exophthalmos, nervous influence must play a considerable part in the action, but how, has been hitherto unexplained.

Since the above was written I have seen an account of a discussion on Graves' disease in the *Société de Médicine* of Paris, recorded in the *Gazette des Hôpitaux* of March 21 and April 16, 1865. A case is mentioned where the sympathetic nerve was carefully examined. The lower cervical ganglia, especially on the right side, were much enlarged and reddened. Under the microscope the ganglionic structure was found almost obliterated, what remained of it being enclosed in the meshes of hypertrophied connective tissue, which composed the greater part of the ganglia. Predominance of the connective element and diminution of the nervous element constituted the alteration. For a full report of the case and the discussion I refer to the journal above mentioned.

INSTANTANEOUS CURE OF CORYZA.—An Army Surgeon, M. Luc, seized with very bad coryza, attended by fever, severe cephalalgia, and excessive secretion, determined upon trying the effect of inhalation of iodine vapour. The coryza first appeared at 9 a.m., and the inhalations were commenced at 3 p.m., being repeated every three minutes during an hour, each lasting about a minute. The headache was first relieved, the sneezing then occurring seldomer, the amount of secretion diminishing, and by 6 p.m. all traces of the coryza had disappeared, except a little burning sensation in the throat. Several of the officers have since tried the means with the same results. The inhalation is effected by placing a bottle of tincture under the nose, the hand supplying warmth enough to vaporise the iodine.—*Rev. Med.*, August 31.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 11.

NEW YORK AND LONDON.

We have before us a volume entitled "Report of the Council of Hygiene and Public Health of the Citizens' Association of New York upon the Sanitary Condition of the City;" and this volume contains many matters which sanitarians in England may consider with advantage.

In the first place, nothing human is perfect, and this Report shows forcibly how imperfect a popular system of Government must be in cases in which the people have not the power of understanding what is right, nor the will to do it. And so be it observed that it is not the popularly elected Municipal Government of New York, from which this Report issues, or to which the citizens look for protection from pestilence. The authorised Health Department of the Municipal Government does nothing itself, and gives no help to others. Here we have a parallel with the condition of certain London vestries, and of the popular assemblies of some towns, such as Winchester, Market Drayton, and others that we could name, where any attempt at measures of drainage and water-supply is sure to be defeated by the mob of low house-owners who call themselves the "people."

The most obvious remedy for an abuse of popular power is what is sometimes called a "wholesome despotism." Well, the despotism of an educated gentleman may be wholesomer than that of a dirty mob; still, thank Heaven! there is a better and more wholesome remedy in the hands of men of English blood; and it is this:—If by mischance or default power have got into wrong hands, guided by muddy heads, let the right hands and clear heads set to work to get the power into their own keeping. Truth will prevail in time. Voluntary associations of the best people, meetings, speeches, and publications will surely win the day, when there is nothing to be put on the other side but sordid objecting to expense.

Acting on this view, a number of the educated and intelligent citizens of New York have formed themselves into a sanitary association, and set to work in an independent and vigorous way. Just so in London, the Commissioners of the *Medical Times and Gazette*, with such Reports as those on Bethnal-green and St. George the Martyr, will put the sluggish authorities in motion. Moreover, there is a new force coming to the aid of the right side in the shape of a "Metropolitan Sanitary Association," which is affiliated to the Social Science Association, and holds its meetings at No. 1, Adam-street, Adelphi, and which is to consist of all persons interested in sanitary reform who will pay a low subscription. Its functions will be, not to lecture, but to act; to get done such things as the existing laws will accomplish, if properly put in motion; and to besiege the Legislature for amendments where the existing laws have no force.

The operations of the New York Citizens' Association have begun with the most complete and exhaustive survey of the sanitary condition of the city. This was divided into twenty-nine districts, each of which was explored by a competent Physician Inspector. So, too, we have in London abundance of local explorations by the Medical Officers of Health; but we greatly desiderate what has been accomplished by this voluntary association of New York; and that is, a sanitary map on a sufficient scale and a comparative summary of the condition of every district on one uniform plan. In London, the sanitary reports of Medical Officers of Health, although of immense value, are each independent of every other; and hence do not well admit of comparison. Luckily, the Metropolitan Board of Works of London is a body animated by a better spirit than the Municipal Council of New York; and we are in great hope that it will cause a summary of the condition of London, and of the results of the efforts already made, to be tabulated and set forth in such a lucid manner as Dr. Ballard, or Dr. Vinen, or Dr. Buchanan, or Dr. Conway Evans would well be able to do it. There are plenty of competent labourers, but they are not called upon to labour without hire.

The details revealed to us by the separate reports of the New York Inspectors are simply appalling. We really are better off in London, and need not hesitate to own it, thankfully. The labours of Chadwick, Farr, Guy, Southwood Smith, Charles R. Walsh, and all the early band of sanitary missionaries, with their legislative results—the Metropolitan and other local Government Acts—spite of shortcomings of those who ought to have worked them more energetically, are truly things to be thankful for. If the New Yorkers had such Acts as those just named, to which we ought to add the Metropolitan Buildings Act, we should not hear of half a million of inhabitants occupying "tenant houses" and cellars constructed in such a way as to be "nests" of every kind of pestilence, moral and physical. The "tenant houses" of New York are the equivalent of more crowded tenements in the heart of London, in which every room is occupied by a distinct family. Some of these in New York, as here, consist of houses once constructed for single families of the better class, of which each room is now subdivided, so as to hold one or more families; but whether this be the case or no, we hear of bedrooms with no independent outlet to the open air; houses so crowded together that the back windows open only into small filthy areas with offensive privies at the bottom; stables, slaughter-houses, cowsheds, piggeries, offensive manufactures, brothels, grog shops, garbage boxes, ill-paved streets, and a catalogue of filth that would put New York to shame, were it not for the patriotic efforts of the Citizens' Association, which has made these foul ulcers visible to the naked eye, with the intent of having them healed from the bottom. One blessed thing there is at New York, the Croton Aqueduct, with its never failing supply of cool, pure, delicious water. Would that we could have a Welsh mountain lake brought within reach of London!

We must add that the Report before us, which is published by Dr. Appleton, of New York, is embellished with woodcuts from photographs of scenes which exceed in horror anything Mr. George Godwin has ever depicted in the *Builder*.

BUTCHERY.

There is a store of facts in the history of some of our simplest words. Take the monosyllable *meat*, for instance; what a change in popular sentiment and usages it reveals! Even in the last century it maintained its original old English or Anglo-Saxon meaning, which was *food in general*. Thus, we have the word *meat* used in old writings and in proverbs to signify anything that was eaten. For instance, "One man's *meat* is another man's poison." Gruel and broth were called *spoon meats;* preparations of milk were called *milk meats;* the flesh of animals, *flesh meat;* and so on. But now there

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can be no more significant proof of one blessed change in popular ideas—one that speaks, too, of an immeasurable increase in popular comfort—than the fact that, by *meat*, ninety-nine out of a hundred English persons would understand what is truly meat *par excellence*, namely, the flesh of animals. In Scotland, still, we fear that it retains the distinctive appellation *flesh* meat, and in some parts of England is still called butcher's meat.

So necessary is flesh meat to the health of the whole population, and especially to that increasing class which is addicted to sedentary pursuits in towns, and which loses the robust digestion necessary for the chymification of bread and cheese and onions, or of the oatmeal and pease which suit the *dura messorum ilia*, that we shall do well to watch jealously all the circumstances which tend to enhance its price. A rise in the price of meat simply means that the weaker and poorer part of the population must go without;—the seamstresses and other women on fixed weekly wages, the wives and children of town artisans especially, and this class, deprived of its usual allowance of meat, will besiege the doors of our Hospitals and Dispensaries for wine, cod-liver oil, and tonics to check the scrofulous and other low diseases that will follow.

Yet few things are more wastefully handled. In the few remarks which follow, we shall confine ourselves to the public losses arising from the putrefaction of meat, owing to its being unscientifically and dirtily treated.

The first condition necessary for the proper keeping of meat in hot weather is, that the animal shall be in good health, not over-driven, and especially not bruised. Whether before or after death, blows, bruises, even rough handling are sure provocatives of putrefaction at the injured part, which putrefaction spreads over the whole piece.

A second condition is *pure* air. Of course, the air must be capable of flowing in a free current through the slaughter-house, but it must be pure. We can give the most unmistakeable proof of the influence of foul air in tainting meat. Some time ago an old rotten sewer fell in, in a street at the West-end of London; and a great excavation was made in order that the drainage might be repaired. Immediately opposite the great chasm in the street lived an unfortunate butcher; and his whole stock of meat turned green as grass. It was in cool weather, but it was impossible for him to keep any meat so long as the sewer gases came up through the chasm in front. We have known the same thing happen with milk. Of course, the necessity for pure air involves the necessity for the utmost cleanliness in all forms—such as can best be attained in a place paved with good firm stones, and lined with tiles, so that that most useful instrument, the hydropult, may be applied to wash off all impurities.

Thirdly, the flesh must be cooled; which is accomplished by hanging it up for a sufficient time in a shady place, in a free current of air. The pattern of the dairy should be followed, and ice or other artificial means of cooling be used in *abattoirs* on a large scale.

Fourthly, the meat must be *set*, which it will be if sufficiently cooled, and treated as above described. Setting is the condition of mechanical firmness which the learned call *rigor mortis*, and which depends, not only on muscular contraction, as is hypothetically held by some persons, but "in the solidification of matters in the flesh that were previously liquid."(a) This state is a physical hindrance to putrefaction, and, so long as it lasts, putrefaction is absent. It is promoted, just as the setting of a jelly is, by perfect rest, and if prevented by movement the meat will putrify quickly in hot weather. This is a curious fact, and has been arrived at by true empirical observation, while it also accords with that latest phase of philosophy which makes *motion* in various forms, the essence of heat, light, and every other kind of force. It is, as we know, found by Messrs. Brand, the manufacturers of the *liquid essence of meat*, that it travels and keeps better in hot weather if it contains sufficient gelatinous matter to set so as not to shake. It is found, besides, that if a Burgundy or South of France wine is at all *shaky*, not only that it may be acidified by a railway journey in hot weather, but that the same will result if it be even *pumped*. Hence the greatest care is taken to avoid mechanical agitation.

Now, we very well know that meat killed in the country may be treated dirtily, may be packed when warm, and sent off before it is *set*; hence the enormous seizures of meat at Newgate Market, condemned, not for disease, but for putrescence merely.

Now, the remedy for this waste is to be found in the adoption of scientific methods of killing and keeping meat. It is a great mistake to suppose that these evils exist in town slaughter-houses: the reverse is the truth. The West-end slaughter-houses have no business to exist; but they do exist, because first-rate butchers know that they can have first-rate meat in untainted condition if killed under their own eye, whilst they never can be sure of it if killed and packed by some slovenly person in the country.

There is no doubt but that the driving cattle into town to be killed, and then casting out their skins and offal, is a sad waste of time, and labour, and flesh, to say nothing of the waste of public time caused by the obstruction of the streets, and the nuisances occasionally created near crowded dwellings. But we repeat it, the excuse for these anomalies is the bad slaughtering and bad treatment of meat in the country.

We want abattoirs constructed on a large scale and under scientific management; and we are glad to see that there is a proposition for erecting one on the shores of the Thames, on the Essex side, at which foreign cattle could be detained for quarantine if necessary, at any rate be allowed to rest, and then be killed in a cool, cleanly, and scientific manner. The scheme has our best wishes. (b)

(a) Here we quote from a Report by the Medical Officers of Health presented to the Vestry of St. George, Hanover-square, at Christmas, 1858.

(b) A Letter on our Meat, and How we Treat it; being an Argument for the Establishment of Abattoirs for the Metropolis. By Fred. Field Whitehurst. London: Edward Stanford, 8, Charing-cross. 1865. Pamphlet.

DOCTRINES OF MODERN CHEMISTRY.

No. IV.

Determination of the Atomic Proportions of Bodies in the Old and in the New System.—We have stated that not only are bodies in their combining powers definitely proportioned to each other by weight, but that also in their other chemical and in some of their physical properties they are so related. These "atomic" relations, being universally admitted, do not require to be established in these articles; but since the followers of the new system of chemistry give to the elements different atomic proportions from those used by the followers of the old, the grounds upon which these proportions are determined do require our attention.

The old atomic weights have been deduced from the combining proportions of bodies by taking the smallest numbers which express in the simplest way these proportions, with the assistance, in cases of uncertainty, of the hypothesis of Dalton, that the combination of two elements the most stable under the influence of heat, etc., is that of single atom to single atom. For instance, hydrogen and oxygen, by combining in different proportions, form a very stable substance, water, and a very unstable substance, the peroxide of hydrogen. The proportion in which hydrogen and oxygen unite to form water, therefore, has been taken to be that of their atoms. Through this the oxygen atom has been decided to have *eight* times the weight of the hydrogen atom; so that H, representing an atom of hydrogen, and O representing an atom of oxygen, O is eight times as heavy as H. Again, an atom of chlorine, represented by Cl, has been made out to be thirty-five and a-half times heavier than H,—the atom of hydrogen—and, consequently,

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as thirty-five and a-half to eight in its weight compared with that of the oxygen atom, O, because thirty-five and a-half is the smallest number of parts which will combine with eight of oxygen or with one of hydrogen. Again, it has been decided that an atom of nitrogen, N, is fourteen times heavier than the atom of hydrogen, since, though it makes the *very stable* body, ammonia, a combination of *one* atom of nitrogen to *three* of hydrogen, at variance with Dalton's hypothesis, this proportion allows of the combinations with oxygen and other elements being represented in the most simple way.

The new atomic weights are deduced from a consideration of all the chemical and physical properties of bodies, and not merely from that of their combining proportions. In using the *physical* properties to determine the proportions of bodies chemically related, the assumption is made that bodies are related to each other in physical properties in the same proportions that they are in their chemical ones. However, such an hypothesis is one which admits of having its truth investigated, so that its proper use tends only to the advancement and development of the science to which it is applied. And, indeed, the results of investigations bearing upon it are so strongly confirmatory of its truth as to have raised it to the rank of an almost established law or theory. Nevertheless, there are certain facts which at present appear in discrepancy with it, and in the conduct of the modern school of chemists as regards this discrepancy we see an illustration of what we mean by a *proper* use of an hypothesis. For example, quantities of bodies in the proportions in which they are chemically related, have usually the same bulk in the gaseous state, when compared under the same temperature and atmospheric pressure: thus, a pint of chlorine gas weighs thirty-five and a-half times as much as a pint of hydrogen, and a pint of nitrogen fourteen times as much. Still, while the facts in these and many other cases are in accordance with the above assumption, there are a few in which they are not so. Now, in these cases, the hypothesis is made to give way, for the present, before the evidence of facts. In this way of using it, an hypothesis may, and usually does, aid the progress of science, and, at the same time, can never impede it. Berzelius, in his time, assumed that in their combining proportions elementary gases had the same volume, but English chemists, fairly enough, we consider, declined to adopt such an assumption because the chemical grounds for doing so then seemed insufficient, strong as they now appear.

But to return to our immediate subject, the mode of determining the atomic weights in the new system as compared with that of the old. We have asserted that in the new the atomic weights are deduced exclusively from the properties of bodies. We can only be expected, in a series of articles like the present, to go into the processes of these deductions to an extent sufficient for illustration. We set before ourselves, therefore, the work of showing the motives for selecting a few of the atomic weights in use. In doing this we shall, for the present, avoid all reference to the identity of the proportions in which bodies are chemically related with those in which they are related physically. This we feel bound to do, as far as is practicable, not only because such an identity is, to a certain extent, an assumption, but because the chemical relationship of bodies can only be properly established on chemical grounds. Gerhardt, it may be said, assumed that all gaseous bodies have in quantities chemically related the same volume; but, then, he did this only on the indications of chemical facts, and because of the great convenience of doing so in comparing and classifying bodies.

Now, let us take oxygen, and try to find out its atomic proportion to the standard body, hydrogen. How must we do it? We must trace its relations through a number of transformations, in which both bodies are concerned, because the transformations of bodies into others make up the phenomena of chemistry.

Before beginning to do so let us understand clearly what we are seeking. We know that oxygen and hydrogen, like other bodies, unite in different proportions, having a simple numerical relation. We know further that numbers expressing these proportions also express, multiplied or not, those in which they alone or together unite with other bodies. We know, further, that the chemical properties (transformation powers) of a compound body depend upon the proportions as well as upon the nature of its components. We want, therefore, to determine the relations of these proportions to each other, in order to explain the chemical properties of the body. In other words, we want to know the chemical divisibility of the quantity of one element in a body as compared with that of the quantity of another in it. This smallest comparative quantity of a body which ever offers itself for consideration in studying its chemical properties is its atomic proportional weight or simply its *atomic weight*. For instance—to take the undisputed case of nitrogen—from a consideration of the chemical properties of ammonia and its elements it has been shown that the hydrogen in any quantity of it is three times as divisible as that of the nitrogen in the same quantity. Hence the composition of ammonia is stated by all chemists to be one atom of nitrogen to *three* atoms of hydrogen. From which it follows that the atom of nitrogen is fourteen times heavier than that of hydrogen, for that is the weight of it combined with *three* atomic weights of hydrogen. What we have to seek, then, in the case of oxygen is to find out the smallest quantity compared with that of hydrogen, which it is necessary to consider in studying the chemical properties of any of its compounds.

Hydrogen and oxygen unite to form water, and from the proportions in which they do so we learn at once that the atomic weight of oxygen is either eight or some multiple of eight; but which it is this reaction does not show, for there is evidently no more reason for deducing from it the atomic weight of oxygen to be eight, than there is for taking that of nitrogen to be four-and-two-thirds because ammonia is a combination of one part of hydrogen and that quantity of nitrogen, a thing never done now.

The metal potassium reacts with water very powerfully, the results being hydrogen and caustic potash, a body containing hydrogen one part, oxygen sixteen parts, and potassium thirty-nine parts. Now, all chemists take the atomic proportion of potassium to be thirty-nine times that of hydrogen, so that they all agree that in caustic potash there is one atom of potassium to one atom of hydrogen; and they all agree, also, that the atom of this body, or smallest relative quantity ever requiring consideration in chemistry, is that which is represented as containing one atom of each of these two elements. But the chemists of the old school say that the sixteen parts of oxygen in caustic potassa form *two* atoms of it, while those of the new say that it forms but *one*. Thus, using K, O, H, for symbols of atoms, the composition of caustic potassa is expressed by KHO_2, where O stands for eight parts of oxygen, as in the old system; while it is represented by KHO where O stands for sixteen parts of oxygen, as in the new. Now, what does this latter formula mean? It means that the potassium and the oxygen united with *one* part of hydrogen are thirty-nine and sixteen parts respectively; that these are the smallest proportions in which they can combine with one chemically-indivisible part of hydrogen; and, lastly, that these parts added together give the smallest number of parts—fifty-six—which can in any way be connected in chemical reactions with one indivisible part or atom of hydrogen. That is, 1 being the atom of hydrogen, the atoms of the other bodies are:—

Potassium	39
Oxygen	16
Caustic potash	56

The formula in accordance with the old atomic weights KHO_2 means, that in caustic potash, to an atom of potassium

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and an atom of hydrogen, there are *two* atoms of oxygen, each only *eight* times as heavy as the hydrogen, making together a quantity sixteen times as heavy. We are not as yet prepared to say which statement is right, that of the old or of the new chemists; for, without going into other matters, we could not challenge certain arguments, based on reactions, which might be advanced in favour of representing one atom of caustic potash as containing *two* atoms of oxygen. All we can say is, that no one disputes that for one argument of this kind in favour of such representation many might be adduced in favour of representing it as containing only one; and besides, that other considerations go to show that the reactions which may be cited in support of there being two atoms of oxygen in one of potash are more correctly—at least, more consistently—explained in accordance with the other view.

We must defer further illustrations to our next article. But granting the truth of our statements, our readers will admit that, even so far, sixteen rather than eight appears to be the atomic weight of oxygen. They have met in this article assertions as to facts which they perhaps think may be open to dispute. We state, therefore, to meet this thought, that the facts we have here asserted are not, to our knowledge, disputed by the chemists of the old school, but that their import is disregarded, if not denied, by them.

THE WEEK.

WASTE OF FOOD.

Dr. Letheby's Report on the Sanitary Condition of the City of London, for the quarter ending September, 1863, contains a good account of the early history of the present cholera epidemic; but besides, it confirms what we have said in a previous article as to the shocking waste of good meat from putridity. Thus, in the Newgate, Aldgate, and Leadenhall markets, during the thirteen weeks of the quarter, no fewer than 143,162 lbs. of meat, poultry, and game were seized,—either because dead, diseased, or putrid. That which was "putrid" amounted to 72,893 lbs., equalling the whole quantity "dead" and "diseased." Assuming that half a pound of meat is enough for a day's supply, here we have a quantity that would have given nearly 150,000 persons a dinner wasted for want of care and skill in killing and preserving. The waste of game from this cause all over the country, during the hot months of August and September was enormous. Enormous quantities were shot for sport, and sent as presents, which had to be committed to the dust-hole as soon as they were unpacked.

MEDICAL HEROES IN NEW ZEALAND.

The *Gazette* of Tuesday, November 7, contains the following;—

"*General Order.—No.* 872.

"Horse Guards, S.W., Oct. 20.

"His Royal Highness the Field-Marshal Commanding-in-Chief notifies to the Army that her Majesty has approved the promotion of Assistant-Surgeon Manley, V.C., Royal Artillery, to be Staff-Surgeon, in consideration of the distinguished and meritorious services rendered by that officer to the sick and wounded in the field during the recent operations in New Zealand.

"By command of His Royal Highness the Field-Marshal Commanding-in-Chief,

"William Paulet, Adjutant-General."

We would add to the notice of Medical heroes which we published last week, the following information which has been sent us by a correspondent in reference to the gallant conduct of Naval Medical officers during the New Zealand war:—At the fight spoken of last week, the attack on the Gate Pah in April, 1864, where the Naval Brigade suffered so terribly, the two Assistant-Surgeons attached to it, Mr. Robert Harding, H.M.S. *Miranda*, and Dr. Norton Manning, H.M.S. *Esk*, acted nobly in their prompt attention to the wounded on the field. Mr. Harding in the act of dressing a wounded soldier *under fire*, had his own assistant, a marine, dangerously wounded in the thigh alongside of him, and had then to direct his attention to this man's safety, and have him conveyed to the rear. This in a Medical officer is considered only a matter of duty, and these services have never been mentioned in the *London Gazette*; but as Mr. Harding has resigned his commission in the Royal Navy, it is proper that conduct so deserving of imitation should not be lost to younger members of the Profession in both services.

INJUSTICE OF THE "TIMES."

Under this title Mr. James Hough, the Surgeon of Cambridge, has published an account of the treatment adopted in the case of Mr. Purkiss, the senior wrangler, who was drowned a short time ago, whilst bathing in the Cam, together with certain letters which were sent to, but not published in, the *Times* newspaper. It will be recollected that after giving a full trial to the Marshall Hall and Sylvester methods of artificial respiration, Mr. Hough, as a *dernier ressort*, performed tracheotomy. For adopting this practice Mr. Hough was criticised in the *Times*, by Mr. Lewis, the non-Medical secretary to the National Lifeboat Institution, principally on the ground, it would appear, that to perform tracheotomy is not one of the instructions published by that Society for the guidance of their boatmen and others who may have to deal with drowning persons. Letters in reply to Mr. Lewis's strictures were sent to the *Times* by Mr. Hough, Dr. Humphry, of Cambridge, and Mr. A. R. Temple, but not one of them was allowed to appear. Now, although we acknowledge that the editor of a newspaper must govern his journal autocratically, he must not govern unjustly. It is true that no newspaper criticism on a point of Professional practice would be considered worth the paper on which it is printed by sensible people. But the majority of general readers do not fall under that category, and when a damaging criticism, as in the present case, appears in a leading journal, with an official signature appended to it, we think that it cannot fail to produce an injurious effect on the person or persons attacked. To deny the means of self-defence or explanation is a real piece of injustice, and it is this charge which Mr. Hough proves against the editor of the *Times*. In his pamphlet Mr. Hough has amply vindicated the treatment he adopted, and he deserves the thanks of the Profession for his strenuous assertion of the principle that qualified Medical men in critical cases possess and are bound to use the right to act by reason and not by rule.

THE LATE PROFESSOR LINDLEY.

The death of this distinguished botanist—who, although himself not a member of our Profession, as Professor of Botany at University College and to the Society of Apothecaries has been intimately connected with Medical education for a large portion of the present century—will be felt as a personal loss by a large number of his former pupils. Dr. Lindley probably did more to diffuse a knowledge of botany amongst the educated classes of Great Britain than any of his contemporaries. Through the influence of his labours a study of the natural system of classification has completely superseded that of the Linnæan as a part of scientific training. Both as a writer and a lecturer he was a model teacher. He had the happy gift of imparting technical and often abstruse knowledge under a form which could be at once understood and remembered, and in the best days of University College as a Medical School, before the star of Liston had set, and when the names of Williams, and Cooper, and Graham were enrolled amongst its teachers, the botany lectures always attracted as large a number of eager students as the more practical courses. Most of the present generation of Medical men will remember with pleasure rising early on a summer's morning for a walk or a row to Chelsea, Lindley's lecture at the Apothecaries' garden, and breakfast afterwards in some suburban coffee-house. We

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think that the discontinuance of these lectures by the Apothecaries' Society has been attended by a falling off in the standard of botanical attainments amongst the mass of London Medical students, and it is a subject of regret that a course which will long be remembered as associated with such men as Wheeler and Lindley has become amongst the things of the past. Writing from personal recollection of Dr. Lindley, we can pay our tribute to his kindness as a man and his success as a teacher. He was always ready to explain a difficult point, and never failed to encourage a working, albeit a stupid, beginner with words of kindness and sympathy. His love of plants seems to have been born with him, and he used to relate in his lectures how, when a school-boy, he was in the habit of laying his beloved specimens in blotting-paper under the mattrass of his bed for the purpose of drying and pressing. The following sketch of Dr. Lindley's career appeared in the *Times* of Friday:—

"Dr. Lindley was born on the 5th of February, 1799, at Catton, near Norwich, where his father was proprietor of a large nursery garden. After leaving the Grammar School of Norwich, he devoted his attention to botanical science. In 1819 he published a translation of Richard's 'Analyse du Fruit,' and in 1820 a work entitled 'Monographia Rosarum,' in which he described several new species of roses. About the same period he contributed to the *Transactions* of the Linnæan Society various papers on botanical subjects. Some time afterwards he proceeded to London, where he became Assistant-Secretary to the Horticultural Society, and was engaged by Mr. Loudon to write the descriptive portion of his 'Encyclopædia of Plants,' the merit of which, as a botanical work, was entirely due to him, as was stated in the Preface. The Encyclopædia was completed in 1829. In the same year he was appointed Professor of Botany at the London University. At this period the Linnæan system was almost universally followed by English botanists. It is one of the chief merits of Dr. Lindley that he early saw the necessity of superseding the artificial by the natural classification of plants. In an essay on this subject, published in his 'Introduction to the Natural System of Botany,' published in 1830, he showed very clearly what the advantages of his system were, and thus paved the way for its general adoption in England. Two years later he published the 'Introduction to Systematic and Physiological Botany, and a Synopsis of the British Flora,' in which our indigenous plants were arranged and described for the first time according to the natural system. In a 'Natural System of Botany,' published in 1836, Dr. Lindley took new views of botanical classification, and proposed a new nomenclature for the families of plants. Ten years later, his great work, 'The Vegetable Kingdom,' was published. This work, the most elaborate that had appeared on systematic botany, gave a description of all the families of plants, and more especially of those useful to man. It gave very extended lists of the genera, and was generally recognised as one of the most important contributions which had at that time appeared on systematic botany. While engaged in writing these works, Dr. Lindley was most diligently employed, as a practical botanist, in describing new species, on which he wrote a large number of papers contributed to botanical publications. In 1841 he became editor of the *Gardeners' Chronicle*, a weekly publication, which he conducted with great ability. In 1860 he was appointed examiner in the University of London. He was a Ph.D. of Munich, and a Fellow of the Royal Society, of which in 1858 he received the medal as a reward for his services to botanical science."

Dr. Lindley died from apoplexy on Wednesday, November 1.

LORD HENRY SEYMOUR'S BEQUESTS.

Our readers will remember that the late Lord Henry Seymour left about £60,000 to be divided among the "Hospices de Paris et de Londres," and that a question was raised as to the meaning of the word "Hospice." A judgment on this point has at last been delivered in the Rolls Court, and we insert it below. It is altogether adverse to the claims of our "Hospitals" as now constituted; but we should think it will not pass undisputed. We believe that the law generally tries to interpret a testator's words by the light of his intentions and wishes, so far as these can be made out; and we believe that Lord Henry Seymour certainly did not mean to confine his benefits to "Hospices" in the narrow interpretation of that term which the Master of the Rolls has selected. Besides, it may be remembered that our oldest London Hospitals were at first refuges for the poor and aged, as well as places for the cure of the sick. As Lord H. Seymour lived abroad nearly, if not quite, all his life, it can be easily understood that he would believe that the French term "Hospices"—the will was written in the French language—would include "Hospitals," as understood by us. We fully expect to learn that the decision of the Rolls Court has been appealed against. As is but too often the case, the gentlemen of the long robe will benefit more by the bequest than will the "charities:"—

WALLACE *v.* THE ATTORNEY-GENERAL.

(*Before the* MASTER *of the* ROLLS.)

"His Honour again gave a judgment in this case, which has come before the Court in various forms as to a bequest in the will of the late Lord Henry Seymour of a sum of about £60,000 to the charitable institutions of London. The will was made in France and is written in the French language, the passage causing the controversy being 'Aux Hospices de Paris et de Londres.' The question the English Courts have to determine is, what institutions are included under the words 'aux Hospices de Londres?' After examining a number of French definitions of the word 'hospice,' his Honour held that such word, and the gift covered by it, did not include 'Hospitals' as generally understood in this country, but must be confined to such institutions as gratuitously received within their walls and permanently provided for persons incapacitated from taking care of themselves, either from old age combined with poverty, or neglected infancy, or mental incapacity, or from bodily ailments not susceptible of cure. Such a gift did not include such Hospitals as discharged their patients when cured or when incurable, such as Bartholomew's and St. George's Hospitals; or Hospitals merely for instruction, such as Christ's Hospital; or Hospitals merely for the relief of sickness, and not admitting inmates, such as Dispensaries. The gift must be construed and confined strictly within the meaning of the French word 'hospice,' and the various claimants must be marshalled accordingly."

FROM ABROAD.—OPENING OF THE PARIS FACULTY—NOTES FROM THE FRENCH CENSUS.

The Paris Faculty of Medicine opened its session, 1865-6, with the usual *éclat* on the 3rd of this month, and the Dean, surrounded by the imposing *cortège* of Professors and *agregés* in full costume, distributed the prizes for last year. He stated that the year which has passed had proved a most satisfactory one, the number of inscriptions having increased, the gratifying announcement of "*extrémement satisfait*" having been appended to the examination papers far more frequently (1 in 90) than in the previous year, while the number of students referred has diminished (1 in 7), and no less than twenty-one theses have been adjudged as worthy of rewards or honourable mentions. The noble devotion of the *externes* and the *interne* who have perished from the cholera was dwelt upon in suitable terms, and the decoration of two of the *internes* with the Star of the Legion of Honour acknowledged. Only one afflicting circumstance had to be alluded to, the death of Malgaigne, whose eloquence, energy, and devotion had so often excited the admiration of his colleagues and the students. His place is to be supplied by M. Denonvilliers, while M. Behier enters for the first time upon the duties of the chair of Medical Pathology. The death of Malgaigne having so recently occurred, there was not time for his *eloge* to be pronounced. This is deferred until next year, M. Laugier, the Professor of Clinical Surgery, on the present occasion pronouncing an *eloge* on J. L. Petit, which seems to have met with very indifferent success at the hands of a somewhat impatient auditory. The following is the distribution of the winter courses:—Medical Physics, Professor Gavarret; Pathology and General Therapeutics, Lorrain *agregé*, in place of Professor Audral; Anatomy, Jarjavy;

Medical Chemistry, Wurtz; Surgical Pathology, vacant by the promotion of M. Denonvilliers to the chair of Operative Surgery; Medical Pathology, Monneret; Histology, Robin; Clinical Medicine, Bouillaud, Guillot, Piorry, and Grisolle; Clinical Surgery, Jobert, Laugier, Velpeau, and Nélaton; and Clinical Midwifery, Depaul. Supplementary courses are to be delivered on the Diseases of Children by Roger, on Mental and Nervous Diseases by Lasègue, and Diseases of the Urinary Organs by Voillemier.

From the accounts of the census of France, made in 1861, which have just been published, we may glean a few facts of interest. The population in the 86 departments had increased between 1801 and 1864 by 9,368,251, or 34·25 per cent. for the entire period, and 0·57 per annum. The entire population of 37,386,313 may be roughly divided into two portions,—urban (or communes in which there are agglomerations of more than 2000 inhabitants), 10,789,766; and rural (the remaining localities), 26,596,547. The number of houses is returned at 7,507,047, with 41,081 in process of building. The foreigners domiciled in France are returned at 497,091, and the chief nations are represented as follows:—Belgians, 204,739; Germans, 84,958; Italians, 76,539; Spaniards, 35,028; Swiss, 34,749; English, 25,711, and Americans, 5020. With one exception, among all these foreigners the male sex much predominates, there being 135 males for 100 females, the exception being in our own countrymen, the English numbering 100 females to 79 males. Of the 37,386,313 souls, 36,490,891 are inscribed as Catholics, 802,339 as Protestants of various sects, and 79,964 as Jews. The insane numbered 42,689, and of these 15,264 (7220 males, and 8044 females) were treated at home (*à domicile*) and 27,425 (13,152 males and 14,273 females) in asylums. There were returned also 41,525 persons as cretins, 37,896 (21,636 males and 16,260 females) living in their own families, and 3629 (1771 males and 1858 females) living in asylums. Thus altogether there were 84,214 persons (43,779 males and 40,435 females) suffering from mental disease or infirmity—*i.e.*, 0·22 per cent., or 235 per 100,000 of the entire population. There were 30,275 returned as blind, of which number 4386 (14·49 per cent.) were born blind, 24·839 (82·04 per cent.) became blind since birth, and in 1050 (3·47) this particular was not specified in the returns. The number of blind of the male sex are returned at 17,371, and those of the female sex at 13,409, or as 130 to 100; but there is a discrepancy in these numbers and those given above. The deaf and dumb are returned at 21,956 (12,447 males and 9509 females, or 131 to 100). Of this number 15,910 (72·5 per cent.) were born deaf and dumb, and 5229 (23·8 per cent.) became so after birth. In 808 (3·7 per cent.) the fact is not stated. The total population of France was found to be composed as follows per 100,000:—Below 15 years of age, 27,112; from 15 to 30 years, 24,795; from 30 to 60, 37,240; from 60 upwards, 10,853 per 100,000. In 1861 the mean age of the population was 30 years 11 months for males and 31 years 6 months for females, or 31·3 months for the two sexes united. The distribution of the population according to occupation and professions is not a little remarkable. Thus, we have returned 19,873,493 (9,918,838 males, 9,951,655 females) engaged in agriculture; 11,000,027 (5,524,880 males, 5,475,447 females) in *industrie*; and 1,537,876 (715,249 males, 792,657 females in commerce. Persons following "various professions" are returned at 321,527 (156,390 males, 165,137 females); those following the "liberal professions," at 1,549,999 (960,601 males, 589,398 females); the regular and secular clergy, at 204,477 (79,584 males, and 124,893 females); and professions "not specified," 2,898,914 (1,259,764 males, and 1,639,150 females). There are stated to be only 127,940 French people established in the different European States, 15,959 of which number inhabit the United Kingdom. The entire total of French established in foreign parts amounts to 317,086.

To this statement we may add an account of the "movement" of the population of Paris during 1863, also just published. The total number of births during that year amounted to 54,077, and of deaths to 42,582, not counting 4107 still-born infants. Of these 42,582 deaths, 30,500 took place *à domicile*, the other two-fifths, 12,082, occurring in the civil or military Hospitals or in prisons, or were the result of accident or crime, as exhibited by the returns of the *Morgue*. This is an improvement upon 1862, as in that year, for 29,950 deaths, there were 12,235 in the prisons, Hospitals, or *Morgue*. Of the 54,077 children born, 27,634 were boys, and 26,643 girls, 47,215 of the children being born *à domicile*, and 6862 in Hospitals. The number born in wedlock was 38,838, the illegitimate children amounting to 15,239,—*i.e.*, a natural child in 3·5 births, or 1 illegitimate to 2·5 legitimate births. But it is to be observed of the 15,239 illegitimate children, 3708 were acknowledged at their birth, and 7304 by the celebration of marriage (the French law, like the Scotch, legitimising the children by marriage subsequent to birth) or otherwise, so that there only remained definitively 4227 infants unrecognised.

THE MEDICAL TIMES & GAZETTE SPECIAL REPORT ON THE EPIDEMIC OF CHOLERA: WITH A PRACTICAL HISTORY OF THE DISEASE.

Chapter XVI.

On the Progress of the Present Epidemic.

During the last seven days there has been, on the whole, a satisfactory decrease of the epidemic. There are no more cases at Toulon and Marseilles; and in Paris there is a daily diminution of the cases. On the 1st of November there were 92 deaths in Paris; on the 2nd, 80; on the 3rd, 75; on the 4th, 70; and on the 6th as small a number as 36.

In Naples the disease is on the increase, and 14, 15, and even 17 deaths per day have occurred.

A resident in Malta, writing to the *Times* of November 9, states that nearly 2000 deaths have occurred at Malta and Gozo during the present epidemic; and yet amongst them all not a single Protestant clergyman has succumbed to the disease, and only four Catholic priests. In the majority of cases the attacks proved fatal in from four to fourteen hours. Those who outlived this brief period generally lingered from two to ten days, to die at last of weakness or typhoid fever. The number of attacks thus far in Malta have been 2258, and of deaths 1593; but in this number of deaths those which occurred at Gozo, and among the soldiers, their wives, and children, are not included. All medicines proved useless, and in the worst cases only two out of ten escaped death. The writer of this letter remarks that in the ports of Barbary, Sicily, and Greece, where a rigid quarantine has been strictly enforced, the cholera has not as yet made its appearance; but in Malta, Beyrout, Smyrna, Constantinople, Marseilles, and Gibraltar, where for a time this precautionary measure was not adopted, the people have grievously suffered. Even with this result thus far before us, yet we cannot forget that the dangerous epidemic is still lingering on the shores of the Mediterranean; and even at this late day broken out in Naples. Where it may yet leave its victims before its final departure remains to be seen. When the cholera broke out in England in October, 1831, it remained three months, not showing itself in Scotland before January of the following year, and yet there was no quarantine, and the people of the two countries were in constant communication. The disease, then passing over to France, committed the most horrible ravages; but all this time Ireland, without any quarantine, and in constant intercourse, wholly escaped. The

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cholera, disappearing in Europe, passed over the Atlantic, and on June 8, 1832, manifested itself in Quebec, on the 10th at Montreal, and on the 21st at New York, when it appeared like a flash which no quarantine could prevent, "striking every prominent city, and causing the most terrible sufferings." As at that period there was no communication by steam between England and America, the cholera must have been carried over by a sailing vessel, if carried at all; thus showing that a quarantine, if thought of any effect, must be of three to four weeks' duration; in other words, that, for this long period, there must be a shackle on commerce, a vexatious detention to travellers, and a serious loss to shipowners, without obtaining for these any beneficial results.

THE CHOLERA IN ENGLAND.

The Registrar-General's return for the Metropolis for the week ending November 4 gives the following details:—

The deaths registered in London during the week were 1414. It was the forty-fourth week of the year, and the average number of deaths for that week is, with a correction for increase of population, 1262. The actual return exhibits an excess of 151 over the estimated number. This is partly due to the fall of temperature, which was low over the country. The deaths from diarrhœa are less numerous now than they were in September, and the number is still less as compared with the numbers returned weekly in August; but the disease was as fatal last week as it was in the second week of October. The deaths from diarrhœa in the last four weeks were 54, 62, 48, and 61. In the forty-fourth week of ten years 1855-64 the average number of deaths from diarrhœa was 26. When the 61 deaths from that complaint, of last week, are compared with the average, it will not be questioned that an epidemic tendency exists in the London population at the present time. Two deaths of children in the week are referred to cholera. They are returned as follows:—On October 30, at 5, Harland-square, Shoreditch, a girl, aged four months, "choleraic diarrhœa (one day);" and on the same day, at 81, Bessborough-place, Millbank, a boy, aged five months, "cholera infantum (fifteen hours)." Scarlatina was fatal in 59 cases, and typhus in 77. There were 177 deaths from phthisis.

The annual rate of mortality last week was 24 per 1000 in London, 31 in Edinburgh, and 24 in Dublin; 40 in Liverpool, 36 in Manchester, 31 in Salford, 26 in Birmingham, 32 in Leeds, 22 in Bristol, 23 in Hull, and 31 in Glasgow. The rate in Vienna was 26 per 1000 during the week ending the 28th ult., when the temperature was 4·2 deg. Fahrenheit lower than in the same week in London, where the rate was 24 per 1000.

In Liverpool, the births in the week were 284, the deaths 369; in Manchester, the births 260, the deaths 246; in Salford, the births 81, the deaths 65; in Birmingham, the births 223, the deaths 162; in Leeds, the births 217, the deaths 139; in Bristol, the births 125, the deaths 68; in Hull, the births 76, the deaths 46; in Edinburgh, the births 118, the deaths 104; in Glasgow, the births 326, the deaths 254; and in Dublin, the births 145, the deaths 148. There were 278 deaths in Vienna during the week ending the 28th ult.

Southampton.—Among the population of this borough (estimated to the middle of the present year at 53,001), 28 deaths were registered during the week ending last Saturday; no death was referred to cholera, but 5 resulted from scarlatina. The annual rate of mortality during the week was 28 per 1000 persons living.

The above return looks favourable; but we regret to have to state that at the moment of going to press reliable information has reached us that a fatal case of the choleraic type has appeared at Leyton, in Essex—a place about six miles from London, partly in the direction of Epping, but at least eleven miles on the Metropolitan side of the latter-named town. Leyton, like Epping, is famous for its openness, and is a constant resort of pleasure-seekers during the summer months. The case to which we refer occurred in a gentleman of position who lived at the Warren Farm, and whose name was Mr. Frederic Page. Mr. Page had barely reached the middle period of life, and was a healthy, robust man. He was seized with symptoms of vomiting and purging on Sunday last, was better on Monday, and came to town on business. He returned to Leyton on Monday night, and on Tuesday the choleraic symptoms recurred, assuming a most serious form. They continued until Wednesday evening, when death took place.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF OXFORD.

(Concluded from page 406.)

Tetanus in the New Wing of the Radcliffe Infirmary.

Since the appearance of my last report I have received from Oxford a very interesting statement relative to certain cases treated in the new wing of the Infirmary. This document, prepared by the Medical and Surgical staff, tells its own story. There have occurred in the new and splendid ward, from the time it was opened to receive patients until now, several cases of tetanus. The disease being comparatively rare in the institution, the Committee of Management have requested the Medical officers to meet and consider the causes of this increase in cases of tetanus following operation. The staff having met, drew up and presented the subjoined report:

To the Chairman of the Committee of Management, Radcliffe Infirmary.

"In compliance with the desire of the Committee of Management, expressed in their minute of Wednesday, September 20, 1865, the Medical officers of the Infirmary have met and considered the subject of the cases of tetanus which have occurred in the new accident ward, and beg to present to the Committee the following report therefrom. The Medical officers present were:—Dr. Child, Dr. Gray, Mr. Hussey, and Mr. Symonds. At the request of the Medical officers the House-Surgeon has furnished a list of the cases of tetanus which have occurred in the house during the last and the present year,—*i.e.*, since the opening of the new accident ward, and also of those which occurred during the ten previous years, from 1854 to 1863, inclusive. These are as follows:—

Cases in 1864-5.

Date.	Case.	Ward.	Result.	—
I. May, 1864.	Woman, with cancerous tumour of shoulder	Litchfield	Died	
II. Nov., 1864.	Boy, with lacerated wound of fingers	New Accident	Recovered	
III. Jan., 1865.	Man, with scalp wound	Do.	Died	
IV. July, 1865.	Man, with gunshot wound in hand	Do.	Do.	
V. Aug., 1865.	Man, with contused ankle	Old Bagot	Do.	Placed first in new ward, and removed to Bagot some days before the tetanus came on.
VI. Sept., 1865.	Man, with compound fracture of leg	New Accident	Do.	

Cases from 1854-64.

Date.	Case.	Ward.	Result.	—
I. June, 1857.	Man, with injury to wrist	Bagot	Died	Had tetanus when admitted
II. Oct., 1858.	Man, with compound fracture of thigh.	Do.	Do.	
III. — 1861.	Boy, with injury to leg	Do.	Do.	Do.
IV. — 1862.	Boy, with injury to finger	Do.	Recovered	Do.
V. May, 1863.	Woman, with compound fracture of leg	Litchfield	Died	Tetanus came on after amputat'n.
VI. May, 1863.	Boy, with disease of tibia	East Attic	Recovered	

From this statement it will be seen that the total number of cases of tetanus in the house during the years 1864-5 has been six, and that the total number in the house during the previous ten years was also six. But of the latter number no less than

three were admitted in a tetanic condition, and therefore the tetanus in their cases cannot be attributed to any defective sanitary conditions to which the patients were subjected while in the house. Of the remaining three cases, one occurred in the Litchfield Ward, one in the east attic, and one in the Bagot or old accident ward.

Of the six cases which have occurred in 1864-5, all came on while the patients were in the house. One occurred in the Litchfield; one came on in the old Bagot Ward some days after the patient had been removed thither from the new accident ward, where he had previously been placed. The remaining four cases occurred in the new accident ward. Hence it appears that while in ten years one patient only was attacked by tetanus in the old accident ward, no less than four have suffered from that disease in the new ward in less than two years.

The Medical officers cannot undertake to assign the cause of a disease, the pathology of which is so little understood as is that of tetanus, in each particular case; but at the same time they feel bound to state their conviction that some of the most generally recognised causes of tetanus are undoubtedly in operation in the new accident ward.

The evidence of their own senses is sufficient to assure them that greater changes of temperature, a greater glare of light, and more currents of air are experienced there than in other wards of the house; and such conditions are, in their opinion, calculated to set up and maintain a degree of nervous irritation very undesirable in patients suffering from severe injuries or accidents. They find also by the evidence given them by the House-Surgeon and by the nurse of the ward that complaints of discomfort and want of rest arising from these causes are habitually made by the patients in this ward."

These facts in relation to the occurrence of tetanus in the new ward at Oxford open an unexpected inquiry relative to the influence of sanitary measures on the health of the Hospital sick. If it should be true that in a Surgical ward the admission of light and air may be carried too far, what a revolution in thought will have been effected by the discovery. Let us, however, not be too hasty in coming to a conclusion. The facts let us accept as of profound interest and importance —as facts to be studied and never forgotten. But for this reason let us also be chary in drawing inferences as to cause. The Medical officers of the Radcliffe Infirmary may be correct in the conclusion to which they have been led; but certainly they have not proved their view correct by excluding all other causes of the phenomena, save and except those they have named. For instance, tetanus seems at times to take, I had almost said, an epidemic character. I knew one Surgeon whose operations it once followed for some weeks as though he carried the cause of it with him. It has been observed in other Hospitals that cases of tetanus cluster, as it were; that there is what is called a run of tetanus, and this independendently of any possible idea of too much of air and of light as causative agents. Here I leave the question, trusting to experience for the elucidation of a difficulty as novel as it is startling.

OTHER MEDICAL CHARITIES.

The Warneford Lunatic Asylum.

The Warneford Lunatic Asylum is situated at Headington, a little distance from Oxford. The idea of founding this institution, which is intended "for the care and cure of insane persons, wheresoever resident, having no title to parochial relief," was first broached in the year 1813 by the Rev. John Cooke, D.D., of Corpus Christi College. The foundation-stone of the building was laid in 1821, and the house was opened in 1826. The trustees of Dr. Radcliffe were amongst the first to support this new undertaking, and for a time the original name given to the Asylum—"the Lunatic Asylum in the vicinity of Oxford"—was changed into the title, "the Radcliffe Lunatic Asylum, Oxford." In the year 1843, the late benevolent Dr. Warneford, who had always been a liberal supporter and active patron, conveyed to the treasurer a freehold estate in the county of Sussex worth £1000 per annum. Thereupon the Asylum was re-christened the "Warneford," and under that title it has since been incorporated by royal charter.

The Asylum is capable of receiving 60 patients; 30 males and 30 females. The non-restraint system is carried out in the fullest degree, and with the happiest results. On the female side there are playgrounds most tastefully arranged, and on the men's side a large piece of meadow land is placed entirely at their service for games and exercises.

The cost of each patient per head averages 19s. 6d. per week. The income of the Asylum exceeds the expenditure, and every year considerable sums are set aside as surplus, and are invested for the future extension of the institution.

The Warneford Asylum is under the experienced and able superintendence of T. Allen, Esq., under whose artistic, not less than Professional, skill improvements many and varied have been carried out of late years. I have visited few places with more pleasure than this establishment.

Oxford Medical Dispensary.

The Oxford Medical Dispensary has been established fifty-eight years, and relieves about 1350 cases of sickness annually. There is a lying-in charity connected with the institution. J. Godfrey, Esq., is the assiduous and benevolent Surgeon and Accoucheur, and S. Symons, Esq., is Consulting Surgeon. I have no return of the details of the practice of the charity.

The Lying-in Institution.

The Lying-in Charity is for the assistance of poor married women. None but married women are considered as objects of the charity, and these are not relieved if they are labouring under any infectious disease. No woman also can be recommended to the charity for her first child. The Institution was founded in 1809. Edward R. Owen, Esq., F.R.C.S., is Surgeon to the Institution.

In my previous articles I have reserved my remarks on the present sanitary condition of Oxford, and on the position and prospects of the city as a national school of education in Physical science. In both these respects Oxford is, as was noticed in speaking of her Radcliffe Infirmary, in a transitional state. What ancient institution that has still the innate vigour of the Saxon race in its blood, is not now passing from some phase more or less important to some other more or less valuable to the State? In no institution, and in no respect, is this course of events more instructive than it has been in this University with respect to the topics above named.

ON THE SANITARY STATE OF OXFORD.

This subject has been well investigated at various periods, and by several hands. The cholera epidemic of 1832 appears to have operated somewhat in the way Lord Palmerston indicated in one of his well-known and characteristic speeches. It set the good people of Oxford to active removal of removable evils; not that their activity has been other than intermitting. From 1832 to 1865 is a period longer than one generation of man can ordinarily claim; and probably there are in Oxford only two or three Practitioners living who served in the first cholera epidemic. Be this as it may, during this period the great science of preventive medicine has gradually been developed, and has shed its local light in Oxford through the writings chiefly of Mr. Ormerod—a pupil, by the way, of Arnold's, and a rare man in his Profession—of Dr. Greenhill, now of Hastings, Mr. Allen, Dr. Acland, the present Regius Professor of Medicine, Mr. Rowell, Mr. Hester, the Town Clerk, and others. Through these authors much information has been directly and indirectly kept before the Oxford public. It was needed. An old monastic town, enclosed in lofty walls, with promenades, and gardens, and quadrangles, afforded opportunity for the overcrowding the population, and the concentration of cesspool influences in perfection. There must be many time-hallowed spots, known or unknown, where the dirty infiltration of centuries is, excepting in older and dirtier Continental cities, unsurpassed.

From Chadwick to Simon and Rawlinson, reformers have expended an almost iconoclastic zeal against these abominations. Oxford, true to her ancient colours, grimly and long resisted the ardour of the sanitary propagandists. But all contests have an end. At the moment we write the Royal Commission for investigating the state of our rivers, and for reporting on the evils which exist, and the remedies which are required in respect of the navigation, the floods, and the purity of the streams, is now sitting at Oxford; and, moreover, plans for the complete drainage of the city and its districts are in the hands of Mr. Bazalgette. The admirable Local Government Act is in force, the old local acts are abolished. Money for the construction of permanent works can be raised on mortgage, a necessary help till lately unallowed by law, and some of the ablest minds in the University and city are engaged in the endeavour to place the district in the best condition which modern sanitary engineering can devise. The change was needed. At least 5 per 1,000 pre-

ventible deaths have recently occurred there, if we accept the last calculated estimates on that score. Cellars in the low parts of the town were always flooded when the river rose above its banks. The diseases consequent on damp and poor dwellings are still rife. No complete system of drainage has existed, and there has been no power to compel it. Cesspools were dug in the gravel or in the clay, as the case might be; indeed, they are dug by small speculators in poor tenements to this day; lastly, the water supply, in the majority of poorer houses, has been from pumps drawing from wells, any of which might be contaminated at any moment with the utmost facility.

As we have said, all evils have an end; and shortly these ancient modes of life will be counted among the things of the past.

Before we quit this subject, it is worth while to record that the Oxford Board of Guardians has acted of late with judgment and liberality in its Medical management of the poor. Work formerly done by one Medical officer is virtually divided between two, and all medicines are furnished by the Board, which provides, moreover, a Dispenser and Dispensary. The harrassing work of "compounding" is, therefore, no longer part of the duties of the Union Surgeon at the close of a laborious day; and there need be no stint in the issue of any requisite drug. It is said that the advantage of this arrangement is already apparent. It ought to be adopted in every union unless impracticable from the nature of the district.

There are in Oxford, besides the Infirmary, the Dispensary, and the Lying-in Institution, a Penitentiary, in which cases of disease are treated by Mr. Freeborn; and a District Workhouse School—institutions all bearing on the health of the mass of the population.

How far these institutions have expansive power to meet the influx of the 6000 or 7000 souls that are expected to immigrate with the Great Western Works into a new artisan suburb remains to be seen. But there can be little doubt that the energy of this intelligent class of persons, and the zeal of the resident members of the University and of the citizens at large, are fully able to cope efficiently with this or any other mode of development of the population that may occur in a thriving and populous city. Indeed rumours are already heard of attempts to follow, through the action of joint-stock companies, the famous examples of Mulhouse and Saltaire in the arrangements for housing the carriage builders who have been the subject of controversy in the journals.

Value of Life in Oxford.

Average Annual Mortality in Oxford from All Causes at Different Ages to 100 *Living, during the Ten Years* 1851-60.

Ages.	Males.	Females.
All ages	2·146	1·997
Under five years	7·531	6·571
Five to ten years	·960	·841
Ten to fifteen years	·476	·441
Fifteen to twenty years	·503	·580
Twenty to twenty-five years	·500	·673
Twenty-five to thirty-five years	1·036	·830
Thirty-five to forty-five years	1·318	1·255
Forty-five to fifty-five years	2·424	1·660
Fifty-five to sixty-five years	2·854	3·143
Sixty-five to seventy-five years	7·124	6·281
Seventy-five to eighty-five	13·108	11·167
Eighty-five and upwards	40·080	33·333

Average Annual Mortality in Oxford from different Causes, to 100 *Living, from* 1851 *to* 1860.

	Males.	Females.
All causes	2·146	1·997
Typhus	·077	·067
Cholera, diarrhœa, and dysentery	·131	·146
Other zymotic diseases	·296	·227
Cancer	·036	·062
Phthisis	·320	·270
Scrofula, tabes mesenterica, and hydrocephalus	·095	·087
Disease of brain	·199	·162
Disease of heart and dropsy	·091	·123
Disease of lungs	·325	·308
Diseases of stomach and liver	·104	·111
Diseases of kidneys	·039	·015
Violent deaths	·068	·032
Other causes	·365	·387

Recreation grounds are not wanting. An enthusiastic clergyman, Mr. Gresswell, has the ambition of draining a vast meadow, known as Port Meadow, and of surrounding it by ornamental walks, against the wish of the ancient freemen, the proprietors, who once threatened in vain to deter his philanthropy by an *emeute*. This ground will abut on the Great Western Works. The physique of the more aristocratic students is not likely to fail for want of appreciation on their part of the advantage of bodily recreation. These hunt, play cricket and football, swim, pull in their boats, perform gymnastics, and erect racquet courts with an alacrity calculated to dispel the softer idleness of the gambling-table and wine party, even though the sport may interfere with the more self-denying exercise of nervous force which might be expended on literature or on science. But with this we do not complain; and, as sanitary observers, we hail with gratitude the endeavours of those who hold the physical development of a people to be as much an object of national interest as is the promotion of book learning; who desire in one of our seats of national education to unite, if it may be, mental and bodily vigour in our youths; who would dispel the old and silly fallacies that learning is to be found only beneath a stooping gait, a negligent exterior, or among morose and unpractical scholars; and that elasticity of spirits and boyish energy are the signs of an uncultivated and frivolous mind.

Oxford as a School of Medicine.

The last point on which we have space to touch is Oxford as a school of science. Here, again, all is change and progress. Without any disparagement to those who have promoted the study of physical science in Oxford, from the time of Boyle to the days of Powell, Buckland, and Kidd, it is certain that till after the middle of this century—that is, till fifteen years ago—there was no united, systematic attempt to make science, as such, part of the general education of the Oxford youth, or to provide them with that which is essential for success in it, the means of practical instruction.

When, indeed, some of the Oxford authorities set themselves with seriousness to this task it was no easy one. The Convocation, who hold the purse strings, were not only averse to change in the character of the studies, but were generally unacquainted with the nature of the science which it was proposed to incorporate. They, therefore, honestly, but in too many cases blindly, resisted any attempt to give activity to dormant professorships, or to studies whose worth they doubted and whose influence they feared. A sharp contest ensued between those who, believing in the past alone, dreaded the future, and those who, trained in critical studies, trusted the God of nature to care for His own, assured that He who made preserves, and that His works are part of His Word to man. Slowly the newer conviction worked its way. With that practical sense which our countrymen so eminently possess, two persons, among many others apparently as little likely to aid the movement as could have been named, and who differed in their own theological departments, the Reverend Dr. Cotton (the Vice-Chancellor) and Dr. Pusey, each supported the vote for the erection of the well-known Museum. Thenceforward all went with comparative smoothness. Though every money vote was pertinaciously contested, still not noiselessly but "slowly the palace grew," and ten years ago a building appeared furnished, according to the several views of the professors, with practical appliances of scientific study, more or less perfect, in most of its departments. Mathematics, astronomy, geology, physics, chemistry, mineralogy, zoology, anatomy, physiology, Medicine found a common home, with a common library of reference, generously provided by the Radcliffe's trustees. I need not, indeed cannot, enter into the details which would be necessary for describing in full the arrangements and intentions of this edifice, where Brodie, Phillips, Rolleston, Donken, Acland, Henry Smith, Westwood, and other well-known men carry on their instructional or scientific labours. I can only say a few words on the scope which the institution seems to have in its relation to national or Medical education.

The authorities of the University appear to have bestowed much attention upon the subjects which they shall endeavour to teach, and on which they shall hold examinations. They felt apparently that what they undertook they should strive to execute with efficiency, and what they could not do well they determined not to attempt. As regards the Medical Profession this principle was of primary importance. All the discussions that have taken place in the last few years have served to show more and more that while our great metropolitan Hospitals could, under a sound educational system,

treat with efficiency all the practical parts of the art of healing, their success, such as it is, is diminished by the want of early classical and scientific training in the students that flock to them. Oxford has been aiming to supplement this Professional and national want by reducing the length of residence, by diminishing expense, and by increasing the means of scientific study. What, therefore, it is so improper—indeed, so impossible—to obtain at a Hospital, an education in Arts and a preliminary rearing in Natural Science, is now put, at Oxford, within the reach of those who can spare the time for a University course.

With this brief sketch I conclude my notice of the ancient seat of learning, Oxford; a University which has been identified, in popular esteem, sometimes fairly, sometimes most unfairly, with obstruction and bigotry, but which has of late years shown, by the conduct of her residents, if not by the mass of her outside voters, a stern determination to mark the educational wants of the youth of England, and, by liberal measures and prudent relaxation of her older restrictions, whether of training within her walls or examinations beyond them, to earn, as far as in her lies, the continued confidence of her country.

REVIEWS.

Contributions to Dermatology, No. III.: On Psoriasis and Lepra. By T. McCall Anderson, M.D., etc., Physician to the Dispensary for Skin Diseases, Glasgow. London: John Churchill and Sons. 1865. 8vo. Pp. 65.

The English Medical Profession has not yet as a body recognised completely the great advantages of the pathological over the anatomical classification of diseases of the skin.

We feel that we owe so much to Willan and Bateman, that we are unwilling to exchange their classification for another which at first sight appears less simple, which may possibly be soon superseded, and which we see to be modified to suit the views of individual observers.

As we become more acquainted with the merits of the rival systems, we perceive, however, that, instead of being more complicated, the natural classification is by far the simpler of the two; we see the absurdity of dissociating in our minds morbid anatomical appearances produced by similar causes, running a similar course, requiring a similar treatment, and very often proving mutually convertible. We are delighted to find that it is possible to get quit of a number of diseases and hard names; that it is no longer necessary to describe a case as a curious compound of eczema, impetigo, pityriasis, erythema, and lichen, but simply as a case of eczema, with varying elementary lesions; that psoriasis and lepra are no longer accidentally associated in our minds, but that the latter is a stage of the former; that Sycosis, Herpes tonsurans, and Herpes circinatus are really identical. We have not the slightest doubt that in a few years the anatomical classification of skin disease will be as entirely superseded by the pathological as the system of Linnæus was replaced by that of De Candolle in the classification of plants. When the change has been effected we shall not, it is true, have a perfect classification, but we shall have, at least, one which tends to perfection.

From the first Dr. Anderson has been a staunch supporter of a classification of skin diseases based as much as possible upon their nature and causes. A pupil of Bazin and of Hebra, he brought to this country views which were at first distasteful to his Medical brethren, but which have since been very generally accepted. He was the first in this country to show that herpes tonsurans, herpes circinatus, and sycosis parasitica are all varieties of one disease, due to the presence of one parasite — the tricophyton. His classification of eczema, which was published in the second number of his "Contributions to Dermatology," is more perfect than that of Hebra in that it includes the *eczema rimosum* (*eczema fendillé* of the French) and it has been accepted by the highest authorities. It was, therefore, with peculiar interest that we opened the pages of Dr. Anderson's third volume; nor have we been disappointed.

The book before us is an exhaustive little treatise, carefully written and simply expressing the results of experience. It is invaluable both to the Practitioner and to the student. As frontispiece there is a well-executed plate of a variety of psoriasis with which we have ourselves met, and to which (from its resemblance to rupia) Dr. Anderson has given the name of "psoriasis rupiodes."

In the work itself it is shown how psoriasis punctata, guttata, nummularis, inveterata, and universalis, are advancing degrees or stages of the disease; while psoriasis circinata (lepra) and psoriasis gyrata are declining stages of the same.

We do not altogether agree with Dr. Anderson in the views which he has expressed on the etiology of psoriasis.

He rejects Hardy's theory of the existence of a dartrous diathesis, while it certainly appears to us that that diathesis is as well marked as any other.

He starts, too, a theory which will at first appear strange:—"While the constitution of the patients (suffering from psoriasis) is generally sound, a careful study of the cases under my care has led me to the conclusion—one which, I am aware, is at variance with the generally-received opinion—that they are not infrequently debilitated."—P. 13. Now, we remember hearing Hebra talk of his "psoriasis-enjoying Jews," and we have so often been struck with the fact that psoriasis, unlike most other eruptions, is associated with robust health, that we are unwilling to alter our creed without a very good reason. It may be, however, that the nervous exaltation not infrequently met with in conjunction with real debility may favour the outbreak of the affection.

The chapter on diagnosis is excellent, but the best chapters in the book are those on treatment. For the constitutional treatment Dr. Anderson places faith only in arsenic, cod liver oil, and alkalies. He considers that cod-liver oil, next to arsenic, but in a different class of cases, is the most efficacious. It is not astonishing that this should be the case if Dr. Anderson's theory of causation is correct. It is, however, in distinct contradiction to the doctrines of Hebra. The local treatment varies according to the chronicity of the attack. If there is much irritation, emollient baths or unguents are ordered, or general or local hydropathic packing is had recourse to. If the disease is more chronic, the thick imbricated scales are to be scraped off, and tarry preparations applied. If the parts affected be exposed, then, to avoid discolouration, the tar is to be substituted by other preparations, as soft soap or mercurial ointment. If all these means fail, the patches may be blistered; and finally, if the malady or patient prove intractable, one of the sulphurous or saline spas may be recommended.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

October 25.

The report of the health of the town for the past quarter is not very encouraging. The death-rate has been equal to 33·8 per 1000 per annum, against 31·52 during last quarter, and the total number of deaths (3997) is an increase of 259 on the average, for the same quarter, of the last ten years. Children under 5 years of age constitute 52 per cent. of the whole. Deaths from zymotic diseases were less than during the corresponding part of last year. Typhus, infantile fever, diarrhœa, and scarlatina, however, were in excess, and the diminution in deaths from this class of disease is due to the decrease of small-pox, which, in the previous three months, occasioned 140 deaths, or 13·8 of those from zymotic causes, but, in the past quarter, accounted for only 43 deaths, or 2·9 of fatal zymotics. Typhus had fewer victims than in the past quarter by 73, but more by 51 than during the corresponding period of 1864. Diarrhœa has been shockingly fatal, the deaths from this cause having been 613, against 120 in the June quarter; of these, 562 were under 2 years of age. Comparing the northern and southern halves of the town, as in my letter for August, the contrast between the mortality in them from this cause is very great, being 405 in the north, against 197 in the south. A table is given showing the streets where four or more deaths occurred in individual houses from diarrhœa; and I was surprised, on adding up the numbers of these ill-fated houses, to find that 102 of them were front houses, and 62 only court houses. Comparing the mortality from all causes in the two divisions of the town, the north again comes out badly, having had 613 more deaths in it than the south had.

The magistrates are carrying out the laws for the prevention of the sale of diseased meat with considerable vigour. Two butchers were brought before them who had bought a cow, literally a "dead bargain," for the poor beast had succumbed to an attack of Rinderpest, and, under the circumstances, the owner of the deceased kindly sold the carcase for £2 7s.

instead of from £12 to £14, which would have been the price had the beast ended her life in good health. To save appearances, the throat of the animal was cut, and it was sent to a slaughter-house to be dressed. Here it was pounced upon by the inspector, the men were brought up, and, to their great amazement, committed to gaol for three months. Next, a farmer from Cheshire was charged with selling meat in a state unfit for food. The inspector seized the carcase of a calf at the abattoir, and, seeing that it was "green," or, as he put it more forcibly on cross-examination, "rotten," he "called a jury of butchers, who also condemned it as being unfit for human food," and, added the witness, "it must have been a very bad case, because it must have been dead, or very near dead, when killed." For the defence, a Veterinary Surgeon was called who had seen the calf professionally. He found that it "had been among the clover;" it had eaten "not wisely, but too well;" and the consequence was that, like certain other animals higher up in the scale of creation, he suffered the penalty of over-feeding in the shape of indigestion; but, alas for the difference of treatment awarded to our lower fellow-creatures! when the Doctor saw the patient, he "advised Mr. —— to kill it as long as it was good meat;" and this mode of treatment was carried out, in order, as the defendant's attorney said, "to prevent inflammation setting in." It need hardly be said that the treatment was completely successful, and the Medical attendant of the late calf swore that the result of a post-mortem examination was to show that the internal organs were perfectly healthy, and that, on the day before the seizure of the carcase, the meat was perfectly healthy. Unfortunately, however, the magistrates had to look at its condition when seized, and, as the evidence of the inspector was too strong to be got over, they sent the prisoner to gaol for a month. These examples will, it is to be hoped, put an end to such practices, or, at any rate, help towards that most desirable termination.

To return now to our own species, and particularly to the subject of nursing them when sick, I think I may say that Liverpool has done, at least, her full share of the great improvement which the last few years have witnessed in this indispensable part of the art of healing. The Nurses' Institution, the District Nurses, the Training School and Home for Nurses at the Royal Infirmary, the Nightingale Nurses at the Workhouse Hospital, the recently opened Institution for the Training of Deaconesses afford such an amount of nursing power as will not be surpassed, I think, in any provincial town.

Among the occurrences of the past month, I ought not to omit the opening of the Liverpool Hospital for Cancer and Skin Diseases on October 7. This institution has been removed from the line of stables behind Rodney-street to the middle of a row of houses in Islington flags. The Committee appear to have been guided in their selection of a site by the great "Lucus a non lucendo" principle, since the position of the Hospital possesses almost every disadvantage that such a place ought not to have. Situated in the middle of the town, it has in front of it one of the noisiest streets, so that the patients may be soothed from early morning to night with the musical rattle of cabs, omnibuses, and carts over the stones. On either side the houses between which it is securely jammed effectually prevent any risk of over ventilation; while behind it there are "convenient" (in the Irish sense), plenty of dirty little streets and courts likely, doubtless, to impart to the neighbouring atmosphere those effluvia to which so many interesting pathological processes are due. The Secretary, in reading the report, evidently felt that they had been hardly used by the Corporation, for when they applied for a house in this situation "the memorial was unsuccessful, the plea put forward being that of *density of population*." (The italics are those of the newspaper report.) The good feeling of the promoters to the Profession is manifested by the fact that not only have all the names, ages, etc., of the patients treated since the foundation been recorded, but also "the names of those Medical men under whose care the case had previously been. And (proceeds the Secretary) let me tell you that there are very few indeed of the Medical roll in Liverpool whose names do not appear on these pages, and no Hospital or Dispensary from which some patient has not come." The "inaugurative ceremony" was attended by no less than two Medical men, in addition to those connected with the institution, and was impressively concluded by the chairman opening the front door and admitting a small mob of patients who had for some time been standing outside. It is much to be hoped that the institution may have all the success which it deserves.

IRELAND.

DUBLIN, November 4.

THE first of the "Introductories" for the Session 1865-66, in the Dublin Schools, was an excellent address delivered on Tuesday, 31st ult., to the pupils of the Mater Misericordiæ Hospital, by Dr. Francis Richard Cruise, Surgeon to the Hospital. At the opening were present the Archbishop (Dr. Cullen) and several other dignitaries of the Roman Catholic Church; the Right Hon. Judge O'Hagan; Dr. Beatty, the President of the College of Physicians; Dr. Stokes, F.R.S., Dr. Croker, Dr. MacDonnell, F.R.S., the Rev. Professor Haughton, M.D., F.R.S., Dr. William Stokes, jun., Dr. Collis, Dr. Burke, Dr. T. W. Belcher, Dr. Purser, etc., etc.

Dr. Cruise commenced his address, after some preliminary remarks, with a short exposition of the nature and objects of the study of Medicine, considering his subject under the three heads of diagnosis, pathology, and therapeutics. He gave much excellent advice to the students, urging upon them the necessity of early and special attention to the more practical portions of their labours in the Hospital and the dissecting-room, and strongly recommending the habit of casetaking. He laid much stress upon the importance of cultivating a reasoning and fruitful power of observation in the study of the Profession, pointing out how such a power had led Harvey to the discovery of the circulation of the blood, which had been previously, through so many ages, overlooked, and showing what an amount of accurate knowledge of disease has been contributed during the last half century by the keenest observers, who have shed the lustre of their genius upon Medicine, instancing the researches of Laennec and Stokes upon affections of the lungs; of Corrigan upon cardiac diseases; of Graves on exophthalmic goitre; of Bright on renal degenerations; of Addison on melasma; of Brown-Séquard on nervous affections, etc., etc. Dr. Cruise sketched the beneficial effects of the advance of Medicine and Surgery in modern times, illustrating them by the diminished mortality in childbirth, the annihilation of small-pox as an epidemic, the disappearance of plague, black sickness, and leprosy from Europe—the use of chloroform, depriving the Surgeon's knife of all its terror. He next insisted upon the necessity of a liberal education for the Physician, referring to the benefits which applied physics had conferred upon [the science of Medicine within the last fifty years, in the invention of the stethoscope, laryngoscope, endoscope, and ophthalmoscope. After some further remarks, Dr. Cruise concluded his admirable lecture in the following words:—"I hardly like to touch, even in passing, upon the fancied drawbacks which are at times supposed to detract from the worth of our noble calling. If I must only allude to them at all, it shall be briefly, and to disabuse your minds of prejudices which a little time, without my aid, must dissipate. It is a not uncommon practice, with a certain class of the public, and even of the educated, flippantly to depreciate the Profession of Medicine, urging that it is wanting in scientific basis, evil in its tendencies, and of doubtful social position. We, who understand better, can afford to bear such aspersions, in pity rather than in anger; for all who take the trouble to understand it, apart from its mere practical art, Medicine is a science, and the grandest of sciences. Day after day brings to light new proofs of the truth of its general laws, and of their co-relation and intimate connexion with the dogmata of physics in general. Medicine is none the less a science, because, being inductive, we have no universal axioms from which to deduce the individual facts of disease; because we are obliged to elucidate its laws synthetically by the comparison of a host of particular instances, and in many cases are forced to reason by analogy and hypothesis. Neither is it the less a true science, because it is an imperfect one, perplexed and confused by the intermixture of vital with physical phenomena—in a word, by the immediate contact of the spiritual with the material. The variations in the practice we adopt at different times, in diseases bearing the like names, has in all ages excited the ridicule of the weak minded, and constituted, for the ignorant and superficial, a ground of bitter attack. You will understand most thoroughly the value of such observations when sufficiently advanced in the study of your Profession to appreciate the doctrine I have endeavoured to inculcate—namely, that disease is not so much an entity as a vital condition—that it is not the name of the malady, but the state of the patient you should seek to treat. Nay, more, when you shall have arrived at comprehending the extraor-

dinary change of type that disease has undergone within the last forty years—that change so exhaustively demonstrated by Alison, Watson, Christison, Graves, Stokes, and others—you will come to perceive that the very alteration of treatment, quoted in ridicule of the supposed inconsistency of Medicine, actually constitutes the most overwhelming vindication of the fixity of its principles. If Medicine, dealing with fluctuating vital conditions, pursued through all an unvarying line of practice, then, indeed, it might justly be arraigned for inconsistency. I shall not delay to consider the slanders occasionally uttered against our Profession in common with other branches of natural science—namely, that its tendency is irreligious—that it disposes to materialism and antagonism with revelation. The imputation is empty and groundless so far as science is concerned, and can refer only to the just judgment which sometimes overtakes that pride of intellect to which St. Paul alludes when speaking of the 'knowledge which puffeth up and perisheth.' The truths of nature are the truths of nature's God, and, surely, we may in all humility expect, and patiently await, the hour when a more expanded comprehension of physics shall clear away all seeming contradictions, and annihilate such cavils in the obvious conformity of science with revealed religion. I shall not here dilate upon the social position of the Profession of Medicine. Unfortunately, it is too true that many influences, some difficult, if not impossible, to remedy—some painful even to think of—have depressed it below the just standard. So far as this consideration is at stake, I think we shall act most wisely by accepting our calling for its own sake; by struggling, each one according to his ability, to elevate it in the estimation of those around us. For ourselves we need have no misgivings—most assuredly if our Profession has disadvantages, it also has grand attractions. That which can be only the occasional luxury of others—the relief of pain—the mission of mercy, above all distinctions—is our daily task. That which is the recreation of few, save the rich and leisurely, the wondrous operations of nature, it is our constant business to study and commune with; we follow no dubious principles of right and wrong; we are harrassed by no scruples of mind on conscience; we truckle to no caprices, acknowledge no worldly dependency, but follow in freedom a life at once useful and bounteous to others, elevating and independent for ourselves. If our Profession offers no great chances of emolument, on the other hand, it seldom, I believe I may say never, fails to procure a competency. If honours and public distinctions come to it like angels' visits, the blessings of both rich and poor fall thick as the showers of heaven. If our toils are great and slavish—if for success we must defy fatigue, exposure, risk, and danger to our very lives—still there are rewards amply sufficient to recompense us. Our vocation is a sacred one, not a means to an end, but the end itself. Neither should we ever waver from its prosecution to follow that glittering apple which once was thrown before Atalanta, and ever since has let and hindered the course of those who stooped to pick it up. Worldly prosperity is an incident, not an essential, to our calling, but our true honoraire is the memory of insufferable pain relieved, the rescue of valued lives from premature death, the restoration of fathers and mothers to their helpless families, and the saving to the hearth the limbs of little ones that seemed doomed to die. For all this the Physician may reap innumerable thanks, inexpressible gratitude; for this he may earn a name, if not renowned, at least beloved. And when, in the inscrutable ways of Providence, his toils prove vain, his efforts void, even still, though baffled, the true Physician is not wholly at a disadvantage. That man must die is an inevitable truth, and who can know it better than he who so oft looks on, the unwilling witness of the sombre visits of 'That shadow cloaked from head to foot, who holds the keys of all the creeds'—that shadow which, certain as existence, one day or other lays its relentless hand on every child of Adam; sometimes tearing from life with all the apparent cruelty of an avenging spirit; sometimes gently wooing by mild decay; or sometimes so stealthily gliding upon the unsuspecting victim, and, as it were, purifying dissolution from all its more revolting aspects, that the very soul itself, dazzled by approaching immortality, fails to recognise or understand the emancipation at hand. Bystander at these scenes, and fully conscious of all that is passing before him, the Physician holds office of boundless responsibility, for good or evil. He can whisper, when needful—the moment when earthly hopes are waning — when it is time for the poor sufferer to bid farewell to all that is human—and thus he may oft bestow a blessing in comparison with which all passing aid is indeed as nothing. For himself he can take a thousand lessons, each more precious than the other. From aught that is sudden and untimely in the fate of others, he may learn, in his own case, the worth of timely wisdom. From the magnificence and gorgeous harmony of the little he can see and understand, he may seek to picture the wonders of those circumstances and phases of being which outstrip his present knowledge, to realise the truth that the beauty of life is overwhelmed by the grandeur of death, which, so far from being the mere defeat of human skill, or end of existence, is, in the expressive language of the ancients, but the "portal of life undying.' And when he stands by the deathbed scene, where sorrowing friends weep and mourn as the spirit of one they love, just disenthralled from its earthly tenement, wings its way to the realms of eternity, he may seek, in mind, to follow its path, and elevating his soul beyond the paltry cares and passions of his mortal career, may learn to hope and long for the day when the brightness of infinite truth shall penetrate the mists that encircle and overshadow his intelligence, and merge all doubts, all uncertainties, all speculations, all theories, in the fulness of the knowledge of the Almighty Creator and his wondrous works."

The annual meeting for the distribution of prizes awarded at the termination of the preceding session in Steevens' Hospital and Medical College took place in the Lecture Theatre of the Hospital on Wednesday, November 1, George Woods Maunsell, Esq., in the chair. The following is a list of those to whom honours and certificates were then handed by the Chairman:—

Cusack Medals and Exhibitions.—*Senior*—Robert A. Caldwell, Coleraine. *Middle*—Dominick Olden, Dungarvan. *Junior*—Richard Bookey, Carnew. *Surgical Clinical Prize*—Thomas A. Thompson, Carrickfergus. *Midwifery Assistants*—Mr. Geoffrey C. Purcell and Mr. Robert A. Caldwell.

Dr. Grimshaw's Botanical Prizes.—*First*—Benjamin Lynch. *Second*—Joseph Lawson.

Certificates of General Attention and Proficiency at Terminal Examinations.—George Corry, Richard Craig, Edward Fawcett, Robert Fletcher, George A. Gloag, Joseph Lawson, Benjamin Lynch, Christopher Sharp.

The session in the Richmond, Whitworth, and Hardwicke Hospitals was opened on the same day in the theatre of the first-named of these institutions by Dr. John T. Banks, King's Professor of the Practice of Medicine in the School of Physic. On this occasion two new wards in the new wing of the Hospital were opened for the first time. These wards, which are situated one above the other, are eighty feet in length, twenty-five in width, and seventeen and a half in height, and are capable of affording ample accommodation for fifty patients. Dr. Banks' address was directed principally to those just entering upon their Medical studies, and contained much excellent advice and useful information for their guidance. He dwelt upon the necessity of a liberal, and, if possible, of a university education for the Physician, as well as upon the advantages those possess who are able to read in the original the important contributions to Medical science of our Continental brethren. The French and German languages he particularised as becoming every day more indispensable. He commended the Universities of Oxford and Dublin for maintaining a high standard of education for the Medical student, and expressed his regret that the sister University of Cambridge had placed Medicine in a lower position than law or divinity, requiring from its students only half the course in Arts. Having touched upon a number of other topics, he referred with pleasure to the number of Army Medical men who had received the Victoria Cross as the reward of valour, which was greater in proportion than the number of combatants who received this distinguished honour. Dr. Banks concluded, amid applause, by urging the students to deport themselves like gentlemen who had selected a noble profession, in which they could indulge the best and purest feelings of the heart.

The inaugural address was delivered, also on November 1, in the Ledwich School of Medicine, by Dr. Mason. The learned lecturer having urged the claims of Medicine to rank as one of the highest of the inductive sciences, and pointed out the elevated nature of its object and aim—viz., the relief of human suffering, the alleviation of pain, and the extension of the span of life—dwelt at some length upon the importance of anatomy as the alphabet of Medicine. Dr. Mason gave his younger hearers some admirable advice as to the proper mode of conducting their studies, and concluded his eloquent lecture with a few remarks upon the advantages of the tutorial system.

On the following day, Thursday, November 2, the introductory lecture in the Carmichael School of Medicine was delivered by Dr. Robert McDonnell, F.R.S. He, too, insisted upon the necessity to the Medical student of a sound preliminary education. He afterwards discussed at some length the modes of teaching and of examination of students. He did not attach much importance to the system of lectures and certificates, and he pointed out what he regarded as the advantages of private teaching. But what he desired above all was a demonstrative practical system of teaching, and also of examination. It was in the dissecting-rooms, the laboratory, and in the Hospital wards the students should learn, and there should their fitness to be admitted into the Profession be tested by the examiners fully and carefully. Upon the mode and nature of the examination depended the teaching which the students would receive, as well as the character of their own studies.

In the afternoon of the same day the RomanCatholic University School of Medicine, Cecilia-street, was opened for the session 1865-66 by Dr. Hayden, Dean of the Faculty of Medicine, with an able address, at the close of which, alluding to the changes likely to be effected before long in the Institution in which he stood, he claimed for all "equality, political and educational," of which, he added, "harmony, peace, and progress would be the result."

November 8.

Postscript.—Since the foregoing was written, some additional "introductories" have been delivered. On Monday, the 6th inst., at ten o'clock, Dr. Porter, Senior Surgeon to the Meath Hospital, gave the opening lecture in the theatre of that institution. In addition to a large assemblage of Medical men, including the President of the College of Physicians, Dr. Beatty; the Regius Professor of Physic in the University of Dublin, Dr. Stokes, D.C.L.; the Rev. Professor Haughton, F.R.S.; the Right Hon. the Lord Mayor; several members of the clerical and legal professions, and others were present. On the same day, at eleven o'clock, Dr. Head inaugurated the session in the Adelaide Hospital. At one, the Medical School of the University of Dublin (Trinity College) was opened by Dr. McDowell, who, having been recently re-elected, for a second septennial period, as Professor of Anatomy and Physiology, was most warmly received by the assembled Professors, students, and the other auditors. At four o'clock Dr. Beatty, President of the King and Queen's College of Physicians, delivered the opening lecture in the City of Dublin Hospital, Baggot-street.

GENERAL CORRESPONDENCE.

ON THE THERAPEUTIC VALUE OF LIQ. POTASSÆ ARSENITIS IN THE TREATMENT OF PHLYCTENULAR OPHTHALMIA.

Letter from Mr. T. Osborne Walker.

[To the Editor of the Medical Times and Gazette.]

Sir,—It having fallen to my lot to attend a goodly number of cases of phlyctenular conjunctivitis, and the various methods of treatment, such as the insufflation of calomel, the application by means of a camel's-hair brush of a solution of argent. nit. to the palpebræ, and then syringed away, &c., pursued and recommended by Ophthalmologists, having utterly failed in my hands to afford relief, in fact rather aggravating the mischief, it occurred to my mind to administer tentatively the liq. potassæ arsenitis, P.L., having satisfied myself of the inutility of local measures except as soothers. I must mention that my cases were mostly severe ones, attended with considerable photophobia, sometimes rendering it impossible to get a glimpse even of the cornea, abundant lachrymation, conjunctival injection, generally a plurality of phlyctenulæ around periphery of cornea, with, in some instances, specks of by-gone attacks, and the peculiar ground-glass corneal dulness.

The unexpected success of my first trial of the arsenical solution induced a recurrence to the remedy in subsequent cases, which, whether original attacks or renewals of disease, whether mild or severe, have unexceptionally given way under the plan of treatment adopted, which has been to commence with two drops of the liq. potassæ arsenitis thrice daily after meals, and increasing the dose of the medicine each successive bottleful by one minim, interposing an occasional aperient of rhubarb and magnesia, and continuing the medicine until the disease has disappeared, the beneficial result being heralded by a peculiar glassy polish of the whole ocular conjunctiva, often succeeded by symptoms of irritation of the gastro-enteric mucous membrane. As soothers and adjuvants to this *methodus medendi*, I apply locally warm poppy decoction to the eyes, and, when there is much circumorbital pain, bags of heated chamomiles to the temples. Not the least advantage of the plan is that the corneal specks clear off concurrently with the departure of the disease.

All that I claim for the plan of treatment here advocated in one of the acknowledgedly most intractable diseases incidental to the visual organ, receives illustration from a case now under treatment. The patient is a child of seven. This is the third invasion. The first attack, which was very protracted, was at the outset treated by the calomel insufflation, which failing, recourse was then had to the nitrate of silver brushing process, which likewise failed, matters all the while becoming worse. I then tried vin. opii drops, from which no benefit whatever accrued. I then made trial of general treatment with pulv. cinchon. and soda exsiccata. The inflammation at length subsided, leaving the eye much damaged by specks impairing its permeability by luminous rays; before long the organ retrograded into an aggravated form of the disease, resisting all former curative means. It was then, almost despairing of saving vision, I made trial of, empirically, the arsenical solution in the manner above described, and speedily effected a cure. More than a twelvemonth had elapsed before the present attack, which, like its predecessor, is fast receding under the treatment adopted. I am, &c.,

T. Osborne Walker, M.R.C.S., and L.S.A.

Blakesley, May, 1865.

P.S.—Since writing the above the case has recovered, but the disease recurred in consequence of the Board (for the patient is a pauper) discontinuing the necessary support.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 4, 1865.

Dr. Barnes, President.

Dr. Priestley exhibited a variety of medicated Pessaries and Suppositories which he had been requested by the manufacturers, Messrs. Duncan and Flockhart, of Edinburgh, to show to the Society. They had been made at the suggestion of Professor Simpson, with the view of administering a diversity of drugs by the vagina and rectum. The vaginal pessaries were so far new that they were of a convenient Minie-bullet form instead of round, of cocoa-nut butter, which readily melted at the temperature of the body, although perfectly hard before introduction.

Dr. Greenhalgh recited a fatal case in which Cæsarean Section had followed the use of the Cephalotribe. A committee was appointed to examine the effect of this instrument upon the fœtal head. The report of the case and of the committee will appear in a subsequent number.

The President laid before the Society the original Cephalotribe of Baudelocque, which had been presented to the Society by Madame Petitjean, of Paris, through the thoughtful mediation of their Hon. President, Sir Charles Locock.

Dr. Barnes also exhibited a specimen of Fallopian Dropsy.

Mr. Baker Brown, jun., exhibited a preparation of two parts of chloroform with one of alcohol, to which the distilled essence of eau de Cologne had been added, which he had found to allay the pain of labour without complete anæsthesia, and recited cases in which it had been used.

Dr. Barnes exhibited an instrument made for him by Weiss for introducing the perforated laminaria-tents into the cervix uteri.

Dr. Way read a case of Twin Pregnancy, in which one of the fœtuses had died at about the fourth month of intra-uterine life, but was expelled at the same time with the other, nearly at full term.

Dr. J. Braxton Hicks, at a former meeting, read a case of

extra-uterine fœtation,

in which he had detected a fœtus alive in the recto-vaginal pouch of peritoneum. Considering its advance to maturity in

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that position highly dangerous throughout its development and after, he endeavoured to arrest its growth by powerful galvanic currents. This was repeated without effect. It was then determined to pass a trocar into the fœtus, which was done per vaginam readily without any bleeding. The fœtal movements ceased next day; but vomiting, partly from the chloroform given, continued very violent till about the fifth day, when, sudden collapse supervening, the patient died on the sixth day after the operation. The post-mortem examination showed that hæmorrhage was the immediate cause of death, owing to slight separation of the upper part of placental attachment to the exterior of the uterus, but none whatever occurred at the seat of puncture. The examination also showed a curious fact—namely, that the cyst in which the fœtus originally was formed had ruptured, and that the ovum entire had escaped into the recto-vaginal pouch, and continued to live and grow, the ovular membranes filling entirely the pouch, the placenta being attached to the back of the uterus. On opening the original cyst from above, the ovular membranes were seen through the rupture in the cyst. Dr. Hicks having requested the assistance of the President in elucidating these points, and in giving a report, the report was then read, confirming the above facts, and endeavouring to explain the mode of occurrence.

A discussion then arose between Dr. Routh, Dr. Graily Hewitt, Dr. Greenhalgh, and Dr. Hicks as to the advisability of attempting the abdominal section in such cases.

Dr. MARION SIMS read a paper on

CHRONIC INVERSION OF THE UTERUS,

reciting two cases of his own. In one of these he attempted manual reduction without success, and as the hæmorrhage from which the patient suffered was so excessive as to threaten a fatal result, he determined to ablate the organ. It was attempted first by ligature; but as this gave rise to severe symptoms, pain, and depression, it was decided to remove it with the écraseur. Severe bleeding ensued from the broad ligament, which was controlled by ligature, and the line of section united by silver sutures. The patient recovered rapidly. In the other case, reduction was effected under ether by the hand. The uterus was grasped and partially restored. By pressing firmly the right cornu with the thumb of the left hand, and pushing upwards, while the fingers compressing the opposite side tended rather to draw the left cornu down, the uterus jumped, as it were, out of the hand, and was restored to its natural condition. The author then alluded to the successful plan of Dr. Tyler Smith by continuous pressure by air-ball, and to Dr. White, of Buffalo, for the plan of lateral pressure on one cornu; and considered that, with the success which had latterly attended attempts at reduction, one should hesitate a long time before removing the uterus for inversion.

Dr. SIDNEY TURNER remarked that the reduction of inversion just mentioned reminded him of the mode of reduction of hernia by the taxis; and suggested continuous grasping of the organ to empty it of its blood as much as possible, so as to lessen its bulk before attempting its reduction.

Dr. HALL, of Brighton, concurred in the view of the last speaker; and further suggested that bags of ice might be passed into the vagina to diminish the bulk, instancing the advantage of cold in treatment of paraphymosis.

Dr. BARNES mentioned that Dr. M'Clintock had fully explained the analogy of reduction of inversion of uterus and hernia. He thought that the mode of action by the elastic ball of Dr. T. Smith was by wearing out the muscular resistance of the uterus.

Dr. M. SIMS then replied to the various speakers.

Mr. F. LAWTON related a case of

VASCULAR TUMOUR OF THE FUNIS

in a new-born infant, with its microscopical appearances by Dr. Hicks.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH.—DOUBLE QUALIFICATION.—The following gentlemen passed their first Professional Examinations during the recent sittings of the examiners:—

William J. Little, Kilkenny; William Henry Garde, Australia; James Hanifin, Kerry; Charles Robert Straton, Montrose; James Fergusson, Kirkcudbrightshire.

And the following gentlemen passed their final Examinations, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh:—

Andrew Dunlop, Haddington; Charles Albert Crane, Avianches, France; Geo. Crowe, Paris; Alexander Hamilton Miller, Londonderry; John Grealy, Galway; Bourke Long, Cork; Henry Cornish, Taunton; William Keys Farrelle, Longford; Edwin Septimus Green, Houghton-le-Spring; Josias Wilson Patrick, Belfast; Abraham Cross Godfrey, Cork.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 7th inst., and, when eligible, will be admitted to the Pass Examination:—

Walter Henry Drew and Henry Murray Steele, Students of University College; Richard Wilson and Frederick Henry Blenkinsop, of St. George's Hospital; Benjamin Duke, of Guy's Hospital; Thomas Harvey, of St. Thomas's Hospital; Frederic William Hodder, Toronto; Barney Constance MacEgan, Galway; Jeremiah McCarthy, Dublin.

It is stated that out of the seventeen candidates who offered themselves for examination on this occasion, no less than eight were referred back to their studies for three months. At this meeting, Mr. Richard Quain, F.R.S., the recently-elected member of the Court of Examiners, took his seat.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—Mr. John Antoine Palanque, Hounslow, passed his first Professional Examination during the October sittings of the Examiners; and the following gentlemen passed their final Examinations, and were admitted Licentiates of the College:—

Robert Watson, Dunfermline; John Steele Mack, Lanarkshire; Joseph Wallace Chestnut, Antrim; Peter Macarthur, New York.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, November 2, 1865:—

Samuel James Hulme, Infirmary, Manchester; John Hurd Wood, Notting-hill; John Loane, 1, Dock-street, E.; Thomas Francis Raven, St. Bartholomew's Hospital.

The following gentleman, also on the same day, passed his First Examination:—

Septimus Evans, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BEER, JAMES J., M.R.C.S. Eng., has been appointed Senior Resident Dispenser to the Westminster Hospital.

BRADLEY, JOHN, has been appointed Junior House-Surgeon to the Northern Hospital, Liverpool.

HEARSEFIELD, J., M.R.C.S. Eng., has been elected House-Surgeon to the South Shields and Westoe Dispensary.

MERCER, NIEL G., M.D. Edin., has been elected House-Surgeon to the Clayton Hospital and Wakefield General Dispensary.

TROTTER, ARTHUR E. H., M.R.C.S. Eng., has been appointed an Hon. Surgeon to the Stockton-on-Tees Dispensary.

WOOD, T. A., M.D. Edin., has been elected Resident-Physician in the Queen's Hospital, Birmingham.

DEATHS.

BASSET, F. J., Surgeon, at Lowestoft, formerly of Brixton.

BLOXAM, WILLIAM, sen., M.D. St. And., at 28, Duke-street, Grosvenor-square, W., on November 5, aged 60.

CRELLIN, Dr. WILLIAM, at Paris, on October 21, aged 71, late of Gloucester-place, Portman-square.

FERGUSON, CHARLES, M.R.C.S. Eng., at 20, Holland-villas-road, Kensington, W., on October 25, aged 32.

GAMBLE, HARPUR, M.D. Edin., Surgeon R.N., at 47, Charlotte-street, Fitzroy-square, W., on October 23, aged 75.

GIBSON, JAMES, L.R.C.S. Edin., at Earlstown, Berwickshire.

GRAY, NICHOLAS L., L.R.C.S.I., Assistant-Surgeon 13th Regt., at Flacq, in the Mauritius, on August 23.

HARTHILL, Dr. R., at Sydney, on July 14, late Surgeon 60th Regt.

HELPS, WILLIAM, M.D. St. And., at Bethlehem Hospital, Lambeth, S., Resident-Physician of that Institution, on November 7, aged 37.

MONCKTON, ALFRED, M.R.C.S., L.S.A., on the 3rd inst., at Brenchley, Kent, of typhus fever, contracted in the discharge of his Professional duties, aged 26.

SWINSON, GEORGE N., M.R.C.S. Eng., at Hamilton-terrace, Leamington, on October 20, aged 76, late of Birmingham.

SPODE, JOSIAH, M.R.C.S. Eng., at Collingwood, Melbourne, Victoria, on June 18, aged 35.

STODART, EDWARD, M.D., at Alba Lodge, Hendon, on November 5, aged 62.

WILLIAMSON, GEORGE, M.D. Edin., Surgeon-Major 64th Regt., at 19, Grand-parade, Brighton, on October 31, aged 45.

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POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bedford Union.—The Bedford and Cardington District is vacant; area, 14,062; population, 10,611; remuneration, per case.

Cambridge Union.—Mr. Beck has resigned the Workhouse; salary, £60 per annum.

Chesterfield Union.—Mr. W. S. Russell has resigned the Eckington District; area, 8319; population, 7117; salary, £25 per annum.

Honiton Union.—Mr. Neil G. Mercer has resigned the Ninth District; area, 7800; population, 940; salary, £25 per annum.

Penistone Union.—Mr. George F. Leigh has resigned the Workhouse; salary, £20 per annum.

Tonbridge Union.—The Sixth District is vacant; area, 7794; population, 2378; salary, £65 per annum. The Seventh District is also vacant; area, 4500; population, 1385; salary, £35 per annum.

APPOINTMENTS.

Bodmin Union.—Thomas Mudge, M.R.C.S.E., L.S.A., to the Third District and the Workhouse.

Chorley Union.—Edward Jackson, M.R.C.S.E., L.K. and Q. Coll., Ire., to the Brindle District.

King's Norton Union.—George Elkington, jun., M.R.C.S.E., L.S.A., to the Edgbaston District.

Saint Columb Major Union.—Thomas Boyle, M.R.C.S., has been elected Medical officer to the Fifth District.

Shardlow Union.—Charles Carruthers, M.R.C.S.E., L.S.A., to the Kegworth District.

DEATH OF ALFRED MONCKTON, ESQ., M.R.C.S., L.S.A.—It is with great regret—a feeling which will be shared by a large number of the members of King's College—that we announce the death of the above most estimable member of our Profession. He died at Brenchley, Kent, of typhus fever, contracted in the discharge of his Professional duties, at the early age of twenty-six years, and at his funeral, which took place on November 6, upwards of 300 of his neighbours followed to the church, which was crowded to excess. All commercial pursuits were suspended for the day. The deceased was in charge of an extensive practice which had been in his family upwards of two centuries.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the general monthly meeting on Monday, November 6, 1865, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, D. Chauncy Beale, Esq., and Protheroe Smith, M.D., were elected members of the Royal Institution. The special thanks of the meeting were returned for the following addition to "The Donation Fund for the Promotion of Experimental Researches:"—Professor Faraday (third donation), £20. The presents received since the last meeting were laid on the table, and the thanks of the members returned for the same.

THE "Dr. Hunter" of newspaper notoriety has been held to bail by the sitting magistrate at Marylebone on a charge of rape. It is alleged that he violated one of his female consumptive patients, having first made her inhale some stupefying drug. The amount of bail taken is £4000 for himself and for two sureties £2000 each.

COURT OF COMMON PLEAS, WESTMINSTER, NOVEMBER 4.—GRADY *v.* HARRISON.—This was an action for Surgeon's fees, in which a verdict was found for the plaintiff—damages, £64 5s. Mr. Seymour, Q.C., moved for a new trial on leave reserved, and that the verdict was against evidence. The action was for Medical attendance on the defendant's wife, who was separatcd from him, but who, it was proved, had a separate estate of £108 a-year. On that ground it was contended the defendant was not liable.—Rule *nisi* granted.

TESTIMONIAL TO THE MAYOR OF LINCOLN.—The citizens of Lincoln have recently paid a singular mark of respect to a member of our Profession, their present chief magistrate, R. Sutton Harvey, Esq. On October 26 they presented Mr. Harvey with a service of silver and a portrait by Mr. Slingsby, the whole being of the value of £400. Mr. Harvey, who has been a Medical Practititioner in Lincoln for nearly forty years, has attained to a local influence as enviable as it is powerful. He has been three times raised to the office of Mayor of the ancient city, and has filled all the important municipal offices with equal independence, honour, and goodwill. He is also a justice of the peace. He has been one of those happy men who can manage never to be idle, and at the same time never to make persistent enemies. These characteristics of his active and useful life were strikingly brought out at the presentation banquet, held on October 26. The room was crowded with members of the municipal body, county gentleman, and citizens. The Mayors of Boston and Nottingham were present, and various members of the Medical body, amongst whom were Mr. Brodbent, Dr. Septimus Lowe, Mr. Walters, of Bakewell, Dr. Bell, of Louth, and Dr. Richardson, of London. The worthy Mayor received, in fact, on the occasion not merely a valuable gift in a worldly sense, but a testimony of friendship and esteem which is worth far more than any material gift, and of which the material gift, however rich it may be, is but the symbol. We heartily congratulate Mr. Harvey on the reception of this well-earned recognition of long years of service; and we congratulate the Profession that so distinguished a mark of public regard should have been rendered to one who is proud to say he made his way towards fortune and reputation by hard work as a Practitioner of the healing art.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Reviews of Vose Solomon on "Tension of the Eyeball, etc.;" Spencer Watson on "Truamatic Keratitis;" and Lawson on "Sympathetic Ophthalmia," are in the printer's hands.

T. Wilson, M.D.—We regret we cannot insert the lecture.

A Country Student.—The next Pass Examination at the College of Surgeons takes place this day. It is not expected there will be another until after Christmas.

One under Examination.—We understand that the gentlemen to whom you refer, as supervising the examinations, were Drs. Parkes and Sharpey, and Mr. Cooper, and that it is the intention of the Council of Medical Education and Registration to superintend the examinations at all the Examining Boards.

GRIFFIN TESTIMONIAL FUND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscription has been further received on behalf of the above fund:—H. Boxall, Esq., Horsham, 5s. Amount previously announced, £129 13s. 3d. Received at *Lancet* Office, £9 9s.

I am, &c.,

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate Without, November 8, 1865.

THE TYPE OF DISEASE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have read the well-written letter, full of ability and research, of Dr. Bree; also the talented and large-minded address of Dr. Stokes, taking opposite views of this important question, with many other Professional upper-class opinions *pro* and *con*. The settlement of this question now is not, it strikes me, of such grave importance as some time ago, when the malapraxis imputed to those who, like myself, hold the opinion of a gradual change of type, was continuing, more or less, in the use of the lancet and anti-phlogistic means. At present, we who can look back many years before the modern majority, although we adopt their practice as it relates to this question, yet we cannot admit their conclusions. To do so would be to admit their accusation of malapraxis with a very heavy calendar of ignorance or crime. But cannot we fairly and honestly turn round upon our accusers, and say we have not so much changed; our patients have changed; and we have accommodated ourselves to that change? and as we were in the field before you, we are quite at liberty to say that we are your instructors and guides in the very paths you claim the merit of discovering and pointing out? If the old Practitioners throughout the kingdom were *seriatim* canvassed for the aye or no, I feel persuaded they must join issue with myself. A student in London from 1817 to 1821, I remember it was stated that the London Hospitals' population did not bear bleeding or reduction, and that country practice required both in many instances, the atmosphere and pursuits of large towns being different from the open country. Over a very considerable population, breathing a good air, and living well from their wages, as labourers or manufacturing people in the cloth business; their dwellings mostly scattered about hill and valley in part of Gloucestershire, for many years—more than forty—I have had an opportunity of seeing and treating such maladies as the neighbourhood presented, and I must say that for many years, from 1822, I may have averaged 100 employments of the lancet. For more than twenty years past a less and less demand has been made upon my attention and judgment for its use. I assert, not from any change of opinion, but because the some pressing cases for immediate relief on the prevention of impending danger do not present themselves. Allow me to mention a case or two. Called to a man reported dying; in a state of stupor and immobility; of full habit; face and hands livid; all over like dying; bled at once; blood at first dark and thick like treacle, coming slowly, by degrees bursting into a stream of lighter blood. As it flowed this man returned to liberty of senses and mind, and soon become himself. I would ask, Would any means beside have answered so well or at all? Undecarbonised blood accumulated, and accumulating, may sufficiently explain, I presume, this case. A man with spitting of blood, severe pain in the side, and burning fever, sends for me. Under a free bleeding, he becomes easy, and the ailments altogether manageable. Many persons formerly near me went to a common workman, who bled for sixpence, and I have no doubt he bled more than I did for pains, and headaches, and fulness of blood, which these people had tried physic for, and which bleeding cured. I have dwelt upon phlebotomy, for that has been singled out by the no-lancet men as a special object of attack. We all use now in our turn plenty of leeches or cupping; but when I look back they would not have done. Every kind of treatment may be carried too far or too little. He who rides a hobby must expect sometimes a tumble. To paraphrase the beautiful lines of Pope, well known, I would beg to say—

"For modes of cure let only zealots fight:
Who cures his patient must be in the right."

I would leave to better acquirements than my own to decide upon the

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theory whether an excited and increased activity of the circulation in fevers and inflammations does not suspend the natural secretions, preventing the capillaries doing their work, and, by so doing, add to, and keep pent up, all those ingesta which should be egesta.

Bleeding certainly has appeared, by lowering action, to set secretions going. Inflammation of the kidney stops urine; a good cupping over it, with medicine, restores it. Sweating in fever does not take place under high action. Pus is not formed under full inflammatory action. It may be said a horse or man in violent action and motion breaks into a profuse sweating. The employment, however, of great muscular action in this respect makes a difference, and without which there might be rupture of bloodvessel; and would not rupture of bloodvessel take place in many of our ailments without the safety valve of secretion or excretion? The best adjustment of our Materia Medica to this case or that, I contend, can only be done with long personal observation and experience, since all the sciences, with the high claims of chemistry among them, which are so powerfully aiding the Profession at this time, must own their submission to the higher rule of the living body in health and disease.

Nailsworth, October 31. I am, &c., T. S.

P.S.—That as a rule, and not the exception, I contend that the lancet was in country practice a most valuable remedy. In a tedious labour from rigid os uteri and full sanguinous habit I have bled with almost instant change for the better. In hundreds of cases where blood has flowed imperfectly at first, and by degrees bursting into a free stream, has speedy relief followed, proving an obstructed circulation. There were people judicious Practitioners avoided bleeding, persons having weak hearts and little muscular power, or such as were at a glance known to have a deficiency of red globule and fibrin. The habit of being bled spring and fall was common, and people were not well without it who had been so accustomed; a woman past ninety was one of these. Leeching and cupping, I am persuaded, in those cases requiring prompt and free bleeding, would not have answered. All Medical men are aware that fevers do come to us under milder or more malignant forms; that matter does not so much concern this subject of dispute. We want no lancets now, or very exceptionally. What is the reason? Are there many or few causes why? Is there any degeneracy of race by the mixing of town and country populations through our railroad communications? If we go to the enlistment of soldiers and look at our militia regiments, or even the line, the men are not the stalwart fellows of olden time; they are below the standard, and often a very puny, poor lot. Is drunkenness and lunacy more rife to account for a squalid number of ill-born children? Certain it is that amongst the masses, from their familiar intermixtures, early marriages, and, in my opinion, degeneracy, there is a great difference as to the standard of bone, muscle, and blood which was, but which now is not. Let me be allowed a remark on the present idea of keeping fever patients well up in brandy, wine, and rich soups. An indiscriminate use of these good things, like anything else, may feed fever and put down patients. Persons who live well every day and fall down with fever have then little power to get rid of those chemicals in the circulation which ought daily to be ejected. A mistake here would surely be equal to a mistake of the lancet.

COMMUNICATIONS have been received from—

Mr. T. Osborne Walker; Mr. James Robertson; Dr. J. Macpherson; Dr. Wm. Ogle; Royal Medical and Chirurgical Society; Dr. M'Craith; Obstetrical Society of London; Dr. Edwards Crisp; Dr. Stothard; Dr. Thomas Wilson; Dr. J. C. L. Carson; Apothecaries' Hall; Dr. J. Daniel Moore; Mr. Thomas Stokes; W. O.

BOOKS RECEIVED.

De la Guérison Prompte et Facile du Choléra Asiatique par la Methode de Henri Jeanneret. Cheltenham. 1865. Pamphlet.

*** It is evidently quite irrational to be afraid of the cholera, or to describe it as an intractable and formidable disease, since Dr. Jeanneret teaches how to cure it quickly, easily, and certainly with three-grain doses of camphor.

Blaine's Outlines of the Veterinary Art. Seventh Edition. London. 1865. Revised and Edited by Charles Steel, M.R.C.V.S.L., Veterinary Surgeon to the 12th Royal Lancers.

*** This work is well adapted for popular use; but it makes us wish that the wall of partition were thrown down between the Veterinary and the other Medical Colleges, and that all Practitioners had the basis of general anatomy and physiology, and knew a little of the diseases of the whole creation. In diminishing the sufferings of the poor brutes we should surely benefit ourselves.

The Antecedents of Cancer. By C. H. Moore. London: T. Richards.

*** A paper prepared for, and read before, the British Medical Association.

Venereal Hemiplegia of the Palate in Hemiplegia, and in Diabetes Mellitus. By W. B. Sanders, M.B. Edinburgh: Oliver and Boyd.

*** Reprint from the *Ed. Journ. Med. Sc.*

Photographs of the Diseases of the Skin. Part 8. By A. B. Squire, M.B. London: John Churchill and Sons.

*** No. VIII. contains a good representation of papular syphilide.

Medical Communications of the Massachusetts Medical Society. Vol. 5. No. 5.

Special Report of Public Wells in Glasgow. By Dr. Anderson.

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·564 in.
Mean temperature	42·5
Highest point of thermometer	57·8
Lowest point of thermometer	31·2
Mean dew-point temperature	39·8
General direction of wind	Variable.
Whole amount of rain in the week	0·92 in.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 4, 1865.

BIRTHS.

Births of Boys, 1067; Girls, 988; Total, 2055.
Average of 10 corresponding weeks, 1855-64, 1773·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	733	680	1413
Average of the ten years 1855-64	586·0	561·0	1147·0
Average corrected to increased population	..	..	1202
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West	463,388	1	4	13	2	7	7	11
North	618,210	6	8	6	1	4	23	11
Central	378,058	..	2	8	1	4	9	4
East	571,158	..	5	20	1	7	20	18
South	773,175	3	5	12	1	22	18	17
Total	2,803,989	10	24	59	6	44	77	61

ANALYSIS OF THE METROPOLITAN WATERS FOR OCTOBER, 1865.

The following is the Return from the Metropolitan Association of Medical Officers of Health of the Quality of the London Waters for the month of October:—

	Total Solid Matter per Imperial Gallon.	Loss by Ignition (a)	Oxydisable Organic Matter. (b)	Hardness.	
				Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains	Grains.	Degs.	Degs.
Grand Junction	17·0	0·85	0·64	13	4
West Middlesex	16·3	0·54	0·36	13	4
Southwark and Vauxhall	15·2	1·01	0·40	12	4
Chelsea	16·7	0·55	0·40	12	4
Lambeth	17·5	0·88	0·64	13	4
Other Companies.					
Kent	28·6	0·75	0·24	17	6
New River	16·9	0·56	0·16	12	3
East London	17·6	0·89	0·24	13	4

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxydisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a tube two feet in length and two inches in diameter.

APPOINTMENTS FOR THE WEEK.

November 11. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

13. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

14. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

Anthropological Society of London, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. A. T. H. Waters, "On the Morbid Anatomy and Early Physical Signs of Pneumonia." Mr. Squarey, "On the Effect of Coffee on the Urea and Chlorides in Health."

15. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

16. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

Harveian Society of London, 8 p.m. Debate "On Rheumatism and Gout."

17. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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See Pharmaceutical Journal of May 1, 1856.

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ORIGINAL LECTURES.

ON LOCAL CHEMICAL DISORDERS ARISING FROM SUBOXIDATION, AND THEIR MECHANICAL RESULTS.

By H. BENCE JONES, M.D., F.R.S.

Part II.—Lecture VII.

EFFECTS OF INTENSE COLD—FROST-BITES—CHILBLAINS—GENERAL AND LOCAL FATTY DEPOSIT AND PRODUCTION.

In all the general chemical disorders arising from suboxidation which I have brought before you, some one or more parts of the body might have been found in which the imperfect action more particularly occurred. Thus, for example, acidity might be shown to be sometimes greatest in the stomach, sometimes in the skin, and sometimes in the kidney. Or urate of soda might be observed to accumulate sometimes in the hands, sometimes in the feet, sometimes in the ear, according to slight determining causes which escape our notice. Indeed, no strict line of separation between general and local disorders of chemical action in the body can be drawn; for when general disorder exists, local manifestations of that disorder are sure to arise, and when a local wrong action is taking place, this, by contact with bloodvessels and nerves, insensibly passes into a general disturbance, and this contagion can be traced in all the chemical actions of health as well as in the errors which excess or of deficiency of chemical action occasion.

Thus, in the chemical disorders arising from local suboxidation, a general want of action may usually be traced out which either modifies or aggravates the local affection, and when this general want of action becomes still more marked, symptoms are produced quite as important as those that occur in the diseases that formed the subjects of the first part of this course of lectures.

For clearness, I have hitherto endeavoured in the lectures on general diseases of suboxidation to make a separation between the chemical disorders connected with the oxidation of the body and the chemical disorders connected with the repair of the body; but in local diseases it is soon seen that no separation between these actions is possible. Mortification from cold cannot be separated from senile gangrene, nor fatty deposit from disuse or insufficient supply of blood from fatty deposit from diseased vessels. Oxidation and repair take place in the same part at the same time, and errors of oxidation and errors of nutrition are so dependent each one on the other that in local or limited disorders the actions cannot be separated. And the perfect picture of any disease will only be obtained when our knowledge of the chemistry of nutrition and the chemistry of oxidation in the affected part are both equally perfect.

I might well have chosen the general action of cold as furnishing the best possible introduction to this course of lectures, inasmuch as it offers the most striking demonstration of the dependence of life on chemical action; but I shall dwell on the general action of cold now only so far as will enable you to obtain clearer ideas on the local action of cold, which forms one subject of this lecture.

In Cook's "Voyages," vol. ii., p. 49, you will find the well-known account of the effect of cold in a few hours on Dr. Solander and his companions. He insisted on resting, and "though he had not slept five minutes, he had almost lost the use of his limbs, and the muscles were so shrunk that his shoes fell from his feet." One of his companions could not be made to stir, and the others being too weak to carry him and another a short distance to a fire, they were both found dead in the morning. Dr. Solander was carried to the fire and recovered.

Letellier has shown that though the energy of combustion in man and the superior animals varies inversely with the temperature of the surrounding air, yet that a fall of one degree of Reaumur causes a decrease of 0·20 per cent. of urea.

Regnault and Reisset found in marmots at a temperature of 50°F., 11·2°C., to 72°F., 22° C., that the weight of oxygen consumed per hour per kilo. = 0·085 grm. was, when the temperature rose to 93°F., 34°C., the weight of oxygen per hour per kilo. = 0·774 grm. In another scarcely one-thirtieth the oxygen was consumed while asleep at 44°F., 12° C. When the body is exposed to a shower of water even at 70° F., I found that in the course of four minutes the pulse at the wrist may become imperceptible, and it remained scarcely perceptible as long as the cold water fell on the body.—Brown-Séquard's "Journal of Physiology," January, 1858.

Chemical action, muscular motion, and nervous sensation gradually become less and less as the cold is continued.

The smaller the individual, that is, the smaller the mass in proportion to the surface, the quicker the chemical actions are stopped, and mechanical congestions of the blood come on. The circle of moving blood becomes smaller and smaller, until the falling temperature reaches the heart itself.

The cold not only stops the chemical changes that occur in the body during life, but it even prevents that peculiar chemical action which begins as soon as fresh oxygen ceases to pass into any part of the body. After death the phenomena of putrefaction first occur in that part of the body in which the temperature is highest. When cold is applied the temperature may be so reduced that even the chemical action of putrefaction may be entirely stopped. The body may remain undecomposed for centuries, and this has actually happened, even to so large a mass of matter as exists in a Siberian mammoth.

The general action of cold, then, consists first in its stopping chemical action, and this gives rise, secondly, to the mechanical stoppage of the circulation of the blood. I pass on now to the local action of cold as shown in chilblains and frost-bites.

Mr. Simon gives the following experiment: Solid carbonic acid was applied to the skin for five and a-half, sixteen, and forty minutes. It almost instantly became so frozen as to ring like metal. In from fourteen to twenty minutes after the application had ceased the frozen textures had completed their thaw. Blood re-entered them. A swelling singularly like that of urticaria then occupied, but only transiently, the exact area which had been acted on, and was soon lost in a general puffy swelling, which extended for some distance around. With all this the part was entirely without sensibility. Inflammation presently set itself up in the surrounding parts; but the part on which the cold had acted remained without signs of life, and in due time, having suffered no inflammation nor recovered any sensibility, underwent separation as a slough. In other words, all chemical action, all nutrition, all circulation, and all sensation—that is, every kind and sort of motion—is stopped by the excessive cold; and if the freezing temperature could be continued no post mortem change whatever would take place in the frozen part.

Whatever part is most distant from the centre of the circulation, and presents a large surface for the cold to act on, there local effects of low temperature are most liable to be produced; for example, the fingers, the toes, the ears, and the nose. Between frost-bites and chilblains there is only a difference in the degree of cold applied. Let us shortly consider the most intense effect first. In a frost-bite the degree of cold is sufficient to stop entirely the chemical actions of oxidation and nutrition which are going on in the affected part of the body; all circulation and sensation stops, and this so entirely that no reaction can take place in the obstructed part, and it then becomes a mechanical obstacle to the free passage of blood. This gives rise to increased pressure of the blood in the arteries, and to increased action of the heart, to propel the blood through the obstruction; and this increased action sets up increased oxidation around that part in which all action is stopped, increased heat is produced, and the chemical actions of repair are altered; increased oxidation of non-nitrogenous and of nitrogenous substances, and consequent increased destruction of these substances takes place. If the action continues, adjoining the healthy part increased cell formation occurs. Cells are produced far too rapidly to admit of their healthy change into the textures of the part. The force of nutrition is expended in the production of pus cells, which multiply far beyond the ordinary cell growth of the part.

This action around a frozen part bears the same relation to ordinary inflammation as a motion caused by a push differs from the same motion caused by a pull. In inflammation generally, as in that of the cornea or cartilage, mechanical, chemical, thermal, photal, and electrical motion sets up increased oxygenation. The oxidation of non-nitrogenous and nitrogenous matter is accelerated, and this leads to more rapid removal of substance and to more rapid cell formation. Increased molecular motion in the lymph outside the capillaries causes increased mechanical motion of the blood in the capillaries; the vessels dilate, the blood accumulates where there is greatest pressure, more fluid than usual is effused from the capillaries into the surrounding parts, and according to the

amount of congestion and the chemical condition of the blood the effused fluid is watery, albuminous, fibrous, or even bloody. The increased flow of blood around the parts where the obstruction by accumulation has taken place, causes increased sensitiveness of the nerves of sensation, and the pressure gives rise to more or less intense pain.

Gradually the increased local oxidation in the lymph outside the blood causes increased oxidation in the blood. This gives rise to an increased amount of fibrin and of its oxides, general increase of temperature is produced, and inflammatory fever disturbing all the circulations, secretions, nutritions, and nerve actions in the body is set up.

In chilblains the action of the cold is usually much less intense than in frost bites. The primary action, as in the bursting of a lead pipe by cold, is overlooked, and the results of the reaction constitute the complaint. The cold, instead of stopping entirely the chemical actions in the fingers and toes, so checks the healthy changes that the blood becomes more or less retarded, then congested, and thus the circulation is more or less completely stopped. This gives rise to increased tension in the vessels leading to the obstruction; the impulse of the heart is increased, it urges the blood more strongly forward to overcome the congestion; increased motion of the blood takes place around, increased oxidation is set up, and altered nutrition occurs in and around the chilblains, thus the healthy action of the part is usually restored, unless the increased oxidation leads to excessive cell formation then suppuration occurs.

We have then here an example of primary local suboxidation produced by cold, leading to secondary mechanical obstruction, and this mechanical obstruction leads to increased mechanical reaction, by which the proper amount of chemical action in the part is restored.

Thus, in chillblains and frost-bites, we have examples of different degrees of the same kind of local suboxidation, both give rise to the same kind of secondary mechanical obstructions, which must be overcome by pressure and peroxidation before the parts can return to a healthy state.

The second illustration of local suboxidation which I desire to bring before you is fatty degeneration.

A glance at the following table of fatty acids will be sufficient to show you that there are a multitude of fatty substances each differing from the substance below it in the table by containing less oxygen; so that if the first fatty acid was subjected to a process of deoxidation, as in vegetables, it would gradually pass down to the last acid, which contains least oxygen; whilst if the lowest acid were subjected to a process of oxidation, it would gradually pass into formic or carbonic acid.

Monatomic Fatty Acids.			
Formic	$C H_2 O_2$, or	21 Formic	$C_{21}H_{42}O_{42}$
Acetic	$C_2 H_4 O_2$		
Propionic	$C_3 H_6 O_2$, or	7 Propionic	$C_{21}H_{42}O_{14}$
Butyric	$C_4 H_8 O_2$		
Valeric	$C_5 H_{10} O_2$		
Caproic	$C_6 H_{12} O_2$		
Enanthoic	$C_7 H_{14} O_2$, or	3 Enanthoic	$C_{21}H_{42}O_6$
Thetic	$C_8 H_{16} O_2$		
Pelargic	$C_9 H_{18} O_2$		
Rutic	$C_{10} H_{20} O_2$		
Enodic	$C_{11} H_{22} O_2$		
Lauric	$C_{12} H_{24} O_2$		
Cocinic	$C_{13} H_{26} O_2$		
Myristic	$C_{14} H_{28} O_2$, or	1½ Myristic	$C_{21}H_{42}O_3$
Benic	$C_{15} H_{30} O_2$		
Palmitic	$C_{16} H_{32} O_2$		
Margaric	$C_{17} H_{34} O_2$		
Stearic	$C_{18} H_{36} O_2$		
Balenic	$C_{19} H_{38} O_2$		
Arachidic	$C_{20} H_{40} O_2$		
Nardic	$C_{21} H_{42} O_2$, or	1 Nardic	$C_{21}H_{42}O_2$
Cerotic	$C_{22} H_{44} O_2$		
Melissic	$C_{23} H_{46} O_2$		
Diatomic Fatty Acids.			
Carbonic	$C H_2 O_3$, or	6 Carb. acid	$C_6H_{12}O_{18}$
Glycolic	$C_2H_4 O_3$, or	3 Glycolic	$C_6H_{12}O_9$
Lactic	$C_3H_6 O_3$, or	2 Lactic	$C_6H_{12}O_6$
Butilactic	$C_4H_8 O_3$, or	1½ Butilactic	$C_6H_{12}O_{4\frac{1}{2}}$
Phocic	$C_5H_{10}O_3$		
Lucic	$C_6H_{12}O_3$, or	Lucic	$C_6H_{12}O_3$

Fat may be considered as a combination of fatty acid and glycerine; by superheated steam, by alkalies, by strong acid, by peculiar ferments formed in the pancreas, liver, and bowels, the neutral fats are decomposed and the fatty acids are set free from the glycerine. All the fatty acids and the glycerine, when oxidised, ultimately give rise to carbonic acid and water.

Cholestearin, $C_{53}H_{44}O_2$, in some respects resembles glycerine. It occurs in the bile, blood, brain, spleen, and in all kinds of cysts and chronic abscesses; and it is also met with in vegetables. It is a fatty substance, but its full relationship to other fats has not yet been determined.

Every part of the body, each particle of every part, contains more or less of some kind of fatty matter. No animal substance exists which will not give fatty matter when treated with ether. Chemical analysis is unable at present to determine accurately all the differences in the mixtures of fatty matter from different parts; but differences are detectable by the eye, and the terms waxy, fatty, lardaceous, oily are used to denote variable mixtures of olein, stearine, etc. To the chemist these eye examinations are full of uncertainty and untrustworthy; for the greatest errors have been and will be made by guessing at quantitative and qualitative analyses by looking at substances with or without the microscope. The waxy-looking matter no more constitutes real wax than milky chalk and water makes milk.

I may here for a moment mention a corresponding error in regard to amyloid or starch-like matter. The so-called starchy substance is in no respect related to starch; instead of being a hydrocarbon, it is a nitrogenous substance, and a modification of fibrin, and has nothing whatever to do with amyloid substance, and has no claim to a name which entirely misrepresents the composition of the effused substance.

(To be continued.)

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.(a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College, and of University College Hospital.

Lecture X.

DIABETES MELLITUS — GLUCOSURIA — SACCHARINE URINE — ITS NATURE AND RATIONAL TREATMENT.

(Continued from page 518.)

Pathology.

Diabetes may also be associated with chylous urine. From the observations of Dr. Babington,(b) indeed, it might almost be concluded that a saccharine condition of the blood predisposes to this disease, for many of the patients suffering from diabetes whose blood Dr. Babington examined were found to be suffering from that condition called piarrhœmia (milky serum).

A few years ago I had the urine of one such patient sent to me for analysis by Dr. Charles Coote. The case which was afterwards published by that gentleman(c) was more than usually interesting, in consequence of its origin having been traced to psychial causes (mental anxiety) and from its having run a very rapid course. The ordinary symptoms of diabetes, such as thirst, and excessive flow of urine, only existed for three weeks. The average amount of water daily passed during that time being from five to six pints, and of a specific gravity of 1031·34.

It has already been said that diabetes is often associated with two forms of inflammation. Boils and dangerous carbuncles are well known frequently to accompany it; and now it would appear from a paper in the *Union Médicale* of February 28, 1861, that even gangrene occasionally arises in the later stage of diabetes. This is not at all incomprehensible, seeing the great derangement to the process of interstitial nutrition to which a supersaturated saccharine state of the blood gives rise.

Lastly I have to call attention to impotence as a common accompaniment of diabetes, especially in men nearing or a

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—Ed. *Med. Times and Gaz.*

(b) Todd's "Cyclopædia of Anatomy and Physiology;" article by Dr. Babington on the morbid conditions of the blood.

(c) *Lancet*, September 8, 1860.

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little beyond the prime of life. Before me is the urine of a case of this kind now under treatment at the Hospital. The man J. W., aged 50, was sent to me a few months ago on account of diabetes. This case having been a very favourable one of defective assimilation, under a course of zinc as a tonic, the saccharine urine may be said to have entirely disappeared. At least, the sugar is now in such small quantity that for the last six weeks it has not been considered worth the trouble of a quantitative analysis. Indeed, on the last occasion (two months ago) that a quantitative analysis was made, Mr. Cluff found it amount to only 1·2 grammes (18½ grains) in the twenty-four hours' urine. The patient is at present being treated for the impotence which began shortly after he discovered that he was diabetic, which is now six months since. During this period he has never had an erection, although he has several times had emissions during his sleep.

Cases of this kind are not uncommon; fortunately, however, there is one good thing connected with them—namely, that after the saccharine urine is stopped the steady employment of a strong nervine tonic, such as strychnine, is generally sufficient to effect a cure.

Treatment.—Like all intractable maladies, diabetes has had a great many specifics proposed for its treatment, and this is not surprising, seeing that the number of specifics generally increase in exact proportion to the irremediable character of the disease they are proposed to cure. I am not, therefore, going to take up time by even attempting an enumeration of the names, far less of the vaunted virtues, of the specifics for diabetes, but shall at once proceed to lay down a few of the general principles upon which my own line of treatment is founded.

Fortunately, medicine is of much use in this affection; and although some cases, of course, are beyond all human aid, yet many—I might almost venture to say the majority—are, to some extent, under our control; and although no one would venture to say that he can remove the malady, yet in almost every case we can substantially mitigate the more distressing of the symptoms, and render the patient comparatively comfortable for the remainder of his life. Occasionally we have the satisfaction not only of finding the symptoms improve under treatment, but even the saccharine condition of the urine entirely disappear. We must never, however, speak too sanguinely even of such a case, for a person who has once had diabetes is far from being in the same condition as one who never suffered from the disease; for, just as with insanity, no matter however perfect the lucid interval may be, there ever exists the danger of a relapse, so with diabetes, however long the intermission may be, there always remains the danger of a return of the affection.

The two great types of diabetes, that due to *excessive formation*, the other to *diminished assimilation* of saccharine matter, require, of course, as far as animal dieting is concerned, opposite modes of treatment; for while in the former class of cases it is a most important—I might almost say an essential—adjunct to the other treatment, in the latter it is either detrimental, or, at best, of no use at all.

Even in the most favourable cases for restricted diet, we must never allow ourselves to be deluded into the idea that, because we are mitigating the symptoms, and reducing the amount of sugar in the urine, we are necessarily curing the disease, or we shall frequently be doomed to sad disappointment. In keeping a patient on restricted diet, we are merely withholding from him the straw and mortar out of which the bricks are made,—not removing the makers—so that, as soon as the straw and mortar is refurnished to them, they will again be found at work as actively as ever. It is true that it occasionally happens during the withdrawal of the straw and mortar the makers disappear; but this, unfortunately, is by no means invariably or even frequently the case; it is rather, indeed, the exception than the rule. We must therefore rely on other means for the removal of the makers. Of these other means I shall presently speak. Meanwhile, let me explain that by the term restricted diet we mean not only the avoidance of all sugars, and substances containing saccharine matter, but also of all kinds of food convertible during the process of digestion into sugar. The foods convertible into sugar in the digestive canal are those containing starch (not gums), such as arrowroot, tapioca, sago, flours of all the different kinds of cereals (wheat, barley, oats, peas, beans, etc.), potatoes, carrots, beetroot, parsnips, turnips, and other edible roots.

Green vegetables, on the other hand, such as spinach, cabbage, turnip tops, Brussels sprouts, and lettuce need not be forbidden, as they contain too small an amount of starch to do much injury.

As for animal foods, on the other hand, every imaginable kind of fish, flesh, and fowl may be indulged in, so that even on the most restricted diet the patient has still a large margin for selection—beef, mutton, pork, venison, poultry, game, and wild fowl, oysters, lobster, crabs, prawns, salmon, cod, turbot, etc., Iceland and Irish moss, calf's foot or gelatine jellies, butter sauces, and salad oils. The only true hardship, in fact, the patient suffers is the deprivation of ordinary bread, and that appears to be a more severe one than most people imagine. I have known patients in whom the craving became at last almost intolerable, as if nature were crying out for some indispensable element of food. In order to mitigate this hardship, a great number of plans of depriving bread of the forbidden element, starch, have been suggested, and many of them have been in a great measure successful. Thus, we have bran, gluten, almond, and glycerine breads and biscuits constantly kept in stock by many of our London bakers.(d)

After a time patients get very tired of these substitutes, so it is as well to know that we may occasionally indulge them with well done toast, or very crisp pulled bread, the extra heat having destroyed a considerable portion of the starch normally contained in the article.

As regards drinks, all such as contain saccharine matter are to be avoided; such, for example, as sweet sparkling wines, whether they be champagnes, moselles, or hocks. An embargo is also to be put on all liqueurs and fruity wines, such as young port, Roussillon, etc.; sweet ales, stout, and porter are also to be shunned. If the patient is to be indulged in wines at all, let him have dry Lisbon, old Madeira, Manzanilla, or Amontillado sherries, Chablis, Niersteiner, or old Sauterne; sound clarets may also be indulged in. When stimulants are deemed requisite, brandy, whisky, rum, or Hollands may be used; but these ought always to be employed with caution for the reasons previously given, when speaking of the artificial production of diabetes by means of stimulants introduced into the portal circulation.

All that has now been said regarding regimen has of course only had reference to that form of diabetes arising from *excessive formation*. There are no restrictions either as regards food or drink requisite in cases springing from *defective assimilation*. On the contrary, the duty of the Practitioner is to select for his patient not only that which is most nourishing, but also that most easy of assimilation. He will often find, too, that such cases not only tolerate but even demand the free use of stimulants, in order to support the flagging vital energies, and enable the weakened organs to perform their work. I think if I were asked what is the best remedy for diabetes, I might venture to answer, in the language of Opie, when the student inquired what he mixed his colours with, "BRAINS, SIR." For to say that any one remedy or particular line of treatment is suitable to all cases of diabetes would be simply charlatanism of the worst sort.

For example, when diabetes arises from a traumatic lesion of the nervous system, it is not the symptom of saccharine urine that we treat. It, we know, will disappear when the nerve-lesion is healed. All our energies are, therefore, directed to the hastening of the healing process.

On the other hand, when the cause is not traumatic lesion, but disease of the nervous system, which we know is neither likely to disappear of itself nor by treatment—such, for example, as tumour of the pneumo-gastric nerve—our efforts are directed to the subduing of its effects.

A similar remark is equally applicable to those cases where the source of irritation does not exist in the nerves themselves, but in the organs which they supply, as, for example, in diseases of the lungs, uterus, or stomach. When the cure of these is beyond our skill, we have still to try and mitigate their effects by the administration of sedatives. A certain amount of discrimination is, however, requisite in the selection of the sedative. When the source of irritation is in some part of the nerve centre, which it is not advisable to narcotise, cannabis Indica is, for instance, to be preferred to opium. On the other hand, if it be deemed advisable to produce a sedative effect upon the brain, then opium would be the remedy selected. Again, should the seat of the disease be found to be situated in the pneumogastic nerve, conia is preferable to

(d) Batchley's, 362, Oxford-street, N.; Donges, Gower-street North, W.C.; Hill and Son, 61, Bishopsgate-street, E.C.; Van Abbotts, 5, Princes-street, Cavendish-square, W. Persons in the country or any others who may desire to have the bread made at home may obtain pure gluten flour daily or weekly from Parsons, Fletcher, and Co., 22, Bread-street, E.C.

either of the preceding, as it possesses a special narcotic influence on that nerve.

In another set of cases, again, when the digestive organs appear to be at fault, hydrocyanic acid or other remedies of that class may be employed. In fact, as before said, we must suit the remedy to the special case, and when we fail in finding benefit from any particular remedy, we must try the effects of a combination. For it will be constantly found that a mixture of drugs do good, although each had individually failed to make any favourable impression on the disease.

As the majority of cases of diabetes are very chronic, we can easily afford to test the value of the treatment by testing the amount of sugar passed under each remedy, and change from one to the other until a decidedly beneficial result is obtained.

In cases of diabetes from *defective assimilation* we find the same diversity of treatment required. Some improve under the administration of nerve tonics, such as strychnine and phosphoric acid, others are benefited by various preparations of iron, such as the sulphate, iodide, and citrate. Then again we find cases absolutely demanding the free use of both stimulants and sedatives.

In fact, it is exceedingly interesting and instructive to glance over the various plans of treating diabetes which have proved successful in different hands. Thus we find that in one case M. Burquet found that from the first day of the administration of the protoiodide of iron the thirst diminished, the sugar disappeared, and the strength returned.(e)

Denican again declares that he has successfully treated diabetes by giving the patient equal parts of alum and extract of rhatany.(f)

While Semniola speaks with equal confidence regarding the benefits of electricity in the Protean affection.(g)

From all this we draw the important lesson that the disease is in no case to be treated by name, but according to its special requirements.

In concluding these remarks, I must again insist upon the necessity of attending to the three following aphorisms:—

1. In treating cases arising from defective assimilation by restricted diet, although the amount of sugar eliminated may be reduced, we but hasten the termination it is our desire to avoid.

2. In no case ought we to trust to the specific gravity of the urine alone as an index to the amount of sugar passed, for it is an untruthful guide.

Lastly, we must always bear in mind that in cases of diabetes of the second class (*defective assimilation*) a decided and permanent improvement in the health of the patient is not inconsistent with a temporary rise in the elimination of sugar.

ORIGINAL COMMUNICATIONS.

CASE OF

APOPLEXY INTO THE SPINAL CORD.

By Dr. E. LEVIER, of Florence.(h)

A GIRL, aged 18, had menstruated normally three months, and had never suffered any illness. On April 18, 1864, she expected the recurrence of her menses, but in vain. She was suddenly seized with a most violent pain in the sacro-lumbar region. General malaise, headache, epistaxis, and increase of the lumbar pains ensued the following nights. These phenomena did not, however, hinder the patient walking half a league to consult a country Practitioner. The functions of the lower extremities remained perfectly intact till the night of the 24th, when on the patient's wishing to get out of bed she perceived her legs no longer obeyed her will. There was then complete paraplegia of sensibility and mobility, with retention of urine and involuntary fæcal evacuations, disappearance of the lumbar pain, and the signs of bronchitis. She was admitted into Hospital on May 9, fifteen days after the commencement of the paralysis. It was then ascertained that there existed complete paralysis of voluntary and reflex movements of both lower extremities, extending on the anterior aspect of the trunk to two finger-breadths below the scrobiculus cordis, and reaching behind up to the level of the seventh dorsal vertebra. The strongest induced electric currents do not excite in any of the paralytic regions any muscular contraction, either general or local; electro-puncture proved equally powerless. No pain along the vertebral column, either on touching it or pressing it. A deep bedsore in the sacral region. Slight œdema of the legs. Frequent accessions of slight, low cough, rendered very difficult by the paralysis, which has destroyed abdominal respiration. Intense fever, with a pulse of 116 to 124 beats, and a temperature in the arm-pit of 40°·2 C. The thermometric observations, repeated several times in the first twenty-four hours, constantly exhibit a higher temperature in the inguinal fold than in the non-paralysed parts above. The difference on May 10 was nearly two degrees (1°·9 C.). In the following days there was a rapid abatement of the bronchitis and fever, which almost entirely ceased on the morning of May 18, the pulse becoming reduced to 92 and the temperature to 37°·2 C. in the axilla, and to 37°·8 C. in the groin. Respiration still extremely rapid, from 44 to 52 inspirations per minute. The ulceration on the back of the trunk increased from lying. It was repeatedly observed that the paralysed parts remained quite dry, while the upper half of the body was bathed in sweat. The urine, which was always drawn off with the catheter, is alkaline, and contains shreds of epithelium, indicatory of catarrh of the bladder. This complication, however, ceased after the catheter had been more frequently used. The patient becomes rapidly weaker, while her spirits keep up, and her intellectual faculties are perfectly unimpaired. The limits of the paralysis remain nearly the same. The difference of temperature between the two halves of the body keeps at an average of 0°·7 C.

From May 20 attacks of pyæmic fever manifest themselves, which recur irregularly once or twice a-day. The temperature of the inguinal fold reaches more than once the figure of 41°·2C., whilst that of the arm-pit does not surpass 40°·6C. As a result of lying down, the sacral and trochanteric regions are laid bare, their surfaces yielding a most fetid pus in great abundance. The quantity of urine passed in the twenty-four hours diminishes daily, as also its specific gravity, and the proportion of urea and phosphates. The wasting and paleness of the patient increase more and more.

On June 16 the lower extremities begin to get covered by extensive ecchymoses and vesicles full of bloody and sanious serum. For a few hours moist gangrene set in, and the patient died on June 17, the fifty-fifth day of her illness, after having been comatose for a few hours.

Autopsy.—In the lower part of the spinal cord from the tenth vertebra onwards to its termination there is grey softening, with a fluctuation that may be felt through the membranes, at the opening of the rachidian canal. When the dura mater is laid open, a notable quantity of serous liquid flows out, mixed with *débris* of medullary substance. A longitudinal section of the spinal marrow displays a hæmorrhagic centre eleven centimetres long and nearly as broad as a goose quill. Above this centre are others much less, and paler. The spinal marrow is much softened around the hæmorrhagic centre for an entire length of twenty centimetres. The tint of the softened parts is the redder the nearer they approach the hæmorrhagic centre. The grey and white substances are not separated, and the two halves of the spinal marrow, when divided in the middle and removed for the purpose of examination, sink together in the shape of a flat ribbon. The exact anatomical position of the hæmorrhagic centre can no longer be determined, on account of the diffluence of the spinal marrow; it appears to be at the posterior part of the circumference of the central grey substance, and in a part of the lateral and posterior columns. The rest of the spinal marrow from the softened part has the normal consistence and colour, excepting a single point on a level with the fourth dorsal vertebra, where a very circumscribed patch of white softening occurs. The microscope does not disclose in the hæmorrhagic portion blood corpuscles, but in their stead a considerable quantity of amorphous pigment matter, brownish or yellowish, is observed. The principal feature is a mass of large cells, with well-defined outlines, containing fat and pigment globules, mingled with a large quantity of disintegrated medullary constituents and myeloid matter. This disorganisation is seen from the microscopic boundaries of the softening up to the level of the fourth dorsal vertebra. Brain, lungs, and heart perfectly normal. Spleen larger than normal, nineteen centimetres long and five centimetres across; its parenchyma is resisting, and of a dark reddish colour. Kidneys also in-

(e) *American Med. Jour.*, January, 1857.
(f) *Gaz. Med. de Paris*, No. 31, 1861.
(g) *Med. Times and Gaz.*, November 9, 1861.
(h) From *L'Imparziale*, No. 11, June 1, 1865.

creased in size, very soft, greyish; the naked eye observes commencing fatty degeneration of the cortical substance, which is confirmed by the microscope. Bladder distended by urine, and scarcely altered by the catarrh. Genital organs those of a virgin. The muscles of the paralysed parts submitted to the microscope disclose a complete disintegration of structure. The striping has completely disappeared; the elementary fibrils present an homogeneous appearance, and are finely granulated, without, however, any distinct fat globules being observed. The muscles of the upper half of the body differ in being darker coloured and harder, and present also under the microscope the normal characters.

The result of the autopsy completely confirmed the diagnosis of an hæmorrhage in the substance of the lumbar spinal cord; a diagnosis made during life, and founded on the following facts:—1. Sudden appearance of complete paralysis of sensibility and movement, preceded by signs of congestion and by violent pains in the loins. 2. The existence of a known cause of spinal congestion—namely, the cessation of the menses. 3. The absence of convulsive phenomena and of any fever during the initiatory stage of the disease, excluding thus the idea of myelitis and of myelo-meningitis.

The total suspension of the central nervous influence over the lower half of the body, and especially the annihilation of reflex manifestations warranted the supposition of a disorganisation of the entire transverse section of the cord, to a pretty considerable extent. Hæmorrhage between the membranes of the cord was at least doubtful, from the absence of convulsive phenomena, and from the existence of abolition of reflex activity, which has its seat in the central grey substance. The femoral arteries presenting a distinct pulsation excluded with certainty another, but very rare, cause of sudden paraplegia—namely, embolism of the aorta.

One of the most remarkable features of our case consists in the peculiar form of the paralysis, marked by the entire absence of any muscular excitability. Neither the will, nor mechanical or electric stimuli caused any contraction, even of the individual fibres. The disorganisation of these recognised under the microscope of itself explains this phenomenon; while, on the other hand, it was impossible to say whether it occurred or not at the onset of the paralysis, as the patient did not enter the Hospital till the fifteenth day of the disease. Such a rapid degeneration of paralysed muscles has been met with but rarely in any recorded pathological and physiological facts. (*Vide* Schiff, "Physiologie," p. 176.)

The immediate consequence of the paralysis of the abdominal muscles was the suppression of abdominal respiration, and hence a difficulty in the efforts of expiration and of expectoration. The coincidence of bronchitis caused accessions of dyspnœa, and, probably, also the fever which attacked the girl at the commencement of her illness. Another interesting phenomenon consisted in the constant increased temperature of the paralysed parts. After Professor Schiff produced experimentally this elevation of temperature by lesions of the cord nearly identical to that produced by apoplexy in our case, some pathological observations of vaso-motor paralysis in man have been made, but very few. Now that the attention of Practitioners is directed to these facts, thermometrical observations become more and more necessary in nervous diseases, and deserve the more consideration from the possibility of their materially guiding us to a diagnosis of the seat of any central lesion, since we know that the vaso-motor nerves of the different parts of the body issue at different levels from the spinal cord.

The suspension of perspiration in paralysed parts, as was observed in our case, is a symptom hitherto without parallel in the numerous observations of spinal paraplegia. Tanquerel des Planches, who observed the cutaneous secretion in lead-paralysis, asserts never to have seen any such suppression, but, on the contrary, the secretion of an abundant tenacious sweat on the paralysed parts.

FEMALE LONGEVITY.—Some rare illustrations of prolonged life in the fair sex have lately appeared in the obituary of the *Times*, more especially on Saturday last, when the deaths of six ladies were recorded, whose united ages amounted to 517 years, giving an average of 86 years and 2 months to each. The oldest was 96 years, and the youngest was 80 years of age. One of the nonogenarians was the mother of the respected Medical publisher, M. Baillière, of Regent-street, who it is hoped will reach the same age as his venerable parent.

ON THE LATE PESTILENCE IN CAIRO, EGYPT.

By JOHN PATTERSON, M.D.,
Egyptian Medical Service.

THE "cholera cloud," so long looming in the distance, has at last broken over Egypt with a violence and fatality scarcely ever before paralleled. For the few previous months its appearance on the Mokullah coast was known, and its progress along the shores of the Red Sea towards Jeddah was occasionally reported, and fears expressed of its being carried by the pilgrims to Egypt. With the arrival of the pilgrims came vague reports of the ravages of some disease of a very fatal character at Mecca and in the valley of Mina. This disease was assumed to be cholera. During the passage of the pilgrims through Egypt isolated cases of this malady were reported to have occurred, but little credit was given to these reports, as every year rumours to the same effect lay hold of the public mind. It did, however, appear in Alexandria, where the pilgrims remained some time, and spread rapidly over every part of the city, causing such a fearful panic that the European population after the first shock fled *en masse*. This great city became in a state of demoralisation, and no less than 40,000 passports are said to have been issued in the course of the first three weeks by the various consulates. After fearful devastation there, the disease spread to the neighbouring smaller towns of Damanhour, Tautah, Zag-zig, and along the course of the Suez Canal, committing fearful havoc and causing dire panic. Its appearance in Cairo was now certain, and we were not long left in doubt. The first case occurred in my own practice, in the person of an English *employé* of the Egyptian Government, who arrived from Alexandria in a state of apparent good health at three o'clock p.m. The case was a brief one. Suddenly seized with pain at the pit of the stomach, he vomited twice, was purged twice; motions not large in quantity, fæcal, but thin and watery; slight cramps in the calves of the legs. Collapse quickly set in, and he died soon after I saw him. The duration of his illness, dating from the hour of his arrival, was about seven hours. A few days after, another case equally fatal occurred, soon after arrival from Alexandria. These were speedily followed by a general outbreak of the epidemic amongst the European population, especially the English, of Banlae, a suburb of Cairo. The disease now rapidly spread over Cairo itself, assuming a most deadly character, striking terror and despair into every heart. The panic was fearful to behold, and, doubtless, to this a good deal of the fatality may be attributed.

The Medical statistics of Egypt will be of little value, I fear, for deducing any practical hints for the treatment of this pestilential malady. The conflicting testimony of the results of treatment, both in Alexandria and Cairo, leaves one in doubt as to the correctness of the diagnosis of this disease in many of the cases, which, judging from its boldly-pronounced characters, seemed impossible to be confounded with any other disease endemic in this country. Some of the results of treatment by the every-day remedies are too ridiculous to need other comment than that the mortality was reduced below that of any other disease, and so the malady at once lost its pestilential and fatal character. This difference may, however, be explained by taking into consideration the prevailing character of disease at the time of year this epidemic appeared. At the same time it will the better enable us to consider the true character of the epidemic itself. In Cairo, during the three hottest months of the year, when fruit is in season, and when atmospheric changes are frequent (June, July, August), a severe form of diarrhœa often prevails; this is attended with vomiting and pains of a crampy character, chiefly affecting the calves of the legs and feet, and very often accompanied by great coldness of the surface of the body, something of the nature of mild autumnal cholera in England, but more severe in its tendency towards collapse. Bilious attacks, also, when severe, often present this type. Now, if, as is possible, these cases were considered and treated as cholera or the existing epidemic, we lose all clue as to the true nature of the pestilence which has just visited Egypt. In reference to this we must also bear in mind the tendency that certain diseases have to take on the characters of a prevailing epidemic towards their termination, and when the patient is weak. The form of disease above described, though sometimes very severe, is yet very amenable to treatment by the ordinary remedies usually given for the cure of the diseases called choleraic or cholera,

with which names we always associate diarrhœa and vomiting. These remedies were of little or no use in the truly pestilential cases of the malady.

In its most fatal forms the disease presented the following characters:—Sudden and acute pain in the epigastrium, with a feeling of great nervous depression and chilliness; a large bilious motion suddenly passed, frequently, but not always, followed by a large watery motion within a few minutes, having mucous flocculi floating on it; nausea, with or without vomiting, the vomited matter being the same as that of the last motion. The bladder was emptied with the first motion, afterwards no urine was passed. In the worst cases no more purging or vomiting; but if the latter continued, it was not at all spasmodic, the patient simply ejecting the fluid from the mouth in a full stream, and without effort; pulse, from the first, scarcely perceptible; tongue white and cold; breath cold; voice husky and weak; skin covered with a viscid moisture, which often appeared suddenly and at different stages of the malady. In an hour, or less, dead collapse set in, and the patient expired within six or eight hours, showing great restlessness. In all the cases the mental faculties were perfectly clear to the very last moments. In many of the cases the collapse was more sudden; the patient was struck down as if by a blow; there were neither purging, vomiting, nor cramps,—all the functions were suddenly suspended, yet the intelligence remained perfect. Of thirty-four deaths in this class, more than half died within eight hours; the longest period was eleven hours, only excepting three or four who, after coming out of collapse, died from exhaustion and want of functional power. A second mode of invasion was equally well marked:—Sudden purging and vomiting; mild cramps of the leg and abdomen; great oppression of breathing, and feeling of heavy weight at epigastrium; marked diminution of the pulse; coldness of the surface of the body; restlessness and anxiety. The skin assumed a dark, leaden hue, which was wanting in the more sudden cases. Collapse gradually came on. The purging and vomiting seemed always to cease in these cases just as the collapse was fairly established or a little before; no secretion of urine. This form was as fatal as the first, only a few hours longer continued, death generally occurring within twelve hours; intelligence also perfect.

The third form of invasion varied somewhat. Cramps were generally the first symptom, more or less violent; the purging and vomiting severe, immense quantities of a whitish, whey-like fluid being passed, with mucous epithelium floating on it; function of kidneys suspended. In all these cases engorgement of the liver was more or less manifest; the organ itself could often be felt distinctly, and seen bulging much beyond its natural limits. The pain in the epigastrium was not severe in these cases, nor was the sensation of weight much complained of. The collapse, though well pronounced, did not partake of the same deadly characters as in either of the two former modes of invasion. The greater number of these cases recovered from the collapse; many, however, died from congestion of the brain and other organs, and in all the convalescence was complicated by local congestions. In one case no urine was passed for five days, yet the patient recovered. Several had severe jaundice.

These are three well-marked modes of invasion observed in a varied practice amongst almost every variety of the human race. Many cases, of course, could not be referred to any distinct class, yet one circumstance marked a great difference between this epidemic and a previous one in Egypt in 1855; viz.,—that premonitory diarrhœa was not a distinctive character of the disease. The majority of the cases had no premonitory diarrhœa; they were men and women struck down in the prime of life and in good health. One case, a man of 50 years, strong and healthy, went, as was his custom, to take a warm bath. He was taken out of the bath in dead collapse, and died in six hours, having had neither purging nor vomiting, and very mild cramps. Another case, an Abyssinian, 30 years of age, strong and muscular, temperate in his habits, while engaged at his work was struck down in my presence with dead collapse, from which he never rallied, though everything possible was tried. Here there were neither purging, vomiting, nor cramps. These cases will give some idea of the dire nature of the pestilence as it showed itself in Cairo in the latter part of July and the whole of August. Post-mortem examinations have thrown no new light on the true nature of this malady,—pulmonary and hepatic engorgement; heart loaded with black, thick blood; stomach and intestines generally bloodless, containing more or less of a thin milky fluid or glairy sort of mucus adhering to the mucous membrane of the intestinal canal. The membrane itself had a sodden, œdematous appearance, and could be as easily separated from the subjacent tissues as the rind from a mandarin orange; the kidneys healthy; urinary bladder firmly contracted. The medicines were found in the stomach as they had been administered a few hours before, clearly proving how little good they could do in such cases. As a rule, the secondary fever presented a marked typhoid character, not admitting very active treatment. It was more severe in the cases where the collapse had been milder, but longer continued; more active where the collapse had been sudden, and of shorter duration. The most marked symptom during recovery from true cases of the pestilence was the enormous quantity of black, oily-looking matter passed by stool.

The treatment was as varied, and as successful or unsuccessful, as usual in times of epidemic. Every one had an opportunity of trying his own special remedy, which, according to theory, should have been successful. Specifics abounded, and thousands of the population perished! The peculiar circumstances of general practice during the prevalence of such an epidemic, and the enormous labour the Physician has to get through, render it difficult to report a true estimate of the value of remedies. Dover's powder and calomel, acetate of lead and opium, ipecacuanha in large doses and in small doses; bismuth and opium, laudanum and ammonia, laudanum and catechu, bismuth and morphia, combined with diffusive stimuli; calomel alone in large doses, and in small doses often repeated; chalk mixture and catechu, tannin, chlorodyne, extract of nux vomica, Indian hemp, cherry laurel, mint, camphor, cinnamon, brandy, ether, injections of turpentine, strong soups, wine, copious use of camomile infusion, etc.; external applications of turpentine, mustard, etc.; friction with camphorated oils and ammonia to spine; dry frictions to spine, hot baths when available; demulcent drinks. All these were tried in various combinations to suit special circumstances attending a case, and, as a rule, I should say, they seemed to have pretty nearly the same effect—that was, not very much. It was evident that opium must be carefully employed where collapse was such an early symptom. Experience soon confirmed this view; nor can I but own that many cases of collapse were hastened by the previous and injudicious use of opium, Dover's powder, and chlorodyne. Unfortunately, every one was provided with a "specific for cholera," which generally was composed of one of these medicines, and which was regularly taken to ward off the disease and to check diarrhœa. No doubt these medicines were at times useful, but where they had been freely used and collapse set in it was more intense and somewhat modified in its character. It was necessary to discontinue the use of these medicines in a great measure, for where they had been so taken and the patients came out of the collapse, they were nearly all affected with congestion of the brain, lungs, or liver, and many died of the former. This was more particularly observed where chlorodyne had been used. Some cases were brought out of collapse by external frictions and warmth, and, when the functions were apparently being restored, suddenly went off again into collapse and died. I fear that in some of these cases the medicines had laid dormant in the stomach until reaction came on, and then they exercised a pernicious influence over the weakly returning vitality. Calomel and all other medicines seemed useless in the bad cases. The use of external stimuli was our main dependence until a little reaction was induced; then the special indications were treated by their appropriate remedies. Probably much good was then done amongst the European population; but, then, amongst the native population I have seen just as many get well without medicines, if they only got over the collapse, and with them the secondary fever was generally milder. It may be generally stated that each special medicine had about the usual and desired effect when applied to fulfil a special indication,—astringents and opium where diarrhœa predominated; sedatives and antacids for vomiting, etc. In the truly pestilential cases a strong mustard emetic did good if it produced vomiting. This was followed by a mixture of carbonate of ammonia, carbonate of magnesia, strong camphor mixture, and mint, to which, in cases where admissible, small stimulating doses of laudanum were added. This mixture could only act as a diffusive stimulus and antacid, thus, certainly, fulfilling two important indications; but, when the diarrhœa and vomiting were present, it seemed to produce a wonderful effect in controlling them. (This, with the addition of opium, was largely used as a remedy for the simple diarrhœa arising from the irritation produced by the stimulants drank to keep off the epidemic, and was found of great service.) At the same time,

external means were freely employed—as warmth, sinapisms, turpentine epithems, and general frictions. Strong soups and wine or brandy had also their proper place, the former in small quantity at a time, but often repeated, and all iced, if possible. The reaction, when established, was kept up by the free use of camomile infusion and acetate of ammonia.

The peculiar character of the collapse was a striking feature of this epidemic, which, as the disease progressed, attracted attention. Thinking there was some resemblance between it and some of the other symptoms to those observed in a form of pernicious fever that formerly prevailed in Alexandria, I was led to think this malady might be something akin to, or be a form of, "perniciosa" masked under choleraic symptoms (these diseases often coming in under the guise of another), and determined to try the treatment used in that form of disease. A large fly blister was placed over the epigastrium, quinine and camphor given in large doses at first, then gradually diminished; a free allowance of iced champagne and ice. That this treatment did good, I believe. Many recovered from the collapse, and the reactionary fever was less severe in its general character, and more manageable. The total number of cases, however, in which this treatment was tried is not sufficient to justify a decided opinion. With the quinine I generally gave a little calomel. The reaction from the cases thus treated was first kept up with very weak brandy-and-water iced, afterwards iced water alone, the patient being allowed to use ice freely in small morsels. Strong soups and beef-tea were also given, but all iced, and great relief was experienced from the application of ice near the epigastrium, as nearly as possible over the solar plexus. This treatment was applied to some of the worst cases later on in the epidemic, where former experience had taught that the ordinary plans of treatment were useless, and where post-mortem examinations showed that the power of absorbing the usual medicines was deficient, if not entirely wanting, and where it was evident there was no response of the nervous system. The result was a proportionately less mortality, though in a smaller number of cases. Two things, I regret to say, were not tried—the use of electricity in some form, and the subcutaneous injection of medicines. The latter seems likely to be an efficacious remedy in a disease where more active absorption of the medicines is necessary, and in that form of the disease where death may truly be considered as the first symptom, one is justified in having recourse to any remedy that holds out a hope. I regret that the want of the proper instruments in time prevented me from trying the subcutaneous injection of quinine and electro-galvanism together, and would suggest their being submitted to a fair trial.

What was the true nature of this epidemic, and the distinguishing mark of it? It was called in Egypt "cholera Asiatica," "cholera fulminante." If by the word cholera, we mean to characterise a disease, the chief symptoms of which are purging, vomiting, and cramps, we have numerous cases to prove that these symptoms were no necessary part of the epidemic. Collapse may be considered a distinguishing character of the malady as it existed in Cairo. The collapse, however, was different from what we are accustomed to observe as a consequence of exhaustion from severe diarrhœa, vomiting and cramps, and certainly different from the collapse observed by myself in the cholera of 1855 in Egypt, and in two previous epidemics in the north of England. In the description of the modes of invasion, the leaden hue of the skin is given as belonging to one mode. Since that was noted, I have heard from Mr. H. Calvert, H.B.M's. Consul at Jeddah, his description of the disease as it appeared in that place. He particularly noticed that the "blueness" of the skin which he had always been led to consider the true mark of cholera collapse was wanting; and he assures me that many of the cases got well from this collapse by the free use of port wine and arrow-root, the only medicines he had at command. I was struck by Mr. Calvert's account, from having already observed that there was some difference in the nature of the collapse from that of three previous epidemics of cholera seen by myself, one in Egypt.

The true characteristic of this epidemic seemed to be the reactionary fever. Of the numerous cases treated by myself, up to a certain date of the epidemic, I have selected 327, which were followed by this secondary fever as typical of the disease, although its severity was not always proportioned to that of the collapse. All other cases have been excluded and classed as choleraic in character, though the collapse was well pronounced; but the secondary fever was wanting. Now, of these 327 cases, purging and vomiting were not prominent symptoms; cramp still less so. In a considerable number the two former were wanting, in some all were absent.

If we divest ourselves of the ideas and associations that the word "cholera" suggests, and associate it less with purging and vomiting, perhaps we may obtain some clue to the true nature of this pestilence, which has just so fearfully visited Egypt, and may probably extend its ravages to Europe. Here was a disease, pestilential in its nature, whose first effects were produced through the nervous system, probably a special division of that system. The sympathetic system of nerves was clearly paralysed in the majority of the cases, and that, too, in the beginning. The functions of secretion and absorption lost their natural relation to each other, and in many cases the latter entirely ceased. The first motion, or motions, which passed from the bowels seemed to be the effect of a sudden contraction of the lower part of the gut, caused by shock to the nervous system, and merely expelled what fæces were ready for expulsion, emptying the bladder at the same time. The watery secretion which followed was probably the simple passage from the bowel of the fluid of mechanical transudation through the large paralysed surface of mucous membrane. The functions of the liver and kidneys were in a similarly paralysed state. The want of absorbing power of the stomach was sufficiently evident in life, independent of the fact being established after death. All these symptoms seem clearly to point out to a certain focus, a diseased condition of the sympathetic system of nerves. The sudden pain with which the patient was often seized over the epigastric region may still further localise the malady, and assign its chief action to the solar plexus. The facts of such perfect intelligence remaining till the last moments of life, and the voluntary powers remaining perfect, show how little the cerebro-spinal system of nerves is affected; and this may be also taken as evidence of a special system being disturbed, and points to that which presides over the functions of organic life, and which specially regulates the functions of the secreting and absorbing organs.

Clearer ideas than we possess as to the treatment of cholera, or this pestilential disease, may arise if such a relation can be clearly established, and much valuable time be saved for some more efficacious mode of treatment than that we at present employ, —that of simply trying to check diarrhœa or vomiting by astringents and sedatives, or the use of chologogues to stimulate to action a liver which has lost its guiding power, and all the various means we are in the habit of employing to produce certain effects in certain organs, when the very power which alone can assist this is wanting, and no direct effort being made towards restoring it.

I am not aware that any meteorological observations were carried on by any one in Egypt. This, certainly, is much to be regretted, as no country is better adapted for tracing the progress of an epidemic and, at the same time, observing atmospheric changes which may influence its character. That peculiar atmospheric conditions attended this malady in its march seems to be generally admitted. The question of contagion or non-contagion is too important a one for Egypt, to be briefly discussed; but a collection of the facts bearing on the subject during this epidemic may supply data on which certain conclusions might be established.

Cairo.

P.S.—The action of ice in these diseases deserves attention. During the whole of this epidemic I had a daily supply from Suez, and gave it freely, and allowed the patients to use it in small morsels. The craving desire for fluids is much relieved by it, and the stomach does not become distended by the constant drinking the thirst induces. This, and the application to the epigastrium, may, in some degree, act as a special tonic to the solar plexus and other sympathetic ganglia. The action of ice, however, as a general tonic, must not be overlooked. In the epidemic of 1855, in Alexandria, ice was very much used by my colleague, Dr. Ogilvie, and myself, and we then were convinced of its utility.

NEW FELLOWS.—At a meeting of the Council of the Royal College of Surgeons, on the 9th inst., the following members of the College having been elected Fellows at previous meetings of the Council, were admitted as such, viz., Messrs. Francis Ayerest Young, Hawkhurst, Cranbrook, Kent, diploma of membership dated October 31, 1834, and Richard Rickman Shillitoe, Hitchin, Herts, Deputy-Coroner for North Herts, August 4, 1840.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

RETINAL DISEASE OCCURRING IN THE COURSE OF KIDNEY DISEASE.

We report this week cases from several sources showing the connexion of certain changes in the retinæ with Bright's disease. We give also remarks on the general bearings of the subject by Mr. Hutchinson and Mr. Hart. We have already (Jan., 1864) published a series of cases of a similar kind from the practice of Mr. Hulke; and in the following series we relate one which was partly under his care. The fact that, with kidney affections, there are frequently to be seen characteristic changes in the retina cannot fail to strike Physicians as one most important means of studying this important class of disease. As to the nature of those changes, we cannot do better than quote from Mr. Hulke's remarks on the cases published in this journal for January 2, 1864. He says:—

"The structural alterations which give rise to these morbid appearances have been ably worked out by German investigators, with whom the retinal disease appears to be more common than with us. Summed up briefly, the greyish opacity of the nerve-disc and retina proceeds from serous infiltration, from sclerosis and hypertrophy of the connective tissue, and from a nodular thickening of the nerve fibres, which acquire such dimensions that some have maintained them to be sclerosed ganglion cells. The small, brilliant white dots are groups of large granular oil-corpuscles, situated in the layer of the outer and of the inner granules. Schweigger supposes that they originate in the connective tissue corpuscles. The redness of the optic disc is from capillary congestion, and perhaps also from the presence of new vessels. The apparent interruption of the vein is due to the intervention at those spots of a thicker layer of opaque retinal tissue between them and the observer. The white appearance of the arteries is caused by amyloid changes in their walls, with corresponding diminution of their calibre. The hæmorrhages proceed from —*a*, the disturbed vis capillaris resulting from the morbid state of the blood produced by the kidney disease; *b*, an increased mechanical resistance to the free efflux of blood through the veins at the nerve-disc offered by the sclerosed connective tissue; *c*, and in some cases, hypertrophy of the left ventricle, which urges the blood more freely into the retina than it is able to escape from it. These are the morbid changes which cause the loss of sight. The sudden obscurations (distinguished from accidentally-discovered pre-existing dimness) depend on hæmorrhages, and their recession coincides with the removal of the extravasated blood. Some cases are susceptible of considerable improvement by treatment. That which I often follow consists in putting a leech to the temple once a week, and the internal exhibition of the tinct. ferri muriatis. Corrosive sublimate, so useful in some forms of retinitis, has not appeared to me to be serviceable here."

We are quite aware that with some Physicians there is a great deal of incredulity as to the existence in the retinæ of any characteristic marks of Bright's disease. There are, indeed, three opinions on this, as there are on many Medical subjects. To give these opinions more concisely than courteously, we may say, first, that it is not true; second, that it is not new; and third, that if true, it is of no practical value. Perhaps we might, to use a common remark, add a fourth, that although there is much novelty and truth in the matter, the new is not true, and the true not new.

We have heard a Hospital Physician remark that he did not believe that the retinæ were affected in Bright's disease, as he had often asked patients suffering from that disease if their sight were bad, and he had never been told in reply that it was. It must be observed that, although the defect of sight may be slight, or may have come on so slowly that the patient may know nothing of it, or be careless about it, the appearances in the retinæ are, in some cases, very striking. Our readers will find that Mr. Hart draws especial attention to this point in his clinical remarks. Although, then, a patient may say his sight is good, he may have white, tallow-like dots in his retinæ. In recording the fact that our patient says he can see well, we must not overlook the other fact that there are slow changes going on in his eyes which may ultimately impair his sight. Similarly, if a patient tells us that he was in perfect health until one morning when he was attacked with hemiplegia, we may record what he says—that he felt well—but we do not infer from that that he was really a sound man when we find his arteries degenerated and his urine albuminous.

As to its being new, it has without doubt long been known that patients with kidney disease have sometimes bad sight, and, moreover, that they are liable to sudden failure of sight, but the nature of the changes to which this was owing could not possibly have been known before Helmholtz showed us how to look at the retinæ. Moreover, when a patient has kidney disease and defect of sight, it would be running the risk of a great blunder to conclude that the defect was necessarily due to the changes which often go with advanced disease of the kidney. The ophthalmoscope will always enable us to make a correct diagnosis.

It seems hardly worth while to discuss the third point. A fact is always "practical." The first thing is to be satisfied of the accuracy of what is announced to be a fact. If, then, Physicians examine the eyes with the ophthalmoscope in kidney disease, and first assure themselves that there really are changes, they must, we submit, not only recognise their importance in the study of defects of vision, but, further, their significance as showing how wide-spread the degenerations of tissues are when there is granular disease of the kidneys. The time is past for us to exaggerate the importance of defects of particular organs. We do not now always blame the kidney as being solely in fault, or even first or most in fault, when we find albuminous urine, although we continue to call a certain constitutional condition by the name of chronic Bright's disease. Every Medical man notes the concurrence of degeneration of arteries with chronic Bright's disease, and it is certainly equally necessary to note the occasional concurrence of other equally marked, although less superficial, changes. For if no better treatment can be founded on this knowledge, we may yet learn much as to what chronic Bright's disease means. It is one more point from which to work at a subject in which the Physician, the Surgeon, and the Ophthalmologist are each extremely interested. It is, then, of great importance not to lose the chance of studying this local affection, whether the patient's sight be good or bad.

As regards prognosis, there is reason to believe that these retinal changes are of very unfavourable import. It is a sign bad enough when a patient with—let us say—hemiplegia has albuminous urine, but albuminous urine, doubtless, has still a worse meaning when there is, besides, degeneration of the retinæ.

It is very important that the microscopical condition of the urine should be studied *pari passu* with the changes in the eye, and that the precise form of the kidney disease be noted after death.

ST. MARY'S HOSPITAL.

(OPHTHALMIC DEPARTMENT.)

CLINICAL REMARKS ON CASES OF AMBLYOPIA AND RETINITIS ALBUMINURICA.

(Under the care of Mr. ERNEST HART.)

In calling attention to a case of advanced albuminuric retinitis, Mr. Hart remarked that it was of particular interest to ascertain how far the disturbances of vision, associated with nephritic albuminuria, were pathognomonic, and what extent the ophthalmoscopic examination of the eye, in patients so affected, could assist the diagnosis or aid the treatment. Ophthalmic Surgeons occasionally meet with cases of acute retinitis albuminurica in which the affection of the sight is the first striking symptom, and in which the ophthalmoscope anticipates the diagnosis of the Physician, derived from the clinical history and the chemical analysis of the urine. Such cases, however, were, in his experience, rare, and usually were examples of oversight due to various causes, such as eccentricity of the complaint or the patient, and unusual complications diverting the attention of the Physician. In the case in question the patient had come to a Practitioner complaining of acute pains in the ankles—"rheumatic pains," as he himself called them. That diagnosis had seemed to be borne out by various collateral circumstances, and had passed muster; meanwhile, however, and rapidly, the sight had become very much disturbed, and, as the man's livelihood depended upon his keen perception of minute textile difference of structure, he was quick to perceive and to suffer from this deterioration of the acuteness of

his vision. When examined by Mr. Hart, the ophthalmoscope immediately revealed, in the right eye, the most marked and considerable retinal changes, perfectly diagnostic of albuminuric retinitis, obscurity of the papilla, bright fatty patches of the retina, with a tendency to grouping around the yellow spot, and irregular extravasations of blood affecting the linear arrangement. The diagnosis was permissibly positive, for the changes accompanying albuminuric retinitis once seen cannot be mistaken. The vision of the eye was considerably affected, much more so than the patient had been aware till the eyes were tested separately. Only No. IV. Giraud Teulon's type could be read at the ordinary reading distance. The examination of the urine showed a large amount of albumen. Treatment by muriated tincture of steel with a free use of the Turkish bath failed to relieve the patient, and he died at the end of three months, all but blind with the right eye, and having very imperfect vision with the left. The pathological changes were of a typical character, the ecchymoses becoming more numerous, the fatty patches coalescing, and the macula lutea being almost entirely destroyed; the retina was not detached. Mr. Hart expressed the opinion that the ophthalmoscopic observation of these symptoms was interesting, as affording a means of studying the changes which the nervous, like the other tissues, undergo in this blood disease, but they afford no indications for local treatment, which, indeed, in such a condition, would be out of place. To what extent could repair go on after serious destruction of the retinal nerve tissue? An examination of a series of cases of albuminuric retinitis might afford the answer. He had not had the opportunity of witnessing any case in which good result had attended treatment, but probably others might have done so. He knew of no record, but would hesitate to believe that nephritis with albuminuric retinitis was always fatal. This was a point to be decided by the accumulation of evidence.

There were, however, other and more trifling affections of the sight in nephritic albuminuria which came under the notice of the Ophthalmic Surgeon, in which the ophthalmoscope revealed nothing, but to which attention should be directed, because he believed that, as they were of earlier occurrence so they were of greater value in directing treatment. There is a form of intermittent dimness of vision unaccompanied by ophthalmoscopic change which had frequently come before him, and in which, guided by the observations of Landouzy, he had always looked for albuminuria in the urine, and several times had found it. It was unassociated with any apparent change in the retina, and was probably due to the cerebral disorder either precedent to or consequent upon albuminuria. M. Landouzy, who approached the question from the simple study of the naked eye symptoms, had drawn the following conclusions from his study:—1. That the disturbance of vision is an almost constant symptom in albuminous nephritis. 2. That these troubles constitute a new species of amaurosis, which may be called albuminuric. 3. That the albuminuric amaurosis cannot be attributed to the deterioration of the strength. 4. That it very often announces the disease as an initial sign, before the invasion of the pathognomonic accidents. 5. That it appears and disappears, and then returns without exactly following the phases of the albuminous deposit in the urine or of the œdema. 6. That it should lead us to consider albuminous nephritis as an alteration of the ganglionic system.

Mr. Hart remarks that Dr. Roberts, in his recent work, attributes the "hæmorrhagic blindness" of retinitis albuminurica, which he speaks of as in no sense uræmic to the hypertrophy of the left ventricle, which so commonly accompanies a contracting kidney and the increased tension in the arterial system consequent thereto. But that this explanation, while it assists to understand the frequency of the extravasation from rupture of small retinal vessels, would be incomplete unless we recalled also to mind the considerable fatty degeneration of the retinal connective tissue and the sclerosis of the nerve-fibres. The deposit of fat was frequently locally anterior to the appearance of ecchymoses. The value of ophthalmoscopic examination in all cases, whether of amblyopia or retinitis albuminurica, was thus apparent, both in reference to the negative information which it afforded in the one case, and the positive data supplied in the other. Intermittent amaurosis associated with albuminuria pointed, he said, to a train of causes very different to those connected with the incomplete but persistent blindness due to fatty substitution and inflammatory destruction of the nerve fibres of the retina. It was to be observed how much more complete the loss of vision was for the time where, as in the amblyopic state noted, the cause was central, than where, as in the true albuminuric retinitis, the loss of vision was due to peripheral disorganisation. A considerable amount of retinal disease was compatible with the retention of considerable power of sight; and thus, as in other forms of disorganisation of the retina, especially pigmentary retinitis, the patient did not discover the serious affection of the eyes until the disease had extended very far. Hence, if the use of the ophthalmoscope were deferred until urgent symptoms appeared, the examlnation was apt to be put off till the chances of doing good were materially diminished. It was the more important to remember this because it was precisely in the case of peripheral disease that the ophthalmoscope afforded the most extended and most useful information, and enabled the Surgeon or Physician carefully to intervene, if in time and in suitable cases.

GUY'S HOSPITAL.

DEFECTIVE SIGHT FROM DEGENERATION OF THE RETINÆ—BRIGHT'S DISEASE—PERICARDITIS—DEATH—AUTOPSY.

(Under the care of Dr. GULL.)

We saw the patient whose case we are about to relate a few days before her death. The ophthalmoscopic signs were characteristic of Bright's disease. They were such as would lead a good ophthalmoscopist to suspect, if not to diagnose, disease of the kidneys. We were, therefore, interested to hear the patient say that she had been for some time before her present urgent symptoms under Mr. Hulke's care for defective sight, and that she had heard him describe white patches in her eyes.

We have ascertained that from the ophthalmoscopic signs in February Mr. Hulke suspected kidney disease, and found the urine to be albuminous. He told the patient, also, that her life was precarious with such evidence of general disease. At our request, Mr. Hulke has allowed us to make use of the following notes of the patient's case:—

"M. A. H., a sewing machinist, formerly a servant. She was a married woman, but had been deserted by her husband, and lately she had undergone much hardship, and had often got wet. She was, however, in general appearance, healthy, and was short and stout.

"Her first visit was on February 25, her sight having begun to fail at Christmas. She had, she said, 'sat all day in her wet clothes.' The dimness had progressed, so that at the date of her visit she could not manage her machine. Her vision was affected on each side, so that she could only read words of No. 20 of Jaeger's types.

"*Ophthalmoscopic Signs.*—Redness and opacity of optic nerves. Central vessels indistinct; arteries most so. Retinal veins turgid; fundus strewed between equator and optic nerves, with opaque greyish-white patches, whether in choroid or retina I am not able to positively decide.

"These signs made me suspect kidney disease, and her urine was found to be loaded with albumen, and also contained numerous large waxy casts, and also granular casts, large epitheleal scales, and clusters of pus corpuscles, last two probably vaginal. The patches are not raised and don't shine; the large retinal veins run over some of them; therefore the patches are in outer layers of the retina or in the choroid. The muriate of iron was given.

"March 1.—Optic nerves less hazy. Capillary hæmorrhages in retinæ.

"April 20.—Yellow spots strewed with white dots.

"August 9.—Optic nerves less hazy; paler; central vessels small; yellow spots as at last date; vision, right No. 10, left No. 8."

We now give the notes of the patient's case as found in the pathological records of Guy's Hospital:—

"Mary Anne, age 26, was admitted October 13th. This patient was said to have been ailing from more urgent symptoms for a month. She had had swelling of the legs twelve months ago, and for this had been in the Hospital. Whilst in the Hospital she had pericarditis, epistaxis, and hæmoptysis, and also menorrhagia. The urine, examined October 24, was albuminous, and sp. gr. 1015. She died October 27.

Autopsy by Dr. Moxon.—The head was not examined. The left bronchus was pale everywhere, or at most of a rose colour, the right was of a deeper rose tint; scarcely any contents. The left chest contained about a pint or less of slightly turbid straw-coloured serum. The pleura had no lymph in it. The

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right chest contained a smaller quantity of fluid of like quality. Both lungs were displaced outwards by the much distended pericardium. The left lung was airless from its position, and had been evidently rendered so by the pressure of the pericardium. The lower lobe of the right lung was bulky, but somewhat crepitated. Its section yielded serum less frothy than usual, it broke down readily. The upper lobe gave a frothy fluid, and felt less substantial, and yet was distended.

[Dr. Moxon then gives a detailed account of the appearances connected with the pericarditis.] The liver weighed 55 ounces. It was of a uniform light colour. There was no trace of cirrhosis nor of the appearance described as "nutmeg." Kidneys weighed nine ounces; they were markedly granular, yet of a dead white colour generally. The cortex a good deal wasted. Ovaries having false corpora lutea.

ST. GEORGE'S HOSPITAL.

ALBUMINURIA—DROPSY—RETINAL DEGENERATION—DEATH—AUTOPSY.

(Under the care of Dr. FULLER.)

The following is also an interesting instance showing distinct changes in the retinæ associated with renal disease. We are informed by Mr. Rouse that both retinæ were extensively diseased, "presenting the large irregular white patches which are so diagnostic of the affection."

In this case, as in the case under the care of Dr. Gull and Mr. Hulke, which we have just related, it is noteworthy that such degeneration should have occurred in so young a patient. We have, however, seen very marked degeneration of the retinæ, with Bright's disease, in a girl 16 years of age. This patient had had dropsy, but was quite rid of it when we saw her. She died within a year of her having the dropsy, but we have no facts as to the mode of death.

Emma T., aged 22, was admitted March 22. This patient was in the Hospital in June, 1864, under the care of Dr. Page. At that time she gave the following account:—

"After a febrile attack five weeks ago, during which there was much pain in the limbs, the legs became œdematous, and from time to time for three weeks puffiness of the face was noticed of a morning. She complains now of vertigo." The heart sounds were normal at this time. The legs were softly œdematous and the urine highly albuminous. She was treated with potash diuretics, and left the Hospital after a month's residence, slight dropsy remaining. She went to Walton, where she got worse.

She now states that the œdema has only disappeared within the last few days upon her taking to bed. For two weeks she has had pain in the left chest. Three days ago the eyesight became dim. Since her former admission she has had an attack described as scarlatina.

Her aspect is natural, and at present there is no œdema. The pupils act well. The left is considerably more dilated than the right when both are exposed to the same light. There is an echoing bruit with the first sound, strong impulse, and regular rhythmical action. The urine is pale and scanty, highly albuminous.

She was treated with muriated tincture of iron and acetate of potash. Beef-tea diet.

April 1.—She gets up daily, and has a fair appetite, and vision is slightly better.

April 13 (nothing remarkable having occurred in the interval).—She was taken yesterday with sickness, and continues to vomit bile. She is much prostrated. The skin is warm and harsh; tongue lacks moisture; some sordes are appearing on the teeth; pulse very small, 104; general state suggestive of fever (which is in the ward), but there are no spots.

14th.—Moister tongue and pulse of 84; generally better.

20th.—Still very sick after meals. She has been taking tinct. cantharidis with ammonia and spiritus armoraciæ in broom decoction and purges of various sorts.

Vomiting persisting, various remedies were attempted. The bowels were seldom moved without injections. Croton oil and colocynth were now given, and prussic acid in saline draughts. She gradually sank, and died May 15. Some hours before death violent pain came on, referred to the epigastrium, to which fomentations were applied. She retained her senses to the end.

The above notes are by Dr. Octavius Sturges, Medical Registrar.

Autopsy by Dr. Dickinson.—The body was in good general condition. Lungs full of frothy mucus; otherwise healthy. Heart pale, but no apparent disease. Liver healthy. Spleen very small, but otherwise natural.

Kidneys.—Capsules very adherent; surface pale, granular, and even, weighing 10½ ounces. Every appearance of being fatty. The vagina was extensively ulcerated, and this extended through the os uteri. The uterus was full of thick purulent matter.

The retinæ of both eyes were examined, but not microscopically. They presented an opaque whitish appearance.

THE LONDON HOSPITAL.

RETINAL APOPLEXIES—GIDDINESS—ALBUMINURIA—DEATH FROM PERICARDITIS.

(Under the care of Dr. HUGHLINGS JACKSON.)

The following instance shows that we must give a most careful prognosis in cases of albuminuria in which the existence of retinal disease points to advanced disease of the kidney. Dr. Jackson thinks it most likely that this patient had had slight hæmorrhage in his hemispheres, giving rise to the giddiness, just as the small effusions of blood in his retinæ affected his vision. He was in a very ripe condition for extensive cerebral apoplexy; but, again, he was ready to die in many other ways readily, and succumbed to pericarditis.

J. S., aged 39, was admitted an out-patient February 18, 1865. He had been previously under the care of Mr. F. M. Corner, of Poplar, who has furnished many of the following particulars:—

It was known that several years ago he had had albumen in his urine, but he got well, as he thought, of the symptoms he then had, and considered himself healthy until about three weeks ago. He held a very responsible post, and discharged its duties well until that time. He then began to suffer—and the symptoms began suddenly—dimness of sight, giddiness, singing in the ears, and tingling in the fingers and toes, more on the right side. The pupils were normal in size. Mr. Corner, however, dilated them, and on looking at the fundus, saw white dots in various parts of the field, and also recent apoplexies. Nearly the same appearances presented themselves when Dr. Jackson saw the patient. The urine was albuminous, sp. gr. 1019.

A careful examination of this patient was made, but the notes of it have unfortunately been lost. There is sufficient, however, for our purpose to show the clinical importance of an ophthalmoscopic examination in such cases. Several observers correctly inferred Bright's disease from the retinal changes. The patient only attended twice. He was then attacked with pericarditis, and died with that affection under Mr. Corner's care.

It is to be observed that this patient was slightly deaf, and equally so on the two sides. It was thought at first that this might be due to apoplexy in the inner ear, but the patient had been deaf some years. In cases of sudden deafness—partial or complete—the urine ought to be examined for albumen; and in such cases it is very desirable to examine the eyes too, whether the sight be bad or not, in order to learn if there are changes in a nerve expansion which is analogous to the auditory.

ROYAL LONDON OPHTHALMIC HOSPITAL.

CLINICAL REMARKS ON CASES OF RETINAL DISEASE WITH BRIGHT'S DISEASE.

(Under the care of Mr. HUTCHINSON.)

In some clinical remarks on cases of disease of the retina from Bright's disease, Mr. Hutchinson mentioned that he had repeatedly diagnosed the existence of the latter from observation of the state of the eye. It was not, he observed, in the cases of Bright's disease attended by dropsy, and therefore furnishing their own clue at a glance, that retinal changes were most often met with. It was rather in a group of insidious cases, in which patients become dyspeptic, suffer from general malaise, and lose colour without showing more definite symptoms, that retinal deposits are met with. He related some instructive facts illustrating this, and proving also how important a good knowledge of the ophthalmoscope is to the general

Physician. In one, a gentleman from Liverpool had been for a long time under Medical treatment on account of dyspepsia, and at length found his sight failing. For the latter symptom he came up to town, and on using the ophthalmoscope the conditions characteristic of Bright's disease were at once found, and on examination of his urine albumen was detected. In a second instance, a lady from New Cross was sent to Mr. Hutchinson by her Medical attendant with the history that for a year past she had suffered from great irritability of stomach and was now losing her sight. Her retinæ showed apoplexies and albuminoid deposits, and this led to examination of the urine with the result anticipated. In neither of these two cases had the patients ever suffered from dropsy or œdema of the feet. A third case was yet more interesting since the discovery of retinal disease was made under very unusual circumstances. Last winter a man was admitted into the London Hospital having been found insensible in a woodyard. He was a workman in the yard, and was believed to have fallen from a stack of wood, but no one had seen him fall. His head was bruised, but no serious injuries could be detected; as he was quite insensible no history could be obtained from himself. The pupils were dilated. On using the ophthalmoscope, Mr. Hutchinson found, to his surprise, the usual evidences of Bright's disease in both retinæ. There were patches and dots of deposit and large extravasations. This discovery led to the suggestion that the man was suffering from apoplexy, and not from injury. He died during the following night, and the autopsy proved the correctness of the diagnosis. Both retinæ were extensively diseased; the urine contained in the bladder was loaded with albumen, and the kidneys were contracted and granular; the lateral ventricles of the brain were crammed with blood-clot. The man had not suffered from dropsy, and had kept at his work throughout.

RETINAL APOPLEXIES AND ALBUMINOID DEPOSITS IN BOTH EYES—NO ALBUMINURIA.

(Under the care of Mr. HUTCHINSON.)

John B., aged 48, a shipwright, of dark complexion, born in Scotland. He is not unhealthy-looking, but rather of the Bath-brick complexion (atheromatous). He has had strabismus from childhood, and the right has always been the better eye. About Christmas his eyes began to fail decidedly. He is accustomed to drink fairly, not excessively. He was admitted on March 3, 1864, when apoplexies were found in the retina and choroid of the right eye.

March 10.—Urine, sp. gr. 1010, no albumen.

April 14.—Urine pale, not clear, sp. gr. 1013; no coagulation with heat and nitric acid.

Ophthalmoscopic Examination.—In both eyes the retina is dotted and patched very extensively with extravasated blood, and at spots where no extravasations are seen the retina is so hazy and œdematous that it is difficult to discover the optic disc. The retinal vessels can only be seen in very short fragments. The apoplexies are largest and most numerous in his right eye, in which, also, the white opacity of the retina is very extensive; but it is everywhere diffused and ill-circumscribed.

June 1, 1865.—Right Eye.—The margins of the disc are concealed by effusion into the retina; the vessels are elevated, contorted, and their trunks very much interrupted. In most parts of the fundus the choroid can be seen through the hazy retina, but in some it is wholly concealed by a light greenish-yellow deposit. In some places a deposit which is perfectly white and opaque is seen; this is chiefly either in lines or in small irregular patches. There are numerous patches of effused blood. A group of these occur at the yellow spot. Left Eye.—The conditions are very similar, but less advanced, and there are fewer patches of extravasation. In this eye there is a long curved line of white, quite opaque, very conspicuous, and much resembling in contour, etc., a vessel. In this eye there are a few dense opacities in the vitreous, quite limited. He has recently suffered from some swelling of his right foot attended with pain (gout?). He mentions that he has a very copious secretion of urine, and is obliged to get up many times in the night.

This man still attends occasionally at the Hospital, and is in much the same state, both as regards his general health and his eyes. Although his retinal disease resembles that found in Bright's disease, no albumen has ever been detected in his urine, and repeated examinations have been made.

RETINAL APOPLEXIES AND ALBUMINOID DEPOSITS IN BOTH EYES—ALBUMINURIA—DEATH FROM PNEUMONIA.

(Under the care of Mr. HUTCHINSON.)

George C., aged 48, of dark complexion, formerly a seaman, now a tea warehouseman. October 29, 1863.

He does not consider himself ill, nor does he look so; but on being questioned he says that his wife has often told him of late that he is getting sallow. He had fever and ague in China in 1834, and afterwards had ague in England in 1835. In the beginning of the present year he had a threatening of ague. Latterly, although eating well and regularly at work, he has been very low spirited. During the last few years he has often had aching and weakness across his loins. He habitually rises frequently in the night to make water. He is very thirsty. His skin is usually dry, but he perspires on exercise. He never has any œdema of face, hands, or feet. Until last Saturday week he never noticed anything amiss with his sight. He then by accident found that he could not see well with his right eye. It may have been failing long before he found it out. He has had some aching in the eyeballs and frequent headaches during the last three months. He has for years been liable occasionally to severe twitching in the eyebrow, lasting only for a very short time. He has been "bilious" of late, but has not vomited. He used formerly to drink wine freely. He has never smoked much, and has been obliged to leave it off lately, as it made his head ache.

Ophthalmoscopic Examination.—Right eye: Media clear. Margins of optic disc traced with difficulty, as the retina was œdematous and swollen: it was opaque and of a greyish yellow, and was dotted all over with minute white dots. At the yellow spot these white dots were arranged in a group, and many of them were of considerable size. There were numerous small retinal apoplexies at different parts of the fundus. At a considerable distance from the optic disc the choroid could be distinguished of a healthy, red colour, and the retinal vessels were easily traced. Near the disc the large retinal vessels had their trunks much interrupted by the opacity of the structure in which they ran. Left eye.—The disc was well margined, and, excepting that the retina was a little hazy, and that a single apoplectic effusion of small size existed near the yellow spot, the fundus was normal. Urine.—Sp. gr. 1015, of light yellow colour. When boiled, it became very cloudy, and, nitric acid being added, it remained so, evidently containing a large quantity of albumen. On adding nitric acid to a fresh portion, and then boiling it, there was no deposit for some time, but in half an hour it became opaque.

This man remained under treatment at the Ophthalmic Hospital for several months, and improved in health somewhat whilst taking the sesquichloride of iron. He had repeated relapses of dyspeptic symptoms and of bronchitis. At length he had an attack of double pneumonia, for which he was attended by a Surgeon at his own house, and of which he died. No autopsy was obtained.

ŒDEMATOUS RETINÆ—APOPLECTIC EFFUSIONS (PUNCTATE)—DEPOSITS AT THE YELLOW SPOT—SYMMETRICAL CONDITIONS—ALBUMINURIA.

(Under the care of Mr. HUTCHINSON.)

Mrs. Anne B., aged 24. She is a pale, flabby woman, having the aspect of albuminuria very decidedly marked. For about a year she has been subject to swelling of her face and feet. About two months ago she first noticed a dimness or mist before her eyes. Before that time she could see well. She is subject to severe "bilious headaches." On the day that her eyes first failed she had suffered most severely from headache, and had been very violently sick. In the afternoon she lay down for a while, and on rising she found that she could not see well. Her headache continued for several days. The eyes gradually got worse. During the last few months she has noticed a much increased desire to empty the bladder, and is obliged to rise frequently in the night. She is low-spirited, and complains much of feeling very weak. In daylight she can see to read large print.

September 10, 1863.—The urine, examined on two occasions, had a sp. gr. of 1006, was of a pale colour, and slightly opaque. It became cloudy on boiling, and on the addition of nitric acid a considerable quantity of albumen was deposited. Large crystals of triple phosphates were found within twelve hours of the urine being passed.

Ophthalmoscopic Examination.—Left eye: The media are clear; the retina is œdematous and hazy. The outlines of the vessels

are concealed, the arteries being especially embedded. The optic disc is very indistinct, its margins not being recognisable. The arteries are small. There are numerous small apoplectic effusions—mere dots, no large patches. At the yellow spot are large irregular patches, strongly reflecting light, and of greenish-yellow aspect. Right eye: It presents exactly the same conditions as the left, excepting that the retina is less hazy, the optic disc better seen, and the arteries of larger size. The patches at the yellow spot precisely resemble those in the left eye. In this also the extravasations are all small.

IMPERFECT AMAUROSIS OF BOTH EYES—NUMEROUS RETINAL APOPLEXIES — HISTORY OF CEREBRAL APOPLEXY FIVE YEARS PREVIOUSLY—ALBUMINURIA—DEATH—AUTOPSY.

(Under the care of Mr. HUTCHINSON.)

John H., a stout, leucophlegmatic man, aged 59. He called on me with the complaint that for four or five months he had been gradually losing his sight. He could previously see well, using glasses. A hatter. Two months ago he could read the newspaper. He can now read No. 16, but not No. 14. No sudden failure of sight was noticed. Can see better in the evening.

He considered that he had been in good average health during the time that his sight was failing; but five years ago he had an attack of paralysis. This attack occurred after he had on the previous day been much starved by exposure to cold. He did not lose consciousness, but his right arm and leg became weakened. It was three months before he got over it. Has had no relapse of paralytic symptoms. Never had any special illness except the paralysis; never dropsical. He is a little puffy looking, and his wife states that she has often noticed his eyelids swollen when he got up in the morning.

Ophthalmoscopic Examination.—Both retinæ are dotted over with small patches of extravasated blood. These are most numerous in the right eye, and in the latter the retina is somewhat hazy, and the margins of the optic disc are much obscured. In the left, the optic disc is normal, excepting that perhaps it is a little whiter.

He was admitted in February, 1863, at the Hospital for Epilepsy and Paralysis, under the care of Dr. Hughlings Jackson, for partial hemiplegia on the right side, which began, as stated, six years before. The following particulars are obtained from Dr. Jackson's case-book:—

"I examined his urine, and found that it contained a good deal of albumen, but he had never had any dropsy, nor, so far as he knew, the slightest swelling of his face or legs. There was another symptom of great importance, viz., dimness of sight. On looking, I found in the left eye effusion of blood to the (apparent) nasal side of the yellow spot, and in other parts of the fundus. In the right eye the optic disc was nearly as red as the rest of the fundus, and there were extravasations of blood near it. There were not in either eye any of the white, tallowy patches one sometimes sees in cases of granular disease of the kidneys. His sight had failed twelve months before, and for this he had attended Mr. Hutchinson, at Moorfields. It began by a dimness, and in two or three weeks he found that he could not see to read, and now he can only find his way about. On the letter which Mr. Hutchinson had given him was written 'Numerous retinal apoplexies in both eyes.'

"On April 12, he had an attack in which he suddenly became drowsy, and then insensible. In about two hours he recovered to a great extent, but was then careless and indifferent, and his motions were passed in bed. I saw him on the 30th with Dr. Downing, of Deptford, whom I have to thank for his courtesy in permitting me to watch the case. From him I learned that the patient had had, since the sudden attacks on the 12th, frequent—indeed, almost constant—attacks of convulsions at intervals over a week. During these attacks he was not insensible, and could speak. When I saw him he was lying in bed looking apathetic and hebete, but he could talk well, and he answered many questions rationally. There was still much albumen in the urine.

"The patient died July 1. I made the post-mortem with the assistance of Dr. Downing and Mr. Brett. The vessels of the brain were rigid to a very unusual extent. On slicing the right hemisphere to nearly the level of the corpus callosum we found a softened patch the size of a walnut. It was dark-coloured, and was evidently the remains of an apoplectic effusion, probably the one effused April 12. This in no way affected the motor tract. It extended to the wall of the lateral ventricle, but did not perforate it. Its position may be best described by saying that it extended nearly to the lining membrane of the ventricle just above the position of the anterior part of the ventricular nucleus of the corpus striatim. In each of the corpora striata, in about the centre, was the remains of an effusion of blood about the size of a horse-bean.

"It is to be particularly regretted that the heart and kidneys could not be examined."

SUDDEN LOSS OF SIGHT IN THE LEFT EYE—APOPLECTIC EFFUSION AT THE YELLOW SPOT—EXTENSIVE FATTY DEGENERATION OF BOTH RETINÆ—ALBUMINURIA.

(Under the care of Mr. HUTCHINSON.)

George C., aged 43, a plasterer; accustomed to drink spirits and to smoke; looking older than his age. Until the beginning of last summer he never had any illness; he then had a sort of "gradual fainting," was obliged to go home, and remained confined to bed for several days. He lost his speech for some days; could not speak because he could not remember his words; could not write either. For three or four days he could not make himself understood. Two or three months later he had a second attack; it came on suddenly whilst he was working; his left hand and arm became numb, and his face was (he says) drawn to the left side. He does not consider that he was paralysed, and in about twenty minutes he went to work again. This second attack was in the middle of last summer. The first one was three or four months before it.

About six weeks ago his left eye suddenly failed; he was almost blind one night, but could see better in the morning. Three weeks later, one afternoon, suddenly the same eye again became dim. His right eye has remained tolerably good, and he has kept at work.

With the ophthalmoscope, I found in the left eye extensive albuminoid deposit in the retina, with extravasation in the centre of the yellow spot; the retinal arteries were very small. The effused blood at the yellow spot was nearly absorbed. In the other eye there were also dotted deposits in the retina of yellowish effusion, but not apoplexies. The optic discs in both eyes were greyish, and their margins ill-defined.

His urine was examined, and found to contain a large quantity of albumen.

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SATURDAY, NOVEMBER 18.

THE REPORT ON THE RINDERPEST.

THE first Report of the Royal Commission on the Cattle Plague is a most valuable State paper. The scientific portion, or that part of it which pronounces a judgment on the nature of the disease, may be held to have finally settled questions which have hitherto been represented to the public as open, or have received answers prompted, for the most part, by self-interest or prejudice. The Commission, composed of men of high scientific and social standing, have patiently examined and tested a large mass of evidence, and with remarkable and highly commendable promptitude they pronounce an opinion which, we hope, will at least have the effect of silencing the ignorant and pretentious babble on the subject with which the public ear has of late been filled. In the main, it is true

that the Commissioners simply confirm the statements of the highest veterinary authorities; but as these have been most unjustly held up to public ridicule, or at best have been treated with civil contempt by some of the "leading organs" of opinion, the judgment of the Commissioners, pronounced after ample investigation, will go far to re-establish in the public mind that faith in scientific investigations and conclusions, which has been so pertinaciously and presumptuously assaulted by nameless scribblers and interested traders. We may regret that the Commission have been unable entirely to agree on the best and at the same time most practicable method of meeting the evil, but perhaps this was scarcely to be hoped. At all events, the majority have recommended to the Government a definite and plain course, which, if it can be carried into effect, will prove certainly efficient. The disease must die out if all transit of living cattle is suspended throughout the kingdom for a sufficient time. No doubt great difficulties will occur in carrying out such an interference with the course of commerce; great sacrifices will have to be made both by the suppliers and consumers of meat, and the Commissioners fully recognise that their proposal will raise a storm of opposition. But the majority of their number—reasoning from the intractable nature of the disease, from its intense contagiousness, and from the experience of other countries and former epizootics—have concluded that this is the only course which offers any reasonable hope of success. Those who dissent from them do so not because they doubt that the entire stoppage of cattle traffic would be a certain death-blow to the murrain, but because they doubt whether it be practicable to interfere so largely with the trade of the country. Both parties, with but one dissentient voice—that of Mr. McClean,—state that if the arrest of all cattle transit could be effected it would be a certain and efficient cure; but the minority, because they do not think it can be accomplished, content themselves with recommending measures less stringent, although based on the same principle. Mr. McClean alone believes that we can afford to disregard the evil, and that home losses can always be made up by foreign supplies. He believes that to order an arrest of cattle traffic and to interfere in any way with cattle importation would really diminish the supply of meat far more quickly and certainly than will the cattle plague. He is apparently quite content that farmers should be ruined and our home-bred herds swept away, whilst he seems entirely to ignore the wonderfully prolific character of the plague poison, basing his calculations solely on the amount of damage hitherto done. In fact, the special report which this gentleman has appended to that of his colleagues does not in any way refer to the purposes for which the Committee were appointed. These were to investigate the origin and nature of the cattle plague, to ascertain the best mode of treatment, and the regulations which may, with the greatest advantage, prevent the spreading of the disorder and avert any future outbreak. The report of Mr. McClean, however, merely goes to establish the position that the supply of foreign cattle may always be expected to balance any home demand, and that, therefore, it is not worth while to introduce any fresh measures of quarantine or any penal laws beyond the regulations already in force, which have hitherto notoriously failed in staying the plague.

The Commissioners' Report commences with a clear account of the known facts of the appearance of the disease in this country. It states that at least in all the earlier cases the plague was clearly traceable to the Metropolitan Cattle Market, although various country marts soon became subordinate centres of infection. From the Metropolitan Cattle Market it was conveyed by some Dutch cattle into Holland, there it overran the whole province of South Holland, and has since been re-imported from time to time into this country; but the provinces of North Holland, Utrecht, and Guelderland, by adopting stringent measures on their frontiers, have protected themselves in a great measure from infection. France and Belgium also have, by minute and careful regulations, hitherto escaped the malady. The Commissioners then repeat the well-known story of the famous Revel cargo, and on the question of the importation of the disease by Russian cattle they return a verdict of "not proven." The opposed statements of the importer and his agent in reference to the alleged appearance of the cattle plague amongst that cargo at Revel previous to embarkation, and the fact that nineteen days elapsed between the arrival of the Russian cattle in this country and the first case of cattle plague are the chief reasons for their hesitation. We think, however, that it may be fairly objected that the Commissioners have not given sufficient weight to the fact that an apparently healthy animal, either convalescent from a slight attack, or that has been simply in contact with cases of rinderpest, may undoubtedly convey the disease. We see this constantly in the case of small-pox and scarlatina. And, as the Commissioners give the full weight of their authority to the doctrine that the disease spreads by a most subtle contagion, we believe that, according to their own showing, a strong case in favour of importation by the Revel cargo is made out.

Although, however, the Commissioners decline to accept the Revel theory, they by no means ignore the high probability of importation, and they think that an explanation offered by Mr. Schrader, of Hamburg, that the disease was probably introduced from Holland through the medium of Hungarian cattle is by no means improbable, the more so as large quantities of beasts are weekly sent to this country from Hungary and Galicia by way of Hamburgh and Rotterdam. The near proximity of these countries to the Russian steppes renders them particularly liable to be attacked by murrain, which in the present year has destroyed large quantities of cattle in Hungary. As to the identity of the disease with Rinderpest, and its intensely contagious properties, the Commissioners have no doubt. They speak of the contagion as being swift, subtle, and destructive in the highest degree, and they do not recognise the possibility of the propagation of the murrain in any other manner. They state that the symptoms presented during life, the results of post-mortem examination, and the whole train of general characteristics are precisely the same as those of Steppe murrain, or varied only by such minute shades of difference as we may expect to find in different breeds and climates. They identify it with the disease which for twelve years ravaged England in the middle of the eighteenth century, of which and the measures taken to check it they give an excellent account; and they conclude the scientific portion of their Report with the following summary, which, it will be seen, differs in no respect from the statements for which Professor Gamgee was gibbetted by the infallible *Times*:—

"The cattle plague is, in the language of Medicine, a specific disease, belonging to the class of contagious fevers. The contagious matter is subtle, volatile, prolific, in an unexampled degree. It is conveyed in a most virulent form in the excretions from the diseased animal. Any particle of those excretions may serve as a vehicle for it. We know not the limit of time within which it disengages itself from them, nor to what distance it may not be diffused. It may travel, we know, in the hide, horns, hoofs, and intestines of the dead animal; the offal, therefore, is highly dangerous. It lurks undeveloped in the system for a period about which some difference of opinion exists, which certainly is not less than five days, usually seven or eight, but appears to be more prolonged in some cases. Towards the end of this period of incubation, but at what precise point we do not know, it becomes capable of diffusing itself by contagion. A diseased animal may, therefore, be infectious before it shows any signs of disease, or, at all events, before the malady betrays itself to any but a very close and very skilful observer. The proportion of cases in which it is fatal is extraordinarily large. No specific has been discovered which neutralises or expels the poison; judicious treatment may enable nature to resist till the virus has spent itself; injudicious treatment may have a contrary effect; but that is all. The practical con-

clusion, therefore, at which foreign Physicians and foreign Governments have arrived,—the conclusion that it is better always to kill a diseased animal, or a few diseased animals, where by so doing you can kill an isolated germ of disease, instead of suffering that germ to linger and fructify while you are attempting a cure, for the precarious prospect of an insignificant saving—is justified by reason; it is also directly justified by experience, which shows that, while the plague, propagated from a single germ, speedily becomes unmanageable, spreads from herd to herd, from province to province, and from country to country, multiplies in a continually increasing ratio, and exhausts itself only after ruinous havoc and a long course of time, it may be effectually eradicated by prompt and unsparing measures. The experience of Prussia is especially valuable in this respect. The plague has often appeared, says Professor Gerlach, in the provinces bordering on the Russian Empire, in East Prussia, Posen, and Silesia, but it has never since 1815 penetrated eastwards, even so far as Brandenburg. Lastly, we must add, it has not been found to give way before cold weather or rain. The reverse seems to be the case. It is worse, Professor Gerlach informs us, 'in cold and wet weather, and better in warm and dry weather.' 'It spreads,' says Mr. Ernes, 'as fast in a cold as in a hot season.' The murrain of 1745 broke out here in early spring, the temperature of the preceding year having been low; and it is stated to have raged most violently during the winters, and to have diminished in intensity with the advance of summer."

The question of what is to be done, as we have already said, is not met with the same unanimity by the Commission. Seven of their number, including Drs. Playfair, Quain, and Parkes, and Messrs. Wormald, Ceeley, and Spooner, have drawn from the scientific facts the only logical conclusion, and have recommended that no cattle, either fat or store, should be permitted to travel in England and Scotland for a certain time, that oxen should be slaughtered on the spot where they are fed, and imported cattle at the ports where they are disembarked. They fairly face the difficulties that lie in the way, and argue that it can be no more impossible to take the butcher to the bullock than the bullock to the butcher. Railways are the means which render such a sweeping proposition in any degree feasible, for to supply London with dead meat was found impracticable with the means of conveyance which existed in the time of the plague of 1745; but as it is a fact that a thousand carcases of oxen are weekly sent from Aberdeen to London, there can be no question that the same thing can be done in the case of shorter distances. The great objection to the plan is the enormous change which it would introduce in the meat and cattle trades, and consequent loss, which must eventually be paid by the consumer. This consideration has led Lords Spencer and Cranborne, who represent the agricultural and landed interests in the Commission, together with Mr. C. S. Read and Dr. Bence Jones, to content themselves with a set of recommendations of a milder and less sweeping character, which are introduced in the Report for adoption in case the Government decline the stronger measures of the majority. These recommendations include the prevention of fairs, markets, and sales by auction, the adoption of a system of licenses for transit, the early slaughter of animals sold to butchers, and the publication of the names of infected districts in the *Gazette*. It will be seen that there is no difference in principle here, and the question at issue is solely one of expediency. It is to be regretted that the force of the recommendations is weakened by the disagreement. With the exception of Dr. Bence Jones, the scientific and Medical members of the Commission are unanimous, and as we firmly believe the facts on which they ground their opinion, we do not think they could avoid giving expression to the conclusions which legitimately flow from them. Lastly, we must not quit the subject of the cattle plague without giving a due meed of praise to an excellent report by Dr. Smart on the disease as it occurred in the neighbourhood of Edinburgh. A portion of Dr. Smart's observations have already appeared in this journal, and his Report has been recently published in a separate form, with costly coloured plates of pathological appearances, by the Edinburgh municipal authorities.

DOCTRINES OF MODERN CHEMISTRY.

No. V.

The Atomic Weight of Oxygen.—Very few of our readers will require to be told that acetic acid is formulated, according to the old system of atomic weights, thus:—$C_4H_3O_3,HO$, or by putting the oxygen and the hydrogen in single groups, $C_4H_4O_4$. In this formula C stands for six parts of carbon, H for one part of hydrogen, and O for eight parts of oxygen. Now, why is acetic acid symbolised in this way, when it is plain that, dividing by four, CHO expresses its chemical composition just as truly—that is, the proportion of its elements to each other? The answer is very simple. When acetic acid acts chemically upon other bodies, we must represent the quantity of it which reacts with them as four times (or twice or three-times-four times), CHO—that is, $C_4H_4O_4$. For example, we wish to express the mode of formation of acetate of potash according to the process in the Pharmacopœia. We are to take certain proportions of aqueous acetic acid and the carbonate of potash, and mix them: carbonic acid gas escapes, and acetate of potash is left in solution instead of the substances used. For every thirty parts of pure or glacial acetic acid contained in the aqueous acid employed we obtain forty-nine parts of acetate of potash. Now, knowing from the analysis their composition, we find that this quantity of acetate of potash contains all the carbon and all the oxygen there was in the acetic acid, but only *three-fourths* of the hydrogen, there being instead of the other fourth, thirty-nine times its weight of potassium. If, therefore, we avoid fractions, or take a standard quantity of hydrogen which we agree to treat as indivisible, we must represent this reaction in symbols, thus—

$$\underset{\text{Acetic acid.}}{C_4H_4O_4} + \underset{\text{Carb. of pot.}}{KO,CO_2} = \underset{\text{Water.}}{HO} + \underset{\text{Carb. a. gas.}}{CO_2} + \underset{\text{Acet. pot.}}{C_4H_3KO_4}$$

It is usual to expand the formula of acetate of potash into $C_4H_3O_3,KO$; but the motives for so doing do not now concern us. It will be understood that K stands for thirty-nine parts of potassium.

We beg our readers to bear in mind that we have been only stating facts, and expressing them in an abbreviated form, according to the valuable conventional method of symbols. We do so, because, so far as we have gone into matters, the chemists of both schools agree about the nature of facts, and the mode of representing them; because if we admit that there are *four* atoms or chemical proportions of hydrogen in acetic acid on the grounds stated (and admitted by all), we must, *on similar grounds*, represent acetic acid as containing only two atoms of oxygen instead of four, if we are consistent; and because the case of acetic acid is similar to that of thousands of other bodies, so that, to the extent of this similarity, arguing about one we argue about all.

By different reactions we can form from acetic acid many other bodies whose composition requires us to treat it as containing four separable quantities of hydrogen. Thus, among others, we can form from

Acetic acid . . . . $C_4H_4O_4$,

the following:—

Acetate of silver . .	$C_4H_3AgO_4$
Monochloracetic acid . .	$C_4H_3ClO_4$
Trichloracetic acid . . .	$C_4HCl_3O_4$
Trichloracetate of potash .	$C_4KCl_3O_4$

So far, then, we have fully justified the universal practice of regarding acetic acid as containing four atoms of hydrogen. But we have represented the acetic acid as containing four atoms also of oxygen. This we have done only in accordance with the old views; for we know of nothing which justifies such a representation. To four parts of hydrogen in acetic acid there are thirty-two parts of oxygen. This quantity appears undoubtedly divisible into two sixteens; for we have the substance formed from it by simple reaction—thiacetic acid, a body strikingly like acetic acid, but containing to the same

quantity of carbon and hydrogen only *half* as much oxygen, there being instead of the other half thirty-two parts of sulphur. Thus there are in acetic acid two quantities of oxygen for consideration; but we do not meet with cases in which a fourth of its oxygen requires to be considered—that is, excluding speculations, which may be about anything. We come, therefore, to the conclusion that it is inconsistent to represent acetic acid as containing four atoms, since we have only evidence that it contains two. And since the oxygen in that quantity of acetic acid which is represented as containing four parts of hydrogen weighs thirty-two of these parts, if we treat them as two atoms, each atom will consist of *sixteen* instead of *eight* parts as it does when the thirty-two are made to be four atoms, as in the old system. If O stands for sixteen instead of eight parts of oxygen, the formula of acetic acid must be changed, and it and its derivative thiacetic acid will be then formulated thus,—

Acetic acid.	$C_4H_4O_3$
Thiacetic acid	C_4H_4OS

if we let S stand for all the sulphur in thiacetic acid.

We have said that the oxygen in acetic acid never requires to be considered as divisible into four parts, from a consideration of facts; nor does it. But there is an hypothesis adopted in the old system, according to which acetic acid is formulated $C_4H_3O_3,HO$, to express that it consists of water plus $C_4H_3O_2$. According to this, therefore, the oxygen is divisible, so far, into fourths. It is, however, only an hypothesis, and we know of nothing to be advanced in support of it. We cannot get either water or $C_4H_3O_3$ from acetic acid or its derivatives, without employing a quantity we must represent as twice $C_4H_4O_4$, when we get twice HO, or twice $C_4H_3O_3$, as the case may be—that is, H_2O_2 and $C_8H_6O_6$. Then once more chemists of the new school ask, why not let O stand for sixteen, instead of eight, of oxygen, and write these bodies H_2O water, $C_4H_6O_3$?(a) Thus the question remains the same, and the answer to it has not been given.

Not only in acetic acid, and not only in the reaction by which acetate of potash is formed, must we represent the hydrogen atoms as sixteen times lighter than those of oxygen, but in the vast majority of other cases also to be able to give consistent reasons for our formulæ.

There is another aspect of matters for consideration by our readers. In the old system, when one body differs in composition from another only in such a way that it may be regarded as that body oxidised, it always contains O_2(or O_2 multiplied) more than the other, O being eight parts of oxygen. Our readers must understand that the combinations of oxygen with an elementary body are not adducible as instances in point, for upon the way in which we represent the proportion of the atomic weight of this element to that of oxygen will depend the way in which we represent the compounds of the two. We must, therefore, take only oxidised compounds of two or more elements. Here are some tolerably familiar ones:—

Hydrochloric acid . . .	HCl
Hypochlorous acid . . .	$HClO_2$
Chlorous acid	$HClO_4$
Chloric acid	$HClO_6$
Perchloric acid . . .	$HClO_8$
Nitrite of potash . . .	KNO_4
Nitrate of potash . . .	KNO_6
Bisulphite of soda . . .	$NaHS_2O_6$
Bisulphate of soda . . .	$NaHS_2O_8$
Phosphoretted hydrogen . .	H_3P
Hypophosphorous acid . .	H_3PO_4
Phosphorous acid . . .	H_3PO_6
Phosphoric acid . . .	H_3PO_8
Hydrocyanic acid . . .	HC_2N
Cyanic acid	HC_2NO_2

(a) In the new system C stands for *twelve* instead of *six* of carbon, so that C_8 in the old becomes C_4 in it.

Bodies formed by the addition of O_1 or O_3 are unknown in the above series or in others. Does not this lead to the conclusion that O_2 is indivisible?—in other words, that sixteen parts of oxygen should be represented by a simple symbol, and not one implying that it is in two quantities of eight each? And let our readers remember that the above list might be made to include thousands of further examples.

In the new system we write all these bodies with half the number of atoms of oxygen they are represented to have above, the new atom being double of the old. The simplification of their formulæ which thus results brings to our notice the fact that, with hardly an exception, in the case of compounds of three or more elements, the employment of the new atomic weights of oxygen, and other simple bodies, renders the formulæ of bodies less complex. This alone, granting no objection to their use, is a very powerful recommendation in favour of adopting the new atomic weights. But, in addition to this, the formulæ of bodies constructed with the symbols of the new atomic weights represent everything we require to represent by formulæ; while those constructed with the symbols of the old atomic weights not only represent the nature of the body often indefinitely, but also very incompletely.

THE WEEK.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

This Society began its session last Tuesday evening, under the presidency of Dr. Alderson. The numbers at these meetings are rarely so large as at those of the less aristocratic Pathological Society, which meets in the same room, and the room, therefore, was more comfortable to pass an hour and a-half in after the work of the day than it was on the previous Tuesday. Two papers were read. (An abstract of these papers will appear as usual in our next number.) The first was by Dr. Squarey, "On the Influence of Coffee on the Excretion of Urea and Chlorides in the Urine." This is one of those papers which, from no fault of its author, is tedious, but yet full of hard, useful work. It is scarcely likely that the reading of it should give rise to much discussion, although it may be highly appreciated when it comes into print. The most notable thing said about it was by Dr. Webster. He objected strongly to the use of the words gramme, etc., and urged that before an English society plain English should be used. We would, however, suggest that the important point is not whether French words should or should not be used before an English Society, but whether French weights are not more convenient than English weights in the calculations of physiological chemistry. In borrowing French weights we of course borrow their names. For the slight difficulty of learning French weights and measures we are well repaid by the greater ease in calculating. The next paper, by Mr. Dunn, was on a subject of more popular interest. In a utilitarian Profession like ours the question of the treatment of any disease always excites interest, and none more so than of the treatment of syphilis. Mr. Dunn has treated fifty cases of infantile syphilis without mercury.

EDITORIAL FAIRNESS.

We will do ourselves the pleasure of quoting the following passage from the preface to the eighth edition of Mr. Hunt's treatise on diseases of the skin,(b) because it enables the editor to add his own to Mr. Hunt's commendation of the accomplished Physician who contributed the papers on "Modern Dermatology" to this journal. We can only say that the emphatic word "fair," which Mr. Hunt applies to our friend's criticisms represents the spirit by which we desire that every word in this journal shall be actuated:—

"It would scarcely be just," says Mr. Hunt, "to omit

(b) "A Guide to the Treatment of Diseases of the Skin." By Thomas Hunt, F.R.C.S. Eighth edition, 12mo, Pp. 260. London: T. Richards.

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noticing in this place the very learned, fair, and correct, as well as elaborate and luminous, review of several recent publications on skin diseases, which has lately been put forth by the accomplished editor of the *Medical Times and Gazette* in a series of papers headed 'Modern Dermatology.' If no one need attempt to reconcile or even to comprehend fully the contradictory theories, and the conflicting and confusing systems of arrangement which have been so industriously and faithfully pourtrayed and criticised in these editorial papers; still the lasting value of these papers as a history of the dermatology of the times cannot for a moment be questioned, and it is to be hoped they will some day be collected into a separate volume."

STREET ACCIDENTS—RIGHTS OF PEDESTRIANS.

THE lamentable death of Mr. Tegart through a street accident gives great emphasis to the statements which the Registrar-General, in his "Weekly Return of Births and Deaths in London," has been for some weeks laying before the blinded eyes of the police authorities and Home Office:—

"One hundred and eight persons were knocked down and killed in London by vans, drays, carts, waggons, omnibuses, cabs, and carriages between the 1st of April last and the 4th of November. It is not stated by what vehicles 22 of the number perished, but 6 were killed by omnibuses, 16 by cabs and carriages, 64 by waggons, vans, carts, and drays.

"Eighty-three were males, 25 females of all ages. 37 of them were children under 10 years of age; 16 were old men and women of 65 years and upwards; 55 were adults of ages ranging from 10 to 65. The men were of various occupations: the large excess of carmen and coachmen only implies that they are more exposed to this kind of injury than other people. The man employed to take the drag off the omnibuses was run over by a cab at the bottom of Holborn-hill.

"*Six* women and 27 men, as well as 1 girl and 4 boys, were killed by falling from vehicles in the streets; 11 of the men were carmen, carters, cabmen, and coachmen; probably some of them under the influence of drink.

"Waggons which are drawn by heavy trotting horses cannot be pulled up in time, and are the most destructive engines in the battle of the streets."

The "equestrian" and "vehicular" people, as Parson Adams would have called them, seem to think that foot passengers have no rights. The consequence is that whoever crosses a street, even in broad daylight, does so at the risk of his life. In every three days two people are killed, to say nothing of those who are knocked down and maimed short of death. There ought to be a police regulation that all vehicles shall slacken their pace at the most frequented crossings.

LIFE AT THE EAST OF LONDON.

UNDER this heading appears an account of an inquest on a child of six, who died of small-pox at 7, Nelson's-place, Bethnal-green, a set of human styes which has been already described in the report of our "Commissioners." It is said that the parish are "taking steps," but nothing has been done yet, as is clear by the evidence of Dr. Edmunds:—

"The 'house' was a dilapidated tenement of two small rooms, with a small shed, called a kitchen, behind. The rooms, if such they could be called, were connected by a rickety staircase, so cranky as to be quite unsafe. The roof let in water, and the floor of the lower room, resting upon the earth, was a foot below the alley or court, and in many places the flooring was broken. The chimneys were so imperfectly constructed as to be likely to smoke, and they did smoke, so poisoning the lungs and preventing ventilation. There was a small yard of a few square feet, leading to a dilapidated privy, without water, with a large heap of stinking refuse surrounding it. There were no taps for water, but there were two orifices whence the water ran in once a-day for twenty minutes, and it ran into a small rotten tub, without a cover. The whole yard was overflowed with water, for when the tub, the capacity of which was quite inadequate to the wants of a family, overflowed, there was no place for the water to run off, and the stink arising from the privy and the rotting refuse would be absorbed by the water in the tub, and which was thus rendered unwholesome, if not poisonous. The coroner and jury expressed their indignation that such tenements should be allowed to stand, and a verdict was returned 'That death arose from natural causes, accelerated by the bad sanitary condition of the house in which the parents lived.'"

"DR." HUNTER.

"DR." HUNTER has been committed for trial on the charge made against him by his patient, Mrs. Meyrick. We cannot pretend to having the slightest sympathy with a person of his Professional character and status; but we cannot but wait his trial with considerable interest; for it is almost impossible for Medical men to avoid making themselves liable to similar accusations by disappointed, hysterical, mercenary, or impure women; and

"Alas for the rarity
Of Christian charity
Under the sun,"

however foundationless and base the charge may be proved to have been, the mere fact of its having been made generally brings about the ruin of the Professional man. In this instance, as the case is to go to trial, we shall not comment upon it further than to say that the evidence of the plaintiff, as given in the police reports, appears to us of a very shaky character.

FROM ABROAD.—SPECIALITIES IN MEDICINE—A FRENCH QUACK ADVERTISEMENT—SUPPRESSION OF "TOURS" AT FOUNDLING HOSPITALS.

AT the second annual meeting of the American Ophthalmological Society, Dr. Noyes read an interesting paper upon "Specialities in Medicine," which has been since published in a recent number of the *New York Medical Journal*. After dwelling at some length upon the necessary creation of specialities by the progress and due cultivation of Medical science and art, and showing how these can be pursued with satisfaction and advantage only by those who have thoroughly grounded themselves in the scientific study of their Profession, he goes on to inquire, "What are the relations of the specialist to the Profession? and what attitude should each hold towards each other?"

"His real position towards them," he observes, "is that of a counsellor in difficult cases belonging to his sphere. He claims a peculiar skill in one subject, and when other Practitioners need counsel in these cases, they ask for his assistance. They may simply call him into consultation, or they may turn the patient over to his care; but in either case the specialist must govern himself by the rules which all Medical men observe in holding consultations with each other. Friction with his brethren may arise on two points. First, claiming to be a Consulting Physician or Surgeon in his peculiar province for the benefit of his Professional brethren and the community, the young specialist perhaps finds himself in an anomalous position—a counsellor who has no clients, a person claiming to be distinguished, but whose claim has never been admitted. Specialists have sometimes demanded, as their right, that they may advertise their pretensions in the public prints or Medical journals. The former kind of self-proclamation is universally condemned by the Profession as an unworthy attitude for the member of a liberal Profession to hold towards the community—none the less should it be condemned and abnegated by the specialist. Advertising in Medical journals may be done as offensively as in any other prints; but when it consists simply in the announcement of name, address, and specialty, it is difficult to see the offensive quality of the act. . . . If by well-considered contributions to current Medical literature, he displays the reality of his claims to special regard, he will both make himself known to the Profession and offer the best plea in his own favour. I must, however, disclaim advocating the insertion of crude and puerile papers, reports of cases which have in themselves no interest, and no purpose other than to secure the writer's personal emolument, under pretence of contributing to the welfare of Medical science and the interests of the Profession. I hold the dignity of the Profession to be as dear to the specialist as to any Physician. I justify in him no loose morality, Professional or otherwise, any more than in any other brother of the order. It seems to me, however, that a correct understanding of mutual relation-

ship shows that, to the general Physician, it is a great help to be able to call in on emergency the services of a highly accomplished and honourable fellow who may solve the doubt, may rescue the patient, may successfully achieve the difficult operation; and that, for the case in hand, it matters not whether the aid be rendered by one who is not ashamed to be called a specialist. . . . This introduces me to a second point, which has made unpleasant feelings against specialists. They have been sometimes accused of throwing out a specialty as a bait to allure other and general practice; in other words, they impose on the confidence of their brethren, and seek to rob them of their just prerogatives. But one word need be said about such conduct: it is utterly reprehensible. Specialities have, in many instances, been to their practisers means of rapid Professional advancement. But the specialist has no royal road to fame and position. He may have keen competitors; he may have mistaken his vocation; he has no immunity from hard and vigorous labour. If he claims much, he must know much. If he would know much, he must work zealously. Above all, he must not set out leaping in a course soon to slacken his pace, to lag among the dullards, and be consigned among the shelves of the yellow and the musty. If from any cause he cannot, by honest endeavours and honourable efforts, attain that success which he hoped, rather than do wrong to his fellows in practice, let him lay aside all pretences to special practice, and, if need be, enter into general practice, in another place, where none can charge him with using unworthy arts to dissemble sinister ends. A specialist who announces himself by approved means as being such, must be that and that alone."

We have from time to time noticed the vigorous prosecutions of charlatans and their abettors which frequently take place in France, and certainly a just principle is indicated by such prosecutions. How far they are practically efficacious in checking the evil they are directed against as a whole is another matter, the decision concerning which requires the command of more information upon the subject than we are as yet in possession of. Certain it is, that in France as well as with ourselves charlatanism is still rampant, and we do not know that we can better exhibit the fact than by a transcription of the following impudent circular, which is in course of free distribution in Paris:—

"Radical Cure of Diseases of the Chest in Sixty Days (even in cases given up by the first Physicians).—M. J. M. Baron has the honour to inform you that he has fixed the price of 50 francs, payable in advance, for the radical cure of all the diseases advertised in the *Siècle* and *Patrie* newspapers in November and March, and now again particularised. (Here various symptoms are vaguely enumerated.) These diseases are engendered in the lungs, which are slowly eaten away, but as soon as M. Baron's remedy is resorted to, the patient regains his voice and strength, and is enabled to defy those affections which attack persons unexpectedly and place life in danger. It is not only a very natural thing to impede the ravages which time makes on us when we have the means of opposing them, but it is also paying obedience to a duty and a feeling of respect for ourselves and others. All recurrence of the disease will be prevented by following the regimen which will be laid down during and subsequent to its treatment. M. Baron, assisted by two Doctors of Medicine, may be consulted at 36, Boulevard Prince Eugène, every day from 12 to 4. No letters will be replied to, as M. Baron does not visit patients at their houses."

It may be of interest, with reference to some of the very crude suggestions which have been made of late with the view of meeting the increase of infanticide in this country, to notice one of the topics discussed by the Medical Congress recently held at Bordeaux. Amongst other proposals, that of reviving the facilities for the secret deposit of infants at foundling hospitals has found its advocates. One would have thought that the limited experience of such a procedure formerly made in this country would have sufficed not only to show its utter immorality, but even its futility as a means of saving infant life—infanticide, in fact, still continuing to be perpetrated, though in a somewhat more circuitous manner. But if lessons on a larger scale are required, we have only to turn to the records of the results of the prolonged trial of the plan on the Continent, and there we find standing out prominently demoralisation of the parents and an enormous loss of life among their unfortunate progeny. To such an extent has this proceeded, that the local administrative authorities in most parts of France, in spite of much ignorant opposition, have determined upon the suppression of the *tours* or boxes for the secret reception of infants; and at the Bordeaux Congress, where this step was brought under discussion, it received the strongest approval. The *tours* were there denounced as offering a premium to libertinage and debauchery; a sink of iniquity, in which vice in rags and vice in satin were enabled to deposit in secrecy the fruits of their immorality. It was denied that any apparent increase of abortions or infanticides that has been observed since this suppression was due to it, being rather explicable by the augmented facility in the detection and certainty in the punishment of crime. Not only were illegitimate children consigned to these *tours*, but even those born in wedlock, when the family was in poverty, or when the prevalent taste for dress and finery induced the diversion of the means of support. It is, in fact, oftener through poverty than through absence of maternal feeling that girls abandon their illegitimate offspring; and the experiment has been very successfully tried in some *communes* of rendering assistance to such, and to poor married women, who formerly would have been tempted by the secrecy of the *tours*. It has been found, also, upon calculation that children thus brought up, through assistance furnished to the mothers, cost the public, upon an average, six times less than they do in the Foundling Hospitals. Their mortality, also, has been diminished; that of foundlings, indeed, subjected to so much exposure, delays, and privations, being excessive.

ARMY MEDICAL DEPARTMENT.

(From a Correspondent.)

The rank of Surgeon in Her Majesty's *Royal*(a) army is about being done away with. This announcement has not as yet appeared in the *Gazette;* but from the late Parliamentary return there cannot be any doubt that such is a fact. According to the return alluded to, it requires a term of forty years' service before an Assistant-Surgeon now joining the army can obtain his promotion to the rank of Surgeon; whereas, we read in the published regulations that after twenty years' service, *in all ranks*, he becomes a Surgeon-Major. It is clear from this state of affairs that the rank of Surgeon is doomed, and becomes only a question of a little time; we will then have assistants of twenty years' standing and Surgeons-Major, but no Surgeons! No doubt there will be economy to the public purse by this new arrangement, as the pay of Surgeon will be saved, the maximum pay of assistant being only 13s. a-day, whereas that of Surgeon is 18s. We live in wonderful days of would-be cheapness, cheap wines, cheap army doctors, all of doubtful quality and totally devoid of *spirit*. Can the authorities be really serious in this idea?

NAVAL MEDICAL OFFICERS.

We have received the following memorial and comments:—

"'*To the Presidents of the National Medical Colleges of the United Kingdom of Great Britain and Ireland.*

"'Gentlemen,—A commission, it is rumoured, will immediately inquire into the grievances of naval Medical officers.

"'The Profession in private life expects an inquiry as public as the reading of the *Times* newspaper. Such is due to the naval Medical officers expatriated to all quarters of the world.

"'Are naval Surgeons for the future to have the constitutional right of petition? Are Orders in Council and Royal Warrants for the future to be respected or disregarded by the Admiralty?

"'Dr. Frederick James Brown's pamphlet is a truthful exposition of the relations of the Admiralty with naval Surgeons and the Profession at large.

"'Yours most obedient,

"'Justitia.'

(a) Sir Chas. Wood, by granting promotion after twelve years' service, has preserved the rank to the Indian army.

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"The address of 'Justitia' to the National Medical Colleges shows the alarm felt by naval Surgeons at the probability of a commission of inquiry into the naval Medical department being rendered abortive by the corporate system of closed doors, *ex parte* statements, and selected evidence. To get qualified Medical gentlemen for the navy is easy enough, if the Admiralty will first learn what grievances exist, and then adopt the suitable remedies of pay, promotion, and honour. Should 'Justitia's' expectations be realised of a Commission with closed doors, such secret inquiry will be viewed with anything but confidence, and the sensible students of the day will shun the navy.

"The official feeling towards naval Surgeons has been that when once enlisted their future was of no further moment. If a supply of young Medical men could be got for the navy, this served the period of the day. No care was taken to reward past services, nor to encourage further honourable exertion. The prizes were too few, and their distribution founded on no reliable principle. Each member of the proposed Commission must consider Dr. Brown's treatise the text-book on the grievances of naval Surgeons."

CHOLERA IN SMYRNA.

(*From a Correspondent.*)

Smyrna, October 26.

The cholera, though officially reported as having ceased, shows itself in sporadic cases yet. Last time (1853) it lingered for four months, and as the circumstances are the same, the runaways coming back, it will probably continue as on the former occasion. The four months are nearly up now. At least 50,000 or 60,000 fled. The mortality in 1863 was about 2500; it has been more this time—perhaps 3500 or 4000.

When it came to Egypt with the Pilgrims, the Medical Board reported to the Pacha "that if he did not take measures to stop it all Europe would attack him." Upon inquiring into the circumstances, it appeared that it would be necessary to keep 40,000 or 50,000 pilgrims in quarantine for six or eight weeks at Suez on their landing from the Red Sea. There were no preparations made, no quarantine establishments, not a tree or house, or even drinking water on the spot; to put this mass in quarantine there would be tantamount to condemning two-thirds to death. The Pacha answered, as I would myself (I may, perhaps, not use the Eastern flower of rhetoric which he is said to have used), "Let the European pesovinks catch it, I cannot put those *holy* pilgrims to such a death." I am not sure that he qualified the pilgrims as "holy"—at all events, they very well knew what they were doing at Alexandria. In any case, it would have come later in the day by land. In 1848 it came by land to Trebizond, on the Black Sea, and from there to Constantinople, and from thence to Smyrna.

It came by land also from Constantinople to Smyrna *viâ* Brussa. The man who brought it slept at a mill at some distance from Smyrna, and the miller's family suffered. It would appear as if disease does not so easily march from west to east as in the contrary direction; as an example, when the plague existed, and was brought, as often happened, from Constantinople here, it never was so malignant as when it was imported from Alexandra. Later in 1848 a regiment of soldiers was sent from Constantinople, as a sanitary measure, to Chesme, where they were put under canvas, with great advantage to themselves; but there were two villages close to their encampments (when I say close, it may be a mile). One of these villages communicated freely with the infected soldiers, and very soon they were decimated or rather suffered severely from cholera. The inhabitants of the other village put themselves in close quarantine; every man and woman became a guard, and so well and so close was the seclusion kept, that the village escaped. Was this *post hoc* or *propter hoc?* I am disposed to think the latter, as I believe that if a perfect quarantine could be kept, the disease being also kept at a certain distance (this may be effected in a small island with none or little trade, but is quite impossible in the present state of the world to the great centres of trade or communication)—if a quarantine, in fact, could be such, I believe in its efficacy; but quarantine, as practised generally, is worse than useless. At all events, on each occasion of its coming to Smyrna, an immense number of the inhabitants fled. Now, I consider this "skedaddling" as immensely useful—in fact, I believe a "pair of post horses the best prophylactic;" it tells both ways—it is good for those who leave it, it is good for those who remain; the poor are put in charge of the houses of the rich who fly, and so escape in a certain proportion from overcrowding, and the other inconveniences of their lanes and alleys. Of course in certain cases the runaway is taking his enemy with him to spread it elsewhere. I am told that at Mecca this year the roads, when the "Feast" was over and the pilgrims leaving, were lined for miles with the dead and dying. It is not necessary to suppose an independent origin for the disease, then and there, from overcrowding, etc. Pilgrims from all parts of India, where the disease is always existing—is endemic, in fact—were there in numbers, and most certainly brought the disease with them. The circumstances there, of course, were such as to give it form and extension. Malaria fever is prevailing here epidemically at present, and the runaways from the cholera have come back suffering more generally from fever and ague, the villages near being more exposed than Smyrna itself to fever and ague.

I used two methods of treatment, according to the feelings of the patients themselves. To one class I gave stimulants freely, if they would willingly take them; and to another class I gave ice to suck and swallow in small pieces at a time. Stimulants, I think, were less relished, and did not seem as useful as on former occasions. The ice was much relished and eagerly asked for by a considerable number of patients. In all cases friction and external stimulation. Hot-air baths, by means of spirit, were very useful. They can be given by means of a cradle to support the bed clothes, the feet being tied up to the cradle, the patient lying in bed; but I believe that 95 per cent. of the collapsed cases perish in every form of treatment. When the respiration gets much accelerated the patient inevitably dies.

A PARISIAN PROFESSOR ON CHOLERA.

Dr. Barth, one of the Physicians to whose care the cholera patients in the Hôtel-Dieu were committed, has recently delivered a lecture on the recent epidemic.

In commencing, he showed that cholera had originally, as far as we could learn, taken its origin on the Ganges, amongst a people much exposed to the noxious emanations arising from the river, and who were exposed to a very high temperature by day, whilst the nights were cold, and there were very heavy dews. The three former attacks of cholera which have visited Paris—viz., those of 1832, 1849, and 1853, may be traced to the Ganges as their starting-point; but the one from which France was even now suffering appears to have burst forth amongst the pilgrims who had congregated at Mecca. Dr. Barth considers that the spread of this epidemic is due to germs which are suspended in the atmosphere, that these have their origin in noxious emanations, and seem to follow the course of the prevailing winds; they also are very prone to follow the course of rivers, and if the stream be a large one, the inhabitants on one bank only may suffer. Crowded localities are most likely to be infected, and armies and caravans carry it with them. Its progress, as a rule, is not more rapid than that of travellers; but at the present time it is found to travel more rapidly than formerly, owing to communication between various places being more free than was the case when the disease was first known. By sea it appears to travel most quickly, as here it is conveyed directly by ships from one port

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to another. It differs from epidemic fevers in rarely attacking isolated individuals, and it has been found to differ from small-pox, measles, etc., in that one attack is no security from a second at a future time.

The pilgrims come to Mecca in vast numbers; they arrive in a state of great destitution and exhaustion; they have travelled principally on foot, and have been subject to great hardship by the way. The way in which they herd together, their insufficient and unwholesome food, are circumstances the most likely to breed the disease; and these are accelerated by their sleeping in the open air at night. On their return their condition is no better, and they are crowded together in the steamers which convey them to Suez, so that it is no wonder that they were the means of bringing the cholera to Alexandria, whence it ultimately has spread as we have seen.

Dr. Barth said that of predisposing causes the summer, a high temperature, and the eating unwholesome food, especially fruit, were the most marked. Low situations, an alluvial soil by the banks of rivers, the sea coast, and especially seaport towns, were more open to the disease than high altitudes, especially if the heat were not great. As an example, he stated that Switzerland had been almost free from the disease.

Once settled in a place, it spreads as from a centre on all sides. Those who live badly, who take large quantities of alcohol and of cooling drinks, those who sleep herded together in improperly ventilated rooms, and, as has been seen at the Hôtel-Dieu during the present epidemic, those who are weakened by other diseases, especially by rheumatism, small-pox, and typhoid fever, are most likely to be attacked.

Dr. Barth then proceeded to speak of the usual symptoms of the disease. He considered that an excellent chance exists of saving a very large proportion of patients if the earliest symptoms of diarrhœa and vomiting are at once treated. Speaking of these two symptoms, he referred to what has been called "dry cholera," in which they do not exist; but he said he had not met with such a case, and they must be very rare. Percussion often showed, from the dulness of the abdomen, that the intestines were full of fluid; and after death they were found in this state or perfectly empty. The diminution of urine is in proportion to the diarrhœa and vomiting.

REPORTS ON THE EXISTING CONDITION OF TOWN AND COUNTRY, AND THEIR STATE OF PREPARATION AGAINST THE INVASION OF CHOLERA.

(By our own Special Commissioners.)

No. III.—EPPING.

The recent outbreak of Asiatic cholera at Epping calls for a more extended notice than usual. The Epping district, including the town of Epping and the adjoining subdivisions, is seventeen miles to the NN.E. of London. It is most favourably dealt with by Nature, and should rank as one of the healthiest localities in England. It stands generally on an elevated site, from 300 to 400 feet above the level of the Thames at high water; its surface is undulating, possessing hill and dale in pleasing variety; its soil is gravelly, and it is amply supplied with good water, if it were duly cared for.

The lands are well cultivated or laid down in grass, and several hundred acres of common—namely, Bell-common, Thoydon-green, and Epping-common—afford open space for pure air and recreation. The adjoining forest of Epping, containing many thousand acres of wooded land, add to its attraction, if not to its salubrity.

The outbreak of Asiatic cholera was nearly confined to a single house in the sub-district of Thoydon, the residence of the late Mr. Groombridge. The house stands in one of the most elevated positions in the country, on the summit of a hill, and may be seen for many miles round. It was recently built by the late owner for his own use at a considerable expense, and possessed every requisite for the purpose. He was wealthy, and could command all the comforts of life. It is about a mile and a-half distant from the town of Epping. In this house the first case of Asiatic cholera occurred on September 26, 1865, in the person of Mr. Groombridge, the owner of the house and adjoining farm.

Mr. Groombridge had suffered for a considerable time from general illness and occasional diarrhœa. To relieve these he had just taken a tour in the South of England, where he visited Weymouth and other places. He returned on September 26, and on the following day was seized with Asiatic cholera, and sent for his Medical attendant, the late Dr. McNab. From this he recovered, but was again seized on October 5, nine days after, and died of this second attack in eleven hours.

As this was the first case, it is necessary to observe that the disease seems to have been generated in Mr. Groombridge without infection. He does not appear to have been exposed in any place to cholera.

The second case occurred on September 30.* On this day his daughter, Emily Groombridge, aged 7, was attacked, and died in ten hours.

The Medical attendant, Dr. Daniel Robert McNab, aged 74, died on October 3, after twelve hours' illness. He had sat up one night at Groombridge House, and from his advanced age and feeble health was ill-suited for such arduous duty.

The fourth case occurred in the person of John Riley, a labourer on the farm, aged 34. He died on October 7, after thirty hours' illness. Riley was removed to his own cottage, and died there. He had been for some time in ill-health, his appetite was bad, and he suffered from general indisposition.

Riley's cottage was situated on Bell Common, about one mile from Groombridge House, near to the town of Epping, and formed one of a cluster of four or five poor cottages, containing a population of from thirty to forty persons. In the adjoining cottage, and communicating directly with it by a door, was a large family of eight persons. A more favourable site for the propagation of Asiatic cholera could not be easily selected.

Susan Saville, aged 46, died on October 11, after twelve hours' illness. She had been called up at 11 o'clock at night to lay out Riley's body, and appears not to have visited Groombridge House. She had been suffering for some time from a palpitation of the heart.

Mrs. Elizabeth Groombridge, aged 50, wife of Mr. Groombridge died on the same day (October 11) after twenty-four hours' illness. She had been confined for some time from mental indisposition.

Mrs. Alice Parsell, aged 86, mother of Mrs. Groombridge, was the seventh and last case of this outbreak. She died on October 14 after one day's illness, and the nineteenth day from the first attack of Mr. Groombridge.

The only case of the above not under the immediate influence of the agents connected with Groombridge House was Susan Saville; and thus in her person the effect of infection appears obvious; but, on the other hand, not one of Riley's family, or any of the numerous families near, took the disease. The writer of this has been frequently in Riley's house since his death, and has had extensive experience of Asiatic cholera and cholera districts, and has rarely seen one more favourable to its development.

That Asiatic cholera should have seized, as it were, on a locality apparently so healthy as Groombridge House, appears, at first view, extraordinary; but local agency affords a satisfactory explanation of the occurrence. The farm had been only recently cleared of timber and cultivated, the house was newly built, and, strange to say, the water of the well which supplied the house was impregnated with the contents of a neighbouring

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cesspool! A stronger instance of local influence and local agency in the development of Asiatic cholera has seldom been met with. These wanted but the choleraic disposition of atmospheric influence to complete the diseased action; and this unhappily presented itself.

The fatality of the attack is the only feature which need be noticed. Of seven cases not one recovered, although provided with the best Medical attendance in the district; but at the same time, all the individuals attacked were debilitated by age, infirmity, or illness; not one case occurred in a healthy person.

The district of Epping is ill prepared to meet a future visitation. The quarters inhabited by its poorer classes—Coppice-row, Thoydon-green, Bell-common, Ivy Chimnies, and Coopersale—are impregnated with malaria arising from open and fetid drains, which are used to accumulate manure; stagnant ponds abound from which impure water is drank; pure water is, in many cases, wholly wanting, and only to be obtained from a considerable distance, and the labouring classes are ill supplied with nutritious food; in consequence of the high price of meat, cheese, butter, etc., their principal food is bread. The town of Epping itself is much behind the requirements of the age; it is unlighted at night (a supply of gas is now being laid on), ill paved and drained, and there is an absence of cleanliness in the back yards, courts, and streets which cannot be too strongly condemned. It is to be hoped that the warning which has thus been given to the inhabitants may not be lost upon them. Whatever opinions may be entertained as to the infectious or contagious character of Asiatic cholera, one thing is certain, that the abode of the rich as well as of the poor is visited by it, and that the malaria so favourable to its propagation may arise in our own or from a neighbouring dwelling. Groombridge House is a melancholy example of this. If local self-government be a name and not a reality; if the labouring poor are sunk beneath it to a condition revolting to humanity, whilst sordid avarice enriches itself by their sufferings, the sooner it is suppressed the better, and its place supplied by the controlling influence of a wise and paternal administration.

Since the cessation of the outbreak, two cases have been reported in the family of Haggar, a labouring man residing in Coppice-row, about half a mile distant from Groombridge House. One terminated fatally on November 2, after an attack of twenty-two hours' duration, to Henry Haggar, aged 4.

Haggar's wife was daughter to Susan Saville, and attended her during her illness. She is reported to have changed her clothes before returning home, but to have subsequently washed them in her own dwelling, and thus to have propagated the disease. Besides, the malaria arising in Haggar's abode affords a satisfactory reason for the lurking of infection there. His family consists of eight children, himself and wife, and within about four feet of the rear of the house runs an open fetid drain, carrying the contents of the privies of the neighbouring houses; one of the back bedrooms looks out upon this, and from a broken pane of glass receives a pestiferous ventilation accordingly. For many weeks remittent fever has prostrated the whole family, except Haggar himself.

The attention of the local authorities has been frequently called to this particular family and district, and measures are in contemplation for their improvement. These fresh cases prove that the choleraic influence hangs over the district, and will sooner or later carry off its numerous victims, unless some means be soon adopted to improve its sanitary condition.

Tabular Statement of Cases of Asiatic Cholera in the Epping District from September 30 to October 14, 1865.

Name of patient.	Age.	Date of death.	Duration of illness.
Groombridge, Emily	7	September 30	10 hours.
M'Nab, Dr. Robert	74	October 8	12 ,,
Groombridge, W. L.	49	October 6	11 ,,
Riley, John	34	October 7	30 ,,
Groombridge, Mrs. Elizabeth	50	October 11	—
Saville, Susan	46	October 11	—
Parsell, Mrs. Alice	86	October 14	1 day.

REVIEWS.

On Traumatic Keratitis; with a Report of Nineteen Cases Treated at the London Ophthalmic Hospital, between December, 1862, and May, 1865. By Spencer Watson, Esq., F.R.C.S. Eng., Assistant-Surgeon King's College Hospital, etc.

The subject of Mr. Watson's little pamphlet is one of great importance, from the rapidity with which, in certain cases, vision may be destroyed and the eyeball disorganised, as well as from the greater or less amount of injury to the sight which results in every case in which actual suppuration of the cornea has taken place. Mr. Watson has therefore done good service in bringing it before the notice of the Profession, and by describing, however briefly, the general character of the treatment adopted at the head-quarters of Ophthalmic Surgery in this country. He alludes especially to the good results of paracentesis, frequently repeated, if necessary, in those cases in which there is much pain, whether the tension of the globe be increased or not, and also to the importance of iridectomy when sloughing is impending or in progress; in such cases the choice lies between operative interference and the destruction of the eye. His remarks on the circumstances under which such interference is called for, though brief, are well worthy of attention.

A Practical Treatise on Rupture: its Causes, Management, and Cure, and the Various Mechanical Contrivances Employed for its Relief. By T. P. Salt, Birmingham. London: John Churchill and Sons. 1865. Pp. 112.

The object of this treatise is to explain rupture, with direct reference to the mechanical contrivances used for its alleviation, in such a way that the public may have a better idea of what is meant by the word *rupture*, and go more intelligently in search of relief or cure than is too often the case now. In the Preface the author comments upon the sufferings of highly educated young ladies—"*these unhappy girls*," he calls them. Surely this constant cry about boarding-schools being places for torture is one of a past date: if it be not, what endurance these young ladies display in being so merry as they always appear! At page 9 we find our old friend *the* diagram of the peritoneum. This is a very convenient vehicle for packing that membrane into a student's head, but it has about as much relation to the Surgery of hernia as a tally-stick has to quadratic equations.

Now, this volume being intended for the general reader, (perhaps even for "these unhappy girls)," the author in his anatomical description has to indicate but dimly the inguinal canal, which, he says, "naturally gives lodgment to certain parts of considerable importance, but the nature of which it is unnecessary to our purpose to explain." However, not to leave his readers too much in the dark, it is "situated at the lower part of the abdomen." We suppose this may be termed anatomy for the use of schools. At page 20 are eight copies from Bernard and Huett's "Operative Surgery." It is rather startling to read that 1 in 8 of the whole population suffers from rupture.

Mr. Salt dwells a good deal on the injurious effects of stays, and gives some very useful and original hints. He says "boys have as much need of it (stays) as girls up to the period of womanhood;" but girls before fifteen wear what are not stays really, only a sort of gearing to support their clothes.

Again, he exclaims—"How much young ladies could tell if they would!" No doubt they could, to some nearer one yet and a dearer one than the author. But really—"One of the most inveterate pinchers among my lady acquaintance (p. 41)" is scarcely the language for a scientific monograph. Mr. Salt's expression that "a girdle of infancy is made to encircle" the viscera is a most ingenious way of telling us that there is, from even loosely-fitting corsets, a forced arrest of development.

Mr. Salt describes very fairly his own truss and some other instruments, belts, uterine supports, etc., and he evidently thoroughly understands the subject. We do not exactly see the use of the fashion which prevails at present of prefacing every monograph with a weak solution of Quain and Sharpey; and when these things disappear may the stock quotations go with them—"that inestimable blessing, *mens sana in corpore sano*," for instance;—there are plenty more, and it would answer the purpose far better to change now and then. For

instance, "As Marcus Antonius Flaminius beautifully says—'Nec pauper,' nor necessarily 'Dives,' need fear applying at my shop, and we will guarantee his returning to the bosom of his family and friends with a well-fitted truss, 'valente semper corpore, mente sanâ, amicis jucundis,' etc., etc. (*for ten-and-sixpence*)."

We venture to say that (if he will condescend to quote a comparatively modern Latin poet such as the above) the effect on the "unhappy readers" will be just as startling and effective, and the meaning is *the same*.

Tension of the Eyeball, Glaucoma, etc.: Some Account of the Operations Practised in the Nineteenth Century for their Relief. (A Paper read before the Midland Medical Society, February 3, 1863.) By JAMES VOSE SOLOMON, F.R.C.S., Surgeon to the Birmingham and Midland Eye Hospital, formerly Surgeon to the Birmingham General Dispensary.

FEW operations in Surgery have excited more controversy than that introduced by the celebrated Professor of Berlin for the cure of glaucoma. Warmly, perhaps extravagantly, lauded by some, it has been denounced with at least equal vigour by others as injurious and inadmissible. The interest still shown in the question, as manifested by a very bulky and vivacious discussion only recently terminated, has induced Mr. Solomon to lay before the public his own views on the subject of tension of the eyeball, as they appeared in a paper which he read two years ago before the Midland Medical Society.

After a short sketch of the various modes of puncturing the eye for the relief of tension in vogue before the introduction of iridectomy, Mr. Solomon discusses the latter operation. While admitting its favourable results in acute *primary* glaucoma, he considers that in sub-acute and chronic cases they are unsatisfactory and discouraging, and he enumerates a formidable list of accidents which have followed its performance by the most skilful Surgeons. Here we think that Mr. Solomon, writing, or at all events, publishing, in 1865, does iridectomy scant justice. When first introduced, the limits of its utility were unknown. It was practised in many cases in which increased experience has shown it to be inadmissible, and hence many accidents to disorganised eyes of which we do not hear now. As now practised, in selected cases, we believe that it will bear favourable comparison with any of the graver operations in ophthalmic Surgery. He then goes on to explain the reasons which have induced him to devise the operation which he terms intra-ocular myotomy, and which he has practised and advocated since the year 1860. They are briefly these:—He considers that "the nerves of the ciliary vessels play an important part in the *rôle* of symptoms which constitute glaucoma," and that to their section at the point where they pass from the ciliary muscle into the iris is to be attributed the benefit which is derived from iridectomy. The removal of a part of the iris is unnecessary and injurious. The facts and observations which led him to this opinion are given in detail, but our limits forbid us to quote them. One, however, we may mention, as it has been observed and commented upon by the advocates of Graefe's operation, and that is the superior results of iridectomy where the iris has been cut close to its origin as compared with those in which such precaution has not been taken. The effect of the section of these vasculo-motor ciliary nerves is to induce a more healthy action in the ciliary ganglion which presides over the organic functions of the eye; the vessels of the choroid and retinæ resume a more healthy action; the intra-ocular secretion is improved; the turbid vitreous clears, and the normal tension is restored to the globe. The operation is described thus:—"The patient being seated, or in the recumbent posture, I entered a small Beer's cataract knife (Sichel's) at the corneo-sclerotic union, and then pushed it through the pillars of the iris into the ciliary muscle, making an incision in the latter of about one-sixth of an inch, on a line parallel with an equator of the eye." The parts divided are some of the radial and other fibres of the ciliary muscle in a transverse direction, and also branches of the nerves which are distributed to the part from the ciliary ganglion. The operation is simple, it is safe, and it is effectual not only in glaucoma, but in several other morbid conditions of the eye, and notably in myopia, for which, however, we should prefer the treatment by concave glasses.

We believe this to be a correct, though exceedingly condensed, and therefore imperfect, account of Mr. Solomon's views, which we would strongly recommend our readers to study for themselves. They may not, perhaps, meet with general acceptance, for the teachings of Professor Graefe seem to have made an indelible impression on the minds of ophthalmic Surgeons; but they are original, ingenious, and instructive. A considerable portion of the treatise is devoted to the refutation of Mr. Hancock's opinions; this, we think, might have been omitted with advantage.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

EDINBURGH, November 13, 1865.

IT is with great difficulty that we can recall to remembrance a University Session which has been ushered in with fewer incidents or changes in the Medical Faculty; and in the other faculties, and in the University generally with more changes and events of a stirring and really noisy character than the present. With few exceptions, the Medical Professors resumed their courses on the first of this month with preliminary remarks of the shortest description. Their classes promise to be of the usual number, and, in some cases, the attendance is such as to augur a diminished class-roll to many of the extra-academical teachers. In the Arts Faculty, the vacancies caused by the deaths of Professors Aytoun and Donaldson gave rise to spirited contests among the numerous candidates for their much-prized chairs.

Mr. David Masson, M.A., Oxon, the well-known critic and essayist, the editor of "Macmillan's Magazine," the defender of Hamilton, and Professor of English Literature in University College, London, has been appointed to the Chair of English Literature and Rhetoric. We have every reason to hope, from his previous career, that he will maintain the high reputation which has been bequeathed to his care by such illustrious predecessors as Blair, Spalding, and Aytoun, and there cannot be the slightest doubt that the welcome given by Scotchmen to a son who has honoured his country's name, as many have done, in the great English metropolis, and who has returned, as few have done, with a ripe lustre to add to the fame of his Scotch *Alma Mater*, will be cordial and enthusiastic. Mr. Oakeley, M.A., Oxon, has been appointed to the Chair of the Theory of Music. We fear it must be admitted that he succeeds to a post the history of which has been an unexampled series of abuses, of funds misapplied, and of almost total forgetfulness of the first duty of a Professor—the instructing of pupils. We feel satisfied that under our new University constitution this history cannot be repeated. The former epoch of this chair was one in which too much liberty was afforded for the performance of the duties of the Professor "in obedience to a law from *within*"; in the new epoch, we have a supreme court whose function is (employing an expression of the student-philosopher, John Holbeach) to keep up "a certain general standard by the enforcing of a law from *without*,"—in conformity with "a law specific and absolute, and furnishing the only escape from anarchy and chaos." Mr. Macpherson has been appointed to the Chair of Scots Law which Mr. Moir resigned at the end of last session. A position of still higher dignity was filled up by the election of Mr. Thos. Carlyle to the Rectorship of the University, in the room of the Right Hon. W. E. Gladstone. After a very animated and ably conducted contest between his supporters and those of his opponent, Mr. B. Disraeli, the sage of Chelsea was placed at the top of the poll on Saturday, the 11th, by a majority of 347 votes out of 967 voters, Mr. Disraeli having polled only 310.

The only changes among the lecturers of the Medical and Surgical extra-academical school have been caused by the resignation of Dr. Warburton Begbie and the appointment in his place, as the teacher of the Practice of Physic, of Dr. George Belfour, the learned translator of Casper's "Forensic Medicine." Dr. Begbie has for many years been a most popular lecturer, and a favourite clinical teacher in the Infirmary. His resignation is to be deeply regretted, though it is matter for congratulation that his private duties have so increased as to necessitate this step. Dr. Scoresby Jackson has been appointed to the vacant Physicianship in the Royal Infirmary. The session of the school was opened on Oct. 31, by Dr. Henry Littlejohn, the lecturer on Medical Jurisprudence. In his address he referred to the increasing necessity for a high class general education for every Medical man. Now, the schools must train a class of Practitioners who shall be in every possible respect gentlemen, conjoining a sufficient

acquaintance with classical and general literature and with science to a thorough knowledge of their Profession. He dwelt on the importance of the possession of such accomplishments to success in life, and appealed to his hearers to consider time profitably spent while recalling the standard classics or affording an introduction to the literature of France and Germany, or bracing the mental faculties and the powers of reason and observation with the broader lessons of mathematics and of natural philosophy. The great advantages, traditional and existing, of the Edinburgh School were pointed out. The wide scope afforded for the study of natural history in the museums, and in the field, and the opportunities for refinement of taste in the galleries of art were eloquently dwelt on. No very cheering result was, however, promised by the lecturer as a reward to the student. The prizes may be as honourable as the pine-leaf garland or the withered parsley crown of Isthmia; they would often prove as unsubstantial. "Working on in the sphere appointed you by Providence—it may be in some remote country village—the trusted friend of the poor and their truest benefactor, you can enjoy your competence, moderate though it be, and yet still remain the gentleman and be respected as well as loved."

Dr. Littlejohn's name has been recently brought prominently before the public in connection with an extremely suggestive Report on the sanitary condition of the city, which he has presented to the magistrates. Our space forbids that we should refer to any of the important topics discussed in this pamphlet, yet we cannot avoid attempting to raise our voice in support of the great hygienic reform which the one proposal of opening up by wide streets the lowest districts of the town may produce. Antiquarians may lament the destruction of streets and houses with histories dating prior to the days when Columbus sailed to America or when the Fourth James was killed at Flodden; but when these have become the hotbeds of fever and immorality, an unwearied war of exterminating destruction should be waged against them by every friend of life and by every guardian of the city's interests. Leeds and Liverpool are already considering some such proposal, and it is about to be inaugurated, on a noble and stupendous scale, at Glasgow, where 80,000 people—a small city—are to be removed from overcrowded dwellings to give place for properly constructed houses and streets. We are glad to find that the principles pointed out years ago by Alison, Shapter, Gavin, Duncan, and others are now so universally credited, and that municipal authorities are nearly convinced that defective dwelling-houses may be the fountains of diseases and epidemics not only deadly but costly.

The Medico-Chirurgical Society held its first meeting on Wednesday, the 8th. Papers were read by Dr. J. Matthews Duncan, "On the Retentive Power of the Abdomen;" and by Dr. W. B. McKinlay, on the much-debated question of "Acupressure." Dr. McKinlay occupies the positions of Surgeon to the Infirmary and Surgeon of Police in Paisley, and has been able to test, in a large and valuable experimental field, the advantages of acupressure. The opinion he has formed of its applicability to Surgery, major and minor, may be best understood by repeating his statements that he now, as a rule to which there are extremely few exceptions, employs acupressure in his Hospital practice, and that his pocket-case for private and police practice contains no other hæmostatic except the means required for acupressure. He finds, generally, that secondary hæmorrhage is now never met with by him, that all his operations are brought to a termination more speedily than before employing this agent, and that it has not been a cause of pyæmia, as this has never been seen in Paisley within his experience. Dr. Patrick Watson, one of the Surgeons in the Edinburgh Royal Infirmary, spoke warmly in favour of acupressure. At one time one of its most determined opponents, he had been induced to give the method a trial, and was so firmly convinced of its superiority that ligatures are now very rarely used by him. He spoke of its great advantages in excisions, even of the knee, and instanced a case of castration where complete recovery occurred on the third day. Professor Simpson, in a speech of considerable length, referred to various objections, which he attempted to combat, especially complaining that some Surgeons had ignorantly modified his method in a manner which completely annulled the advantages claimed for it, by forgetting the short time the needles should be retained. He announced his firm belief that acupressure, or, possibly, some more perfect method of avoiding interference with healing by the first intention, was certain rapidly to extend, and instanced Aberdeen, where all the Hospital Surgeons, except one, employ it alone. At this meeting it appeared a significant fact that only one gentleman, Dr. Gillespie, attempted to hint that the method by ligature had been unfairly decried, and acupressure extravagantly praised. A large proportion of the Medical Profession in Edinburgh, we are morally persuaded, are not inclined to occupy the position of exclusive advocates of either method, but rather that *milieu* which is so often *juste*. It appears as yet the only logically tenable position when, on the one hand, we refer to the favourable experience of Paisley and Aberdeen; and, on the other, to the more than doubtful experience of Carlisle and Liverpool.

IRELAND.

Dublin, November 14, 1865.

SIR PATRICK DUN'S HOSPITAL.

The formal opening of this time-honoured institution, which has so long been the Hospital for Medical clinical instruction in direct connexion with the University of Dublin and the School of Physic in Ireland, as a Medico-chirurgical Hospital, took place on Friday, the 10th instant, when a lecture introductory to the course of clinical instruction was delivered by Dr. Law, King's Professor of the Institutes of Medicine. The change in the arrangements of the Hospital just alluded to has been rendered necessary to complete the Medico-chirurgical character of the School of Physic, and in consequence of the University of Dublin now granting degrees and licenses in Surgery as well as Medicine, qualifications which, bearing the stamp of University education, are every year more sought after. The change has been facilitated also by the recent removal of the hall, library, etc., of the King and Queen's College of Physicians from within the walls of the Hospital, to the splendid building lately erected by the College in Kildare-street, whereby space has been obtained for additional wards. As at present arranged, the Hospital contains forty-eight beds for Medical and thirty-two for Surgical cases, and it is intended, so soon as the funds shall admit, to increase the total number of beds to 100. The Medical and Surgical staff of the Hospital is as follows:—

Consulting Physician: William Stokes, M.D., D.C.L., F.R.S., Regius Professor of Physic.—*Consulting Surgeon:* Robert Adams, M.D., M.Ch., University Professor of Surgery.—*Physicians:* Robert Law, M.D., King's Professor of the Institutes of Medicine; John T. Banks, M.D., King's Professor of the Practice of Medicine; Aquilla Smith, M.D., King's Professor of Materia Medica and Pharmacy.—*Surgeons:* Benjamin G. M'Dowel, M.D., M.Ch., University Professor of Anatomy and Chirurgery; Robert W. Smith, M.D., M.Ch., Trinity College Professor of Surgery; Edward H. Bennett, M.D., M.Ch., University Anatomist.

Attendance on this Hospital is recognised by the Royal College of Surgeons in Ireland, by the King and Queen's College of Physicians, and by the Apothecaries' Hall of Dublin.

In your impression of November 19, 1864 (page 552), I alluded to the extensive and important improvements lately effected, through the wise and laudable liberality of the Board of Trinity College, in the Medical School of the University. I may now mention that the museum of Materia Medica there spoken of has just been completed, under the immediate direction of the present able and energetic Professor of Materia Medica, Dr. Aquilla Smith, who has spared no personal trouble or exertion to carry out, in the most perfect manner, the wishes of the Board. The specimens of drugs, etc., almost without exception collected by Dr. Smith himself in the best markets of London and Dublin, and from other sources, are among the most beautiful I have ever seen, and the ample opportunities afforded to the pupils of examining the collection will certainly leave them without excuse if they neglect to acquaint themselves with the physical properties of the weapons they are hereafter to use in combating disease.

GENERAL CORRESPONDENCE.

CHOLERA IN GERMANY AND RUSSIA.

Letter from Dr. J. Althaus.

[To the Editor of the Medical Times and Gazette.

Sir,—The epidemic in Altenburg and Werdan, in Saxony, to

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which I referred in your journal for November 4, still continues undiminished. In the former place there were, from October 27 to November 1, 13 cases and 8 deaths, and in the latter 131 cases and 28 deaths.

At Leipzig only one fatal case has occurred. From Italy the epidemic has spread to Trieste, but the cases have not been numerous there. In the South of Russia cholera has been very severe. In Berditschef, a town of about 60,000 inhabitants, in the Government of Volhynia, there were, between October 13 and 19, about 250 cases, and from 30 to 50 deaths daily. In Balta, in the Government of Podolia, there were 309 cases and 98 deaths between September 10 and 20. In Kertch the disease was less severe, there being only 82 cases and 38 deaths during the whole of September. Cholera has also appeared in the neighbourhood of Kiew.

I am, &c. J. Althaus, M.D.

18, Bryanston-street, November 13.

ON THE TREATMENT OF ACUTE ORCHITIS BY PUNCTURE AND COMPRESSION (IMMEDIATELY AFTER PUNCTURE) BY STRAPPING.

Letter from Dr. W. Spencer Watson.

[To the Editor of the Medical Times and Gazette.]

Sir,—About a year ago my colleague, Mr. Henry Smith, drew attention to a practice he had been in the habit of following in the treatment of swelled testicle, at King's College Hospital. That treatment consisted in making a small incision through the tunica vaginalis and into the body of the testicle, during the acute stage of the disease, and repeating this proceeding twice or more, if necessary. The result obtained by this plan was so good as to induce me to imitate it, and I have now the opportunity of laying before your readers the conclusions I have arrived at, and of offering a suggestion as to the combination of a further proceeding with, and in addition to that of making a puncture. The first few cases in which I tried the plan of puncturing alone gave very satisfactory results, in almost all cases the patients expressing themselves as being relieved at once, *i.e.*, as soon as the escape of serum from the tunica vaginalis had relieved the tension of the parts, and it seemed to me that this escape of serum alone was the chief use of the puncture. I therefore tried the plan of puncturing the tunica vaginalis only, and letting off the serum by a grooved needle, and in one or two cases this seemed to give relief for the time; but under both these plans I soon found that in a few days the opening would close and the pain and tension return as before. Under such circumstances it was necessary to make a second puncture, but few patients would submit to a repetition of this proceeding, and I therefore found it necessary to adopt the plan which I have since followed, and with which I have every reason to be perfectly satisfied.

The plan consists in puncturing the testicle through the front or lower part, so as at the same time to let off the serum in the tunica vaginalis, and to relieve the tension of the tunica albuginea, and as soon as the bleeding has ceased, (the quantity which escapes being in all cases very small, seldom more than an ounce,) to apply a firm case of strapping, put on as tightly as the patient can bear it. At the same time I prescribe a full dose of opium, and direct it to be repeated twice or three times. As an instance of this plan of treatment, I may mention the following case:—

J. H., aged 20 years, came to King's College Hospital, under my care on May 8, 1865. He had had a gonorrhœal discharge since Dec., 1864, for which he had been treated without injections. On the day previous to my seeing him he had been drinking freely, and the left testicle became suddenly enlarged and very painful and tender. The testicle was punctured and strapped immediately, and opium 1 gr. prescribed.

May 10.—He was in great pain, but had been able to sleep the night before. Strapping was again applied and opium repeated.

12th.—The strapping having become loose was again applied. He is now free from pain.

17th.—The testicle is now very little larger than the natural size, and is free from pain or tenderness.

Thus in one week the acute symptoms of this case subsided, and the testicle was restored to very nearly its normal condition. In other cases the same result has been obtained at the end of a fortnight, and this is a much more rapid resolution than can be obtained by the ordinary method of treatment.

I am indebted to my colleague, Dr. Jno. Harley, for the suggestion of the plan of treatment by strapping; he having adopted that plan without a previous puncture; but I believe that the previous relief of tension materially assists in the restoration to health of the parts involved, and this more particularly where there is a considerable effusion of serum into the tunica vaginalis, for it is quite clear that when this is the case, no efficient compression can be made on the body of the testicle. It is also to be observed that after the escape of serum and blood, the size of the whole swelling is materially diminished, and the compression made will be proportionably effective, while the pain experienced by the patient will be greatly lessened.

As a further recommendation for this method of treatment, I may observe that should bleeding prove troublesome after the puncture, as I understand was the case in one case so treated by Mr. Henry Smith, this would be a most effectual way of restraining it. I have myself never seen more than an ounce of blood escape from the puncture, which I generally make with a Syme's knife, and most frequently not more than a drachm of blood is seen. I am, &c.

W. Spencer Watson.

27, Montague-street, Russell-square, W.C.

THE MODE OF ELECTING TO THE COUNCIL OF THE COLLEGE OF SURGEONS.

Letter from Mr. T. Watkin Williams.

[To the Editor of the Medical Times and Gazette.]

Sir,—I enclose a copy of a memorial to the Council of the Royal College of Surgeons, which in two days last week obtained the signature of 135 Fellows resident in the provinces. In so short a time it was quite impossible to apply to every one. The Hon. Secretaries of the several Branches did well to obtain so many signatures. I shall feel obliged if you will insert this note as well as the memorial in your next number, and I beg of those Fellows who have not already signed it to do so, and forward it without delay to the College, to the care of Mr. Thomas Paget, of Leicester. The discussion upon the question has been postponed until some early Thursday. I am, &c.

T. Watkin Williams,
General Secretary British Medical Association.

British Medical Association,
13, New Hall-street, Birmingham.

"*To the President, Vice-Presidents, and Members of the Council of the Royal College of Surgeons of England.*

"The memorial of certain Fellows of the Royal College of Surgeons of England resident in the provinces

"Sheweth—

"That your memorialists are desirous of bringing before you the general dissatisfaction of the Fellows of your College resident in the provinces at the mode of electing your Council.

"That the privilege of electing Members of the Council is vested by the Charter in the Fellows generally, without any personal distinction whatever, and that this is the chief or sole function of the Fellows in relation to the College; but the personal attendance required virtually deprives a large portion of those Fellows resident at a distance from London of their privilege, and makes the Council the representative body, not of the Fellows generally, but of a limited number only.

"That your memorialists therefore earnestly request that you will be pleased to obtain a new or supplementary Charter, in order to render it lawful for the election of Councillors to be conducted by means of voting papers, which may be filled up by non-resident electors, after some such plan as that proscribed for the Universities of Oxford and Cambridge in their election of members of Parliament."

Recognition of Medical Services at Gibraltar.—The *Gibraltar Chronicle and Commercial Intelligencer* of October 26 contains an official notice in reference to the late epidemic of cholera, from which we extract the following paragraph:—"His Excellency the Governor takes this opportunity of tendering his best thanks to the civil and military Medical gentlemen for their unremitting attention to all classes during the epidemic. Called upon at one period almost incessantly night and day, they have worked zealously and indefatigably, and by their exertions have probably saved many lives. His Excellency is sure that, in thus publicly thanking them, he is only expressing the feelings of the community at large.—By command, S. Freeling, Colonial Secretary."

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OBITUARY.

THE LATE MR. TEGART.

We are extremely sorry to have to record the death of Mr. Tegart, for many years one of the most influential and active General Practitioners at the West-end of London. He was of Irish extraction, and his father, who came from the north of Ireland, practised for many years as an "Apothecary" in Pall-mall, and has the reputation of having been a man of great skill and energy. At any rate, he enjoyed a very extensive practice amongst the very highest circles, and attained to all the Professional honours to which his branch of the Profession gave him access. He took a great share in the movement which gave a distinct *status* to the General Practitioner, and which elevated them formally from the rank of little better than tradesmen to that of members of a liberal Profession. He was one of the earliest members of the Court of Examiners of the Society of Apothecaries, in which society he afterwards attained to the dignity of Master. It must not be forgotten how late is the date of that organisation of the Profession which exacts anything like scientific knowledge of Medicine from the general Practitioner. Up to 1815, any person could practise as an Apothecary, upon as slender a foundation as the chemists and druggists practise now. Some knowledge of the properties of drugs and the routine of dispensing, acquired through a seven years' apprenticeship, formed the common door to general practice, so far as Mecicine was concerned. Surgery is a rather more serious thing, and for this the student used to walk the wards of a Hospital and attend the dissecting-room for a year or so. Hence, an Apothecary might be a thorough ignoramus, and in rude districts was often little better than a grocer. But it is but common justice to state that this was by no means the case with the Society of Apothecaries of London. From their earliest establishment they made a good education, as tested by an "Arts" or "Humanity" examination, an essential preliminary to apprenticeship; they had a library; they established lectures on chemistry for their apprentices and members at a date long antecedent to the "courses" which students are now obliged to attend; and as a proof of their scientific character, it may be stated that it devolved upon them to keep alive the study of botany in this country for more than a century, which they did by the garden whose care was committed to them as public trust, and by the lectures and scholarships which they provided, at no cost to the students who chose to attend. Although time and progress have thrown them into the shade, and a more advanced order of things now exists, it must be remembered that, to be an Apothecary to the aristocracy fifty years ago, implied the possession of good education, good manners, and great Professional skill; and these were inherited largely by the gentleman whose loss we now deplore. He succeeded to his father's business in Pall-Mall, which he carried on in the same manner,—as the confidential Medical adviser of a large circle of the best classes in Society; and it may be remarked, as characteristic of his early days, that he never troubled himself to acquire the diploma of the College of Surgeons; he was an Apothecary *par excellence*, and did not call himself Surgeon. By "Surgeon," the upper classes mean "pure." He never wrote, and did not much to leave his mark on the literature or opinions of the Profession; but for many years he was member or chairman of the Court of Examiners at the Hall, where the accuracy of his knowledge of the subjects within the circle of examination, together with his unfailing good temper, and tact, and courtesy, mode him a most genial examiner. In private life he was universally beloved; and as a Professional man, his tact, and good sense, shrewdness, knowledge of the world, presence of mind, and ready wit, rendered his services most valuable to those who had the good fortune to put confidence in him. About four years ago his career of Professional occupation was cut short by an attack of paralysis, which left his speech considerably embarrassed, and he retired to Brompton from Dover-street, where he had practised since the original house of business in Pall-mall had been swallowed up by the Army and Navy Club. At last, on Friday, the 10th inst., he met with one of those accidents whose number and fatality is positively appalling to every one who is in the habit of walking in London. He had left his club in Pall-mall about six, in perfect health and spirits, to walk home, but on crossing St. James's-street, near Piccadilly, was knocked down by a Hansom cab. He was picked up by a policeman who witnessed the injury, and taken to St. George's Hospital, where he was well known from being on the Committee of Governors and holding some honorary Medical office. He was perfectly insensible, with a contused wound over the right temple and rigid paralysis of the right arm. He recovered consciousness for a short time that evening, but next day became delirious and prostrate. An erysipelatous swelling of the wound supervened, and he sank on Tuesday. Some doubt existed at first whether he had been knocked down or had fallen in a fit. The post mortem, which revealed a fracture of the right frontal bone and effusion on both sides of the brain, makes it certain that he was the victim of "accident," as these collisions are called. The deceased was in his 70th year, and will long be remembered by all who were fortunate enough to know him as a most kind and genial friend.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the Diploma, were admitted members of the College at a meeting of the Court of Examiners on the 14th inst., viz.:

Charles Smith, M.B. and L.R.C.P. Lond., Basingstoke; Andrew Christopher Jackson, Cape Town; and John Shirley Steele Perkins, Exeter, Students of Guy's Hospital. James Edward Adams, Finsbury-circus; Robert Wood, L.S.A., Uttoxeter, Staffordshire; and Alfred Walker, Albion-road, Stoke Newington, of the London Hospital. Theodore Thomas Taylor, Cricklade, North Wilts; William John Land, Exeter; and Hamilton De Tatham, Dorset-square, of St. Mary's Hospital. Frederic Tickell Prince, Lawston, Cambs.; Reginald Palgrave Simpson, Norwich; and Francis Henry Lovell, Aspley Woburn, of St. Bartholomew's Hospital. Henry Martin Body, Cheriton, North Devon, of Charing-cross Hospital. Edward Forster Brockman, L.R.C.P., Brunswick-gardens, Kensington, of St. George's Hospital. Frederic Henry Ward, L.S.A., Scarborough, of St. Thomas's Hospital. Edward John Barry, M.D. Edin., Ramsgate, and Edward Francis Willoughby, Bristol, of University College. Charles Gray Montgomery Lewis, Sedgley; Edward Mills Grace, Downend, Bristol; William Thomas, L.S.A., Birmingham; Charles John Stokes Diggs, Dublin; and John Bedford Kerswill, St. Germans, Cornwall, of King's College.

The following gentlemen were admitted members on the 15th inst.:—

Samuel Sanders Stephens, Taunton; Alfred John Freeman, Southsea, Hants; Richard Plowman, L.R.C.P. Lond., Coleshill, Warwickshire; and John Raby, L.R.C.P. and L.R.C.S. Ed., St. Germans, Cornwall, Students of St. Thomas's Hospital. John Burge, jun., L.R.C.P. and L.S.A., Hammersmith; Alfred Swaine Lethbridge, M.B. Aberdeen, Musbury, Devon; and Henry Hyde, Lamb's Conduit-street, of King's College. Eustace Greenaway, Woodford, Essex, and Albert Kisch, Circus-place, E.C., of the London Hospital; Robert Brennan, Croydon, and John Murray Gibbes, Sidmouth, Devon, of St. George's Hospital. Frederic Mainzer Charles Beechey, Wokingham, and Frederick Lyndon Attwood, Marylebone-road, of St. Mary's Hospital. John Hancocke Wathen, Fishguard, Pembrokeshire, and James D'Arcy Harvey, St. Just, Cornwall, of University College. Thomas Cuddeford, Plymouth, of St. Bartholomew's Hospital. Henry Parry Chandler, Berners-street, of the Middlesex Hospital. John Augustus Ball, Stradbrook, Suffolk, of Guy's Hospital. Henry Stubbs, L.S.A., Stourbridge; John Murray Moore, M.B. Ed., Liverpool; Robert Barker, Sunderland; and John Attygalle, Calcutta.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, November 9, 1865:—

David Thomas, Carmarthen; Wm. King, Moreton-terrace, Pimlico; Wm. Bell, 7, Torrington-square; Edwd. Russell Woodford, Ventnor, Isle Wight.

At the recent Examination for Prizes in Materia Medica and Pharmaceutical Chemistry, annually given by the Apothecaries' Society, the successful candidates were:—

1st, Geo. Rolph Raine, Guy's Hospital, a gold medal; 2nd, Wm. Barnett Burn, St. Bartholomew's, a silver medal and a book.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Aldred, Charles C., M.R.C.S. Eng., has been re-elected Mayor of Yarmouth, in the County of Norfolk.

Bantock, George, M.D. Edin., has been elected an Assistant-Surgeon to the London Surgical Home, Stanley-terrace, Notting-hill, W.

Cheadle, Walter B., M.D. Camb., has been elected a Physician to the Western General Dispensary, Marylebone-road.

Jessop, Thomas R., M.R.C.S. Eng., has been appointed Surgeon to the Northern Division of the Great Northern Railway.

Jolly, Robert M.D. Edin., has been elected Resident Surgeon to the Queen's Hospital, Birmingham.

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KING, DAVID, M.D. Aberd., has been appointed Medical Officer of Health for Eltham, and Surgeon to the Eltham Division of the Metropolitan Police.

LEIGHTON, EDMUND T., M.D., has been elected a Physician to the Western General Dispensary, Marylebone-road.

MOORE, FRANCIS G., M.R.C.S. Eng., has been appointed Government Medical Inspector of Emigrants.

OWENS, HENRY, M.D., has been elected House-Surgeon to the Birmingham and Midland Free Hospital for Sick Children.

PYE-SMITH, PHILIP H., M.D., has been appointed Assistant-Physician to the Metropolitan Free Hospital, Devonshire-square.

WOODMAN, FREDERICK, M.D. St. And., has been appointed Surgeon to the Deal and Walmer Dispensary.

DEATHS.

ALLAN, THOMAS, L.F.P.S. Glasg., at Melbourne, Victoria, on July 4, aged 26, Senior Resident Assistant Medical Officer to the Yarra Bend Lunatic Asylum.

BARROW, JOHN, M.R.C. Eng., at Kegworth, Leicestershire, on October 23, aged 41.

BYNOE, BENJAMIN, F.R.C.S. Eng., Staff-Surgeon R.N., at 440, Old Kent-road, S.E., on November 15, aged 61.

DICKINSON, WILLIAM F. D., F.R.C.S. Eng., at Ulverstone, Lancashire, on November 11, aged 55.

DRURY, JAMES S., M.D. Lond., at 13, Radnor-place, Gloucester-square, W., on November 11, aged 44.

MACADAM, JOHN, M.D., Professor of Chemistry at the University of Melbourne, at sea between Melbourne and New Zealand, on September 2, aged 38.

MATHER, JOHN B., L.S.A., at 8, Spurstowe-villas, Dalston, on November 13, aged 59, late of Islington.

MAYOR, E. SCIPIO, M.R.C.S. Eng., at 3, Ashley-place, Bristol, on November 13, aged 65.

MICHAEL, JOHN, Assistant-Surgeon Royal Artillery, at Woolwich, on November 14, aged 32.

ROGERS, Dr. J. R., at Honiton, Devon, on October 25, aged 43.

STEVENSON, WILLIAM, M.D., at Hamilton, Australia, on July 22.

TEGART, EDWARD, L.S.A., at 14, Onslow-crescent, S.W., on November 14, aged 69, late of Dover-street.

TUSON, EDWARD W., F.R.C.S. Eng., F.R.S., at 6, Devonshire-street, Portland-place, W., on November 10, aged 64.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Ely Union.—Mr. Thomas S. Jones has resigned the St. Mary's District; area, 16,550; population, 4854; salary, £61 per annum.

Martley Union.—Mr. George F. Knipe has resigned the Fourth District; area, 11,266; population, 4703; salary, £85 per annum.

APPOINTMENTS.

Parish of Bethnal-green.—Frederick J. Burgess, L.R.C.P., M.R.C.S., L.M., to the Third District.

Bideford Union.—John Thompson, M.R.C.S.E., L.S.A., M.D. St. And., to the Buckland Brewer District.

Canterbury Incorporation.—Henry E. Hutchings, M.R.C.S.E., L.S.A., to the Out District and the Workhouse.

Headley Incorporation.—John Woods, L.R.C.P. Edin., M.R.C.S.E., to the Out District and the Workhouse.

Hoxne Union.—William W. W. Andrew, M.B. Cantab., M.R.C.S.E., to the Bedfield District.

Plomesgate Union.—W. W. W. Andrew, M.B. Cantab., M.R.C.S.E., to the Earl Soham District.

Sturminster Union.—John C. Leach, M.R.C.S.E., L.S.A., to the Sturminster District.

Woodstock Union.—John G. White, M.D. Edin., M.R.C.S.E., to the First Woodstock District. Frederic Taylor, M.R.C.S.E., L.R.C.P., to the Workhouse.

THE LATE HEALTH OFFICER OF SOUTHAMPTON.—At the monthly meeting of the Southampton Medical Society, held at Dr. Langstaff's on Tuesday evening last, the President, Mr. Sampson, commenced the proceedings with a brief notice of the late respected member of our Profession, Mr. Francis Cooper. He said:—"Gentlemen,—When at our last meeting, with the able assistance of Dr. Budd, we were occupied in devising such measures as we imagined best calculated to check the spread of cholera in this town, we little anticipated, that we should be so soon called upon to mourn the loss of the healthiest and one of the most intelligent of our members. Yet such are the risks to which human life is exposed in the exercise of our Profession, that it would seem even the stalwart frame of our late esteemed friend afforded no guarantee for its safety. Francis Cooper has been snatched from us at a time when his valuable services appeared to be especially needed. For many years the servant, and for too many the slave of the public, he has died at the post of honour and of duty. The services he has rendered to his town by his activity as health officer have been too little seen, and too little understood, ever to be fully recognised by the public. When we look back at the state in which he found the town at the commencement of his career as sanitary officer, and institute a comparison with its present condition, we are bound to admit that to our late friend, more than to any other individual, are we indebted for the comparatively short duration of what I hope may be called the late epidemic. It is quite true more might have been done, and it is quite possible that a little more promptitude might have lessened the mortality; but when we bear in mind the opposition a health officer has to encounter, and the discouragements Mr. Cooper met with, we must not only exonerate him from all share of blame, but we are left to marvel that amidst so many obstacles he was able to accomplish so much. Silently and manfully he struggled on in his laborious work, until even his iron constitution could no longer resist the burden imposed upon it. Many an aspirant after military renown has honestly won a Victoria Cross with less courage, less endurance, and fewer self sacrifices, than were displayed in the life and death of our hard worked friend. But a brighter reward than temporal honour is in store for men who, like Francis Cooper, lay down their lives for their fellow men. It is left for us who cherish his memory in our hearts to award him the praises so justly his due. Francis Cooper will long be remembered by all who knew him, as a man without vices, but not without failings. Such as he had were all on the surface. There was no malice or hatred in his heart. If his impulsive nature would sometimes lead to a momentary separation from his friends, he was always the first to make advances for a reconciliation. He may have met with many opponents in life, but in death he had no enemies, as the respect shown to his remains on the day of his funeral abundantly proves, when those who differed most from him, as well as his stauchest supporters, were unanimous in mourning his loss, and testifying by every outward demonstration in their power that his death was a public calamity. Had time permitted, I might have alluded, even in this brief notice, to the capability of Mr. Cooper as an orator, a politician, and a writer, but it would be departing from my present purpose to say more than that in his public life, whether in speaking or writing, he was emphatically the people's friend. The spirit of his teaching was always on the side of humanity, and if he had been free from what unfortunately is too common amongst us all—party bias, and under more favourable circumstances, he might have ranked as a philanthropist in the fullest acceptation of the term."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Erratum.—P. 522, second line from top of first column, "urine," *for* "sp. gr. 1060," *read* "sp. gr. 1020."

RECOVERY BY UNREGISTERED PRACTITIONERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly allow me to ask the readers of your valuable journal if they can answer this question—viz., Can a Medical man recover in the County Court for services rendered when he was qualified, but not registered? and whether they can refer to any case in point? I should imagine from the wording of the Act that they can; but the wording is ambiguous.

I am, &c.,
ANCEPS.

November 13, 1865.

AN ERRATUM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you oblige me by correcting an error which occurs in the abstract of my paper "On the Brain" (Sept. 30, p. 373). The average weight of the human brain, as is well known, is about 48 oz., not 38, as reported. The same error, which I corrected, occurred in one of the local papers.

I am, &c.
E. CRISP.

42, Beaufort-street, Chelsea, Nov. 15.

"FORMULARY OF PRESCRIPTIONS FOR USE IN MILITARY HOSPITALS. 1865."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—This little book has just emanated from the Army Medical Department under the conjoint parentage of Mr. Longmore and Dr. Maclean. It has been most liberally and universally distributed gratis to the officers of the Department both at home and abroad. In itself it unfortunately does not reflect much credit either on its authors or on the Medical officers and candidates who are supposed to need such a work. It is not only lamentably deficient as a "Formulary of Prescriptions," but actually in some instances erroneous, and its publication cannot but be regarded as an obtrusive act of dictation to the members of the Department.

An "excessive expenditure of Medicine" is put forth in the preface (for this little book owns a preface) as an excuse for its publication and distribution. We must, however, look a little closer for its real meaning, which may in general terms be explained thus:—The acknowledged claims of the officers of this much-injured Department still remain unsatisfied, and, under the present aspect of affairs, likely for ever so to continue. First, and even second, class men will not throw themselves away in the Army. Some kind of "Doctors" must be got for the service; and, therefore, not only has the standard of the examination been lowered, but the required ratio of answering also. An inferior class of student, therefore, not only presents himself as a candidate, but gains admission into the service. Hence the necessity for this "Formulary of Prescriptions."

The patients must be protected; the waste of valuable medicines caused by the prescription of incompatibles prevented, or at least checked; English must be substituted for Latin for the convenience of the non-Latinists; and thus the "lame dogs are helped over the stile" into the Army Medical Department.

The invidiousness of confining the formulary to Netley (for which it was palpably designed, as the medicines most in vogue in the commonest of all diseases in Regimental Hospitals are totally omitted) might prove offensive; and hence the advisability of distributing the book generally throughout the service. I am, &c., SENEX.

THE SPECIFIC IDENTITY OF HERPES TONSURANS, HERPES CIRCINATUS, AND SYCOSIS PARASITICA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I ask you to allow me to correct a mistake into which the reviewer of Dr. Anderson's last work has fallen. The words, "He (Dr. A.) was the first to show in this country that herpes tonsurans, herpes circinatus, and sycosis parasitica are all varieties of one disease," do me injustice. Dr. Anderson's book, and the papers on which that is based, appeared in 1861, but nearly two years before, in the early part, and the September, of 1859, some papers of mine appeared in the *Lancet* in proof (*a*) of the identity, not only of the three above-named diseases, but also favus and tinea decalvans, and (*b*) that the various fungi were forms of one species. The circumstances which accounted for the differences in each case were also discussed. I am, &c.

43, Sackville-street, W., November 12. TILBURY FOX, M.D. Lond.

THE PRIVILEGES OF REGISTERED PRACTITIONERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly inform me on the following point?—Does registration confer on us any privilege beyond that of practising fully any branch of our Profession, be it Medical, Surgical, or Obstetrical, for which our names may have been included in the Register? To make my meaning clearer, can any one who has but one qualification—that of Surgeon, for instance—if he inserts it in the Register, claim to practise legally every other branch, whether of Apothecary or Obstetrician? and can he recover his charges for the same?

I believe that in this neighbourhood some such opinion as this exists, and I know that one worthy judge of the County Court permits any Practitioner, registered only for one branch, to recover for all.

I thought the meaning of the Act was very clear; that such insertion gave us the power of recovery only for practice in accordance with qualification. Surely I was not mistaken. I am, &c.,

Gravesend, November 13, 1865. M.R.C.S., L.A.C.

*** The Act states that every registered person "shall be entitled, according to his qualification or qualifications, to practise Medicine or Surgery, or Medicine and Surgery, as the case may be, in any part of Her Majesty's dominions," etc. There can be no doubt that this limits the practice of Medicine and Surgery to registered persons who are qualified by their diplomas to practise *either or both*, as the case may be. We believe that a Surgical Diploma does not entitle its possessor to practise Medicine. Of Obstetrics the clause says nothing, and no Obstetric Diploma is registered under it.

FIBROUS TUMOURS OF THE UTERUS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—With reference to the rarity of fibrous tumours connected with the round ligament of the uterus, as mentioned by Mr. Spencer Wells in his interesting communication to the Pathological Society; there is a single specimen—226a—in the museum of the Royal College of Surgeons, presented by Edward Stanley, Esq. It has the following description:—

"Section of a fibrous tumour which was connected with the round ligament of the uterus. It has the ordinary characters of tumours of this species, but a circumscribed portion of it near its surface is softened and sheddy, and was infiltrated with serous fluid. The tumour was taken from a woman, 40 years old, who died with peritonitis after strangulated hernia. The whole tumour appeared more vascular than is usual."

I may mention, in addition, that this specimen is about midway in size of the two tumours exhibited by Mr. Spencer Wells, and has generally the same appearance.

I am, &c. J. B. BROWN, Jun.

14, Cambridge-street, Connaught-square, W., October 25.

THE NEW SYDENHAM SOCIETY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can you or any of your readers inform me whether the New Sydenham Society still exists, or whether it has come to an untimely end? I never see any notice of it, or of the works it proposes issuing, in the Medical journals. An excuse was made some two years ago that in consequence of the decrease in the numbers of its members, owing to the war in America, the works issued were neither so good nor so numerous as the committee could wish. But this drawback has now been removed some months, and surely hopes might be held out of something good next year. I think I speak the minds of a great many when I say the Books already issued have been theoretical in too large a proportion, and not sufficiently adapted to the practical wants of the busy Practitioners who constitute the majority of the Society. I fear the committee requires a purge, followed by an infusion of younger hands, and then, perhaps, the money lavished in abstruse treatises would be more economically and advantageously spent in works which cannot fail to be useful both to students and Practitioners. I feel convinced that one half the books sent out are put upon the library shelf without being looked at; and to show how badly affairs are conducted, I have not yet received my quota of works for 1864, I have not paid, nor have I been applied to for, my subscription for that year, and no books for this year (perhaps as a punishment), have been forwarded to me. I am, &c.

"A MEMBER NEW SYDENHAM SOCIETY."

COMMUNICATIONS have been received from—

DR. A. REITH; A MEMBER OF THE NEW SYDENHAM SOCIETY; APOTHECARIES' HALL; M.R.C.S., L.A.C.; ANCEPS; Mr. A. ARTHUR NAPPER; ETHNOLOGICAL SOCIETY; Dr. SAMELSON; Dr. J. MACPHERSON; Dr. TILBURY FOX; Dr. W. H. ARFORD; Dr. JOHN WHITMORE; Dr. FOTHERBY; Dr. W. SPENCER WATSON.

BOOKS RECEIVED.

Transactions of the Pathological Society of London. Volume XVI.

On Some Varieties and Effects of Cancerous Disease of Bone. By William Hickman, M.B. London: Robert Hardwicke.

Journal of the Scottish Meteorological Society for the Quarter ending June 30, 1865. London: W. Blackwood and Sons.

Transactions of the Odontological Society of Great Britain. Volume IV., 1863-4-5.

On Flooding after Delivery, and its Scientific Treatment. By Lumley Earle, M.D. 12mo. Pp. 244. London: R. Hardwicke.

Address Delivered at the London Hospital Medical College. By Walter Rivington, M.S.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 11, 1865.

BIRTHS.

Births of Boys, 1072; Girls, 1099; Total, 2171.
Average of 10 corresponding weeks, 1855-64, 1785·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	771	693	1464
Average of the ten years 1855-64	613·2	591·9	1205·1
Average corrected to increased population..	..	..	1326
Deaths of people above 90	..	1	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	2	10	7	1	7	6	6
North ..	618,210	3	10	12	4	10	11	9
Central ..	378,058	..	4	10	2	5	10	2
East ..	571,158	4	1	15	1	9	19	6
South ..	773,175	4	15	18	2	9	16	14
Total ..	2,803,989	13	40	62	10	40	62	37

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·986 in.
Mean temperature	42·4
Highest point of thermometer	51·9
Lowest point of thermometer	31
Mean dew-point temperature	38·7
General direction of wind	N.N.E.
Whole amount of rain in the week	0·14 in.

APPOINTMENTS FOR THE WEEK

November 18. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

20. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Clinical Discussion. Dr. Anstie, "On Some Clinical Results of the Investigation of the Pulse in Disease by Marey's Sphygmograph."

21. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ETHNOLOGICAL SOCIETY OF LONDON, 8 p.m. Thomas Wright, Esq., "On the True Assignation of the Bronze Weapons, etc., supposed to indicate a Bronze Age in Western and Northern Europe."

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

22. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

23. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

24. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES

ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

LECTURE II.

(Continued from page 516.)

The sympathetic and vaso motor nerves seem to be rather specially liable to suffer from inhibitory agency. So much is this the case that the view was proposed by Heule in his theory of the production of inflammation, that whereas it is the general rule of muscles which act under reflected stimulation that *they contract*, there is a contrary law for the muscular coat of arteries, so that under reflected stimulation it becomes *relaxed*. Mr. Simon does not accept this view as a true statement of the first act in the drama of inflammation; but with this reserve (a reserve which extends only to placing it in the second rather than in the first series of inflammatory changes), it seems to him the only plausible explanation of the condition of the larger blood-vessels in active hyperæmia, whether inflammatory or hypertrophic. Now, with regard to this question, we know certainly that the muscular coats of the arteries contract under the influence of stimuli applied to their nerves, and relax when their nerves are enfeebled or paralysed. Contraction of blood-vessels may be produced both by direct stimulation of vaso-motor nerves, and also by reflected stimulation applied to some sensory surface, as in Brown-Séquard and Tholozan's experiment. There is no doubt, therefore, that the law for the vaso-motor nerves and organic muscular fibre is the same as that for the ordinary motor nerves and muscles. The only difference, apart from the greater or less rapidity of contraction which characterises the animal system, seems to be that the former have a greater liability to be injuriously affected by inappropriate stimuli than the latter. It is worth while, I think, to adduce some examples of inhibitory arterial paralysis, both from the striking characters of the phenomena and on account of the important practical bearing of the theory. The application of a strong lead collyrium to the lining membrane of the eyelids of a gentleman who had some chronic corneitis and acne rosacea caused great hyperæmia, not only of the eyes themselves, but of a large extent of the skin of the face, the nose especially becoming of a deep red. The irritation in this case was evidently reflected from the branches of the first division of the fifth, supplying the lids on to the vaso-motor nerves of the face, which, in consequence of the *morbid* impression, became *dilated*, not contracted, as they normally should. The result in this case is rendered more striking by comparing it with the following:—A wet towel suddenly flapped on the back causes contraction of the cutaneous muscles, and consequent development of gooseflesh, not only in the part touched, but also in a very marked manner in the anterior part of the trunk. Here the stimulus of the cold evidently acts through sensory nerves on the motor filaments of the organic muscular fibre entering into the composition of the skin.

I can see only one objection that can be made to the above view of reflex inhibitory relaxation, which is that the stimulus operates through the nerves, not on the vessels, but on the tissue of the part, which becomes irritated and attracts blood to itself, just as it does when stimulated directly by a local irritant. To this it may be replied that the *diffuse* character of the hyperæmia distinguishes it from that which is the result of local attraction of blood. It is, perhaps, possible that irritation of a nerve may give rise to inflammatory phenomena in the part supplied by it, but these are always, I think, of a circumscribed character, and quite unlike the wide-spreading erythemata of arterial relaxation. Moreover, the recent experiments of Weber, respecting the trophic nerves and their influence on inflammation, go to show, in opposition to Samuels', that inflammation cannot be caused by irritation of nerves. Further, the common phenomenon of blushing is sufficient to show that a very similar hyperæmia may be induced by causes which certainly cannot cause any irritation of the cutaneous tissue. The following case is proving as to the same point:—A married lady, whose nervous system was overtasked with family cares, and who had suffered from chorea in early life, had when I saw her choreic twitching of the muscles of one side of the face. Her mouth was drawn awry so much that she had to hold it with her hand at times to steady it. Immediately on eating, her face and neck become quite suffused with blood, crimson-coloured, so that she does not like to dine out. She is wonderfully better in frosty weather, though during the cold weather she is extremely liable to catarrh. In this instance phenomena of debility of musculo-motor and vasomotor nerves were both very apparent, and the hyperæmia of the surface produced by the ingestion of food can scarcely be referred to anything except to an inhibitory paresis which had its starting-point in the nerves of the stomach. The transitory nature of the hyperæmia in this and in like cases, and the absence of any marked changes in the tissue of the affected locality, or of exudation, are also arguments of weight against the blood being attracted thither by a *vis a fronte*. The great liability to catarrh probably depended on the nerves of the bronchial membrane being as prone to depression as those of the face and neck. Cases resembling this are common enough, and their very commonness makes the correct reading of them the more important. Mr. Tyrrell relates the case of a youth, aged 13, who had been suffering for many days from headache of a severe kind, giddiness, flushed state of countenance, and great restlessness and irritability; he was also intolerant of light, and his vision was very imperfect, being obscured by a gauze or web. Treatment had been directed to the head as the primary seat of disorder. On examination, an irregular indurated swelling was found in the right iliac region, apparently depending on a collection of hardened fæces in the caput coli. A full dose of scammony and calomel was administered, and produced a very copious discharge of hard scybala; the relief was immediate, all urgent symptoms subsided, and after a second dose he became convalescent. In the case quoted from Dr. Burgess the amaurosis, which was complete and was attended with pain in the eyes and head, was evidently dependent on retinitis of a congestive character produced by paralysis of the retinal artery and its branches. This view seems to me strongly supported by the simultaneous paralysis of the muscles of the face and tongue. The removal of the inhibitory cause—a tænia—was successful, just as it was in the preceding one. It is rather exceptional that actual inflammation with exudation should be produced by vaso-motor nerve paralysis, but Bernard distinctly states that it does happen in weak states of the system, and I have myself seen severe muco-purulent conjunctivitis set in shortly after the division of the cervical sympathetic. Emmerich(a) relates a case of inflammation of the cornea, sclerotic, and conjunctiva of fourteen years' duration which yielded rapidly to extraction of a carious bicuspid tooth. Anstie records in his work an interesting case of a boy, aged 5¾ years, who, from the age of 3 years, had constantly-increasing choking sensation in the throat, and the temperature of the left cheek was higher, and its colour deeper, than that of the other side; moreover, the left side of the face was frequently covered with perspiration. These phenomena were the precursors of an epileptiform paroxysm attended with unconsciousness, and tetanoid convulsion of the left limbs. Five such attacks had occurred, and in the intervals there always remained a certain amount of weakness of the whole left side, and a considerable tendency to rigidity of the left arm and leg. There was an internal squint of the left eye, dating from a series of fits when he was only three days old. Constipation seemed to bring on the epileptiform attacks, and mild aperient medicine had a beneficial effect. On one occasion when he was seen, after constipation had lasted two days, the whole left side of the face and the left ear were flushed deep red; the surface was pungently hot and bedewed with a copious sweat. The heat and sweating were found to extend over the whole left half of the head, and to cease abruptly at the median line. An epileptiform paroxysm supervened speedily, and was succeeded by sopor. An hour or two after the unilateral flushing and perspiration and the feeling of choking were still present. A brisk purgative enema was now administered, and a large quantity of scybalous fæces were discharged. This was almost immediately followed by the entire disappearance of the unilateral heat and sweating, and of the choking sensation. From this time forward the boy never had a bad symptom for two months, and was then discharged well, except some weakness of motor power in the right arm and leg. Dr. Anstie fully recognises the paralytic condition of the nervous apparatus in this important case, and adds, "Henceforward there can be no sort of propriety in assuming that the flushing and sweating so commonly

(a) Emmerich. "Retrospect," 1848, p. 72.

produced by an over-full or an ill-digested meal is an active phenomenon depending on stimulation." Scanzoni has recorded some highly interesting cases in which severe urticaria was produced by the application of leeches to the uterus(b). In one of them a woman, aged 28, had five leeches applied to the cervix. Scarcely had they taken hold when she complained of most violent, labour-like pains in the abdomen, and, although these soon moderated in force, they were accompanied with such intense febrile action that the entire body glowed with heat, the pulse rose to 140, the carotids pulsated visibly, and the face, neck, and chest exhibited an intensely red colour; to which was added in a very short time a large eruption of urticaria elevations of a palish colour. The eruption was accompanied by great headache, inclination to vomit, and excessive lassitude—symptoms which continued until the following day, although the exanthem, with the accompanying fever, disappeared entirely after three hours' continuance: Scanzoni refers the phenomena to irritation of the uterine nerves, and states that they could not depend on the absorption of any poison from the leeches, as no such symptoms are ever occasioned by the application of leeches to other regions of the body. This view is supported by the circumstance that in a third case the leeches had been applied eight times, and it was not until the ninth that the urticarious eruption occurred. The sudden supervention and speedy cessation of the phenomena are quite in accordance with the genius of nerve disorder. The excessive lassitude which ensued so early testifies to the essentially paretic character of the affection. The uterine irritation being reflected on the vasomotor nerves, paralysed them, and thus caused relaxation of arteries, manifesting itself in the carotid pulsation, and the cutaneous hyperæmia. The increased action of the heart was similarly produced by paralysis of the vagi and of the coronary plexuses. This seems to me the only reasonable account that can be given of the ætiology; and, if it be correct, it is certainly very suggestive of the probable operation of similar influences after the same manner in other cases. Is it not well nigh a matter of certainty that, had the irritation taken a different direction, as to the nerves of the peritoneum or gastro-intestinal mucous membrane, severe inflammation of these parts would have ensued, the more delicate tissues being unable to tolerate the excessive hyperæmia so well as the stronger cutaneous texture? Other inflammations may no doubt be produced in a like way. Burns appear to me to supply very illustrative examples of such phenomena as we are considering. Death is known to be caused in many instances by an inflammation of the various viscera; and Dr. Brown-Séquard's experiments go to show that these internal inflammations are produced through the intermedium of the spinal cord, as they do not ensue when the impressions transmitted from the burnt part are arrested by section of the nerves or of the cord. Dr. Brown-Séquard considers that the visceral inflammations produced by burns depend not on augmentation in the quantity of blood traversing the secondarily-affected parts, but on a change in the tissues which produces a greater attraction of arterial blood. From this view I dissent, partly because the earlier phenomena are so completely those of nervous shock, the patient dying twelve or eighteen hours after the receipt of the injury in a state of asthenia, evidently from failure of the heart's action. This failure cannot, I think, result from excessive stimulus of the vagi or other nerves of the heart causing unrelaxing spasm of the organ, or of its coronary arteries, but must depend on an actual palsy of its nervous and muscular apparatus. I have notes of the state of the heart in two children, one 2, and the other 5 years old, who died of burns. In the former, life had been prolonged during three weeks, in the other, only twenty-four hours after the receipt of the injury. In both the cavities were found open and uncontracted. It seems reasonable to suppose that the vasomotor nerves of the arteries must be in a like state of paralysis, and that it is the continuance of this condition into the second stage, with concomitant loss of the tone of the capillaries, which gives rise to the hyperæmia and exudation observed in the most affected districts. The heart, as the more powerful and more highly innervated organ, may be expected to recover from the depressing shock sooner than the less muscular arteries, and its impulse will tell with undue force on vessels of enfeebled contractility, and capillaries with impaired retentive powers. In a case I have recorded in my work (p. 91), an erythematous eruption, closely resembling that of scarlatina, appeared on the chest and abdomen of a youth who had received a severe burn about the upper part of his thighs two days before. His tongue was also exactly like that of scarlatina, so that it was very doubtful whether he was not actually affected with this disease. During two nights he was very delirious, the eruption then became more dusky, the hands and feet cold, and he sank, having been perfectly sensible before death. At the autopsy, the viscera were all found more or less congested, there was extravasation of blood under the scalp and between the dura mater and the bone. In this case the diffuse hyperæmia of the skin was much more like that resulting from arterial paralysis than from tissue irritation. Similar hyperæmias have frequently been observed as the result of Surgical operations, where they could only be attributed to the shock inflicted on the nervous system, and not to any persistent irritation reflected on the skin from an injured locality. The effusion of blood within and without the cranium could only have been due to an altered state of the capillary walls, such as occurs in scurvy, and which, as we have seen, may be produced by severe nervous shock.

The following interesting history of a patient now under my care in St. Mary's Hospital is, I think, very illustrative of the same point:—M. B., æt. 28, ad. February 10, has been ill since last October, when she quickened, and spit up then a great quantity of blood; the hæmoptysis went on to a considerable amount till the end of the pregnancy, though checked by medicine. The accouchement took place four weeks ago, at the end of seven months. Until she quickened she was very well. The hæmoptysis has occurred in all the three pregnancies she has had, and has come on in each at the time of quickening, attended with very bad cough; she thinks the cough brought on the hæmoptysis. Anasarca of the feet has occurred during the pregnancies, but at no other times; the legs are, however, rather swollen now. Abdomen contains a notable amount of fluid, it began to enlarge seven days ago. Urine free from albumen, sp. gr. 1020, of good colour, in fair quantity. Regurgitant mitral murmur is heard on auscultation, but there is no material hypertrophy or dilatation. Pulse regular and quiet. Mucous râles are heard in both lower backs, and there is some expectoration of clear, subtenacious matter. The dyspnœa which she experiences is chiefly nocturnal, and is relieved by ether and opium. Is not at all anæmic. Perspires very copiously. The further progress of this case was highly interesting; under the use of iron and quinine she lost all her dropsy, both ascites and anasarca, the cardiac murmur either quite disappeared or was reduced to a minimum, she gained strength, and became quite convalescent. Bronchial râles continued to be heard in the posterior parts of the lungs especially, but there was no indication of phthisis, all expectoration had ceased. Although in this instance the mitral imperfection doubtless predisposed and contributed to the occurrence of the hæmoptysis, it seems to me equally clear that it was not the efficient cause. This was evidently an inhibitory irritation proceeding from the uterus, which both relaxed the walls of the pulmonary arteries and impaired the texture of the capillaries, so that they allowed blood to escape profusely into the air-cells. The dropsy depended on a relaxation of the walls of the capillaries of the general system, very similar to that which affected the pulmonary.

(To be continued.)

(b) *Edin. Med. Jour.*, Oct., 1860.

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.(a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College, and of University College Hospital.

Lecture XI.

ALBUMINURIA WITH AND WITHOUT DROPSY, IN CONNEXION WITH BRIGHT'S DISEASE, HEART AND LIVER DISEASE, PREGNANCY, FEVERS, ETC.—ITS CHEMISTRY, PHYSIOLOGY, PATHOLOGY, AND TREATMENT.

Chemistry.

As urine containing albumen may be either acid, neutral, or alkaline, the most common, and, at the same time, the best, method for detecting this substance is to employ heat and nitric acid, at first separately, afterwards combined. In doing

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—Ed. *Med. Times and Gaz.*

so, a drachm of urine is put into a test-tube, and boiled. Should the liquid thereby become turbid, albumen is most probably present, but not necessarily so. To decide this point, therefore, a few drops of nitric acid are added; and should the turbidity caused by boiling be increased rather than diminished on the addition of the acid, it is due to the coagulation of albumen. If, on the other hand, the turbidity either wholly or in part disappears, it has, in all probability, been due to the precipitation of some earthy phosphates or carbonates,—two inorganic substances which are often mistaken for albumen, in consequence of their being readily precipitated from neutral or semi-alkaline urine by heat. The nitric acid re-dissolves both of these precipitates, the phosphatic without, the carbonatic with, effervescence. Although nitric acid precipitates albumen from urine without the aid of heat, it must never be used alone; for when employed *per se*, it is a most fallacious test, in consequence of its giving an amorphous precipitate of uric acid in urine containing a great excess of urates, and a crystalline one of the nitrate of urea in urine loaded with that substance. The uric acid precipitate is frequently, the nitrate of urea precipitate rarely, mistaken for albumen. The application of heat in either case removes the difficulty by dissolving the precipitate, and enabling the substance to reassume its characteristic crystalline form during the cooling process.

In consequence of the above-mentioned source of fallacy in testing for albumen with nitric acid, some authors recommend the substitution of acetic acid; but it, too, has its drawbacks, for acetic acid throws down a precipitate of cystin when that substance exists in quantity in human urine; and if uric acid be in great excess, acetic acid is even sufficient to precipitate it. The microscopic examination of the deposit in all cases of doubt allows of its true nature being ascertained.

In testing human urine for albumen there is yet, unfortunately, another source of error—namely, the possibility of overlooking its existence when it is actually present. This may arise from two causes; one being the nature of the albumen, the other the condition of the urine.

In afterwards speaking of its physiology, it will be shown that one particular kind of albumen is a normal constituent of healthy urine, but as that variety of the substance is neither coagulable by heat, nor precipitable by nitric acid we have nothing to do with it at present. What I now allude to, is the fact, that in the urine of disease albumen may exist, and yet escape detection, unless certain precautions be employed in order to ensure success.

In the first place, in alkaline urine a *small quantity* of albumen is not coagulable by heat; hence the necessity of always adding acid in order to avoid this source of error.

In the second place, some varieties of abnormal albumen are not coagulated by heat when only a little nitric acid is added, the addition of an excess being requisite to ensure the precipitation. On the other hand, another less common kind is occasionally met with where a great excess of acid re-dissolves the coagulum.

If, then, we wish to avoid these sources of error, when a discrepancy seems likely to arise, we must test repeated portions of the urine with different quantities of acid—say, with five, fifteen, and thirty drops of nitric acid to the drachm of urine. Thus, and thus only, are mistakes likely to be avoided.

There are still other reagents the employment of which in cases of doubt is attended with advantage. Such, for example, as absolute alcohol, chloroform, tannic acid, alum, acetate of lead, bichloride of mercury, and a variety of other solutions of the mineral salts—almost all of which precipitate albumen. None of these are, however, in experienced hands, at all to be compared, in point of accuracy, with heat and nitric acid.

The effect of the presence of sugar in causing albuminous urine to give a fine mauve colour with the sulphate of copper and potash has already been pointed out.

Specific Gravity.—It is generally stated that the specific gravity of albuminous urine is very low. But this is by no means invariably the case. In fact, it only holds good with one form of albuminuria, namely, that consequent upon structural change in the kidneys. A low specific gravity, therefore, aids in distinguishing that from the numerous other forms of albuminuria, in some of which I have met with it as high as 1032, or even 1035. These, however, were quite exceptional cases—the former being one of intermittent hæmaturia, the latter due to the co-existence of diabetes. In what is commonly called Bright's disease, the specific gravity ranges between 1005 and 1014. The usual average being 1010—12. In the other forms of albuminuria the specific gravity of the urine has no limit, it may be as low as 1005, or, as just said, as high as 1035.

The reason why the urine in certain cases of kidney disease has such a low specific gravity, is on account of the disorganised renal tubes being incapable of eliminating the urea and other urinary crystalloids. The lower, therefore, the specific gravity in these affections, the more dangerous is the case.

Quantitative Analysis.—In all cases of albuminuria a quantitative analysis is an invaluable aid to prognosis and treatment. It is best done by measuring off 50 c.c. (about two ounces) from the twenty-four, or, better still, from the forty-eight hours' urine of the patient, and adding it drop by drop to a couple of ounces of boiling distilled water acidulated with acetic acid. The capsule should be placed over the spirit-lamp, and its contents kept boiling vigorously the whole time the urine is being added. A drop or two of acetic acid should occasionally, during the process, be allowed to fall into the boiling mixture, in order to ensure its being always faintly acid. When the coagulation of the albumen is completed, the capsule is to be put aside, to allow of the coagula falling to the bottom of the vessel, and thereby facilitating the next stage of the process, which is the collection of the precipitate on a filter and thoroughly wash it with distilled water. After this, while still moist, the albumen is to be transferred to a watch-glass, dried, and weighed. The weight of the dried albumen represents, of course, the quantity in 50 c.c. (about two ounces) of the patient's urine.

The calculation for the twenty-four hours' urine is then simple enough. Suppose, for example, the quantity of urine passed be 1500 c.c., and the weight of dried albumen 0.2 grammes, then

$$\frac{0{\cdot}2 \times 1500}{50} = 6 \text{ grammes of albumen in the twenty-four hours.}$$

The quantity of albumen passed varies considerably in different cases, at different times, and in different forms of the disease. It may be from 1 to 2 grammes (15 to 30 grains) only, or it may amount to from 20 to 30 grammes (300 to 500 grains) in the twenty-four hours. In average cases the amount leaves about 10 grammes (150 grains) daily.

To follow the above method time and apparatus are alike requisite. By those, therefore, who have neither the one nor the other at their disposal, the following mode of procedure may be adopted; it may be called the "rough and ready method," and, although far inferior to the other, is yet much better than none at all:—Take the twenty-four hours' urine of the patient and dilute it till it measures 3000 c.c. (100 ounces).(b) Then, to two drachms of this diluted urine, in a test-tube, add ten drops of nitric acid, either after or before coagulation by boiling. When this is accomplished, place the tube aside until the precipitate is all deposited. The amount of coagulum yielded daily gives a rough relative approximation of the quantity of albumen passed, and by preserving the test-tubes, and comparing their contents from day to day a tolerably fair idea of the progress of the case may be obtained.

In these cases, in consequence of the dilution of the urine, the coagulum seldom looks to be much. Having now not only ascertained that the urine of the patient is albuminous, but even the amount of coagulable matter passed, we are still but on the threshold of our diagnosis. The source and cause of the presence of the protein substance has yet to be discovered.

The coagulable matter found in the urine may have come directly from the serum of the blood, as in Bright's disease; it may be the result of a lesion of the kidney, as in renal calculus; it may be the product of inflammatory action, as in cystitis, or the secondary result of a variety of affections quite independent of renal disease. Many things have therefore to be taken into account ere we can arrive at a correct diagnosis even in a case of albuminuria. Before touching upon them, however, I must first say a few words regarding the physiology of our subject.

Physiology.

In studying albuminuria, it is well to bear in mind that the presence of albumen in the blood is a normal condition, while its existence in the urine is always abnormal. When I say the existence of albumen in the urine is abnormal, I mean of a kind, and in a quantity sufficient to be detectable by heat and nitric acid. There is always albumen in healthy urine, but like the albumen found in the stomach, after being acted upon by the gastric juice, it is neither coagulable by heat, nor

(b) The amount of dilution is immaterial so long as it is always the same. Few patients pass more than 100 ounces of urine in the twenty-four hours; hence, I have made it the standard of comparison.

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precipitable by nitric acid. I believe it, in fact, to be the effete albumen of our blood, excreted like urea or any of the other products of tissue metamorphosis.

Gigon was the first to call attention to the presence in healthy human urine of a substance coagulable by chloroform. He thought it was ordinary albumen, and that it had been previously overlooked in consequence of the tests not being sufficiently delicate for its detection. This, however, can scarcely be the case, seeing that we pass on an average 2·6 grammes (40·3 grains), in the twenty-four hours of this coagulable matter. Becquerel (c) says the substance described by Gigon(d) is simply mucus; but this cannot be the case, as Gigon finds that chloroform gives a precipitate when shaken with urine from which all the mucus has been removed. He has even shown that the same thing occurs in urine taken direct from the pelvis of the kidney, in which there is no mucus. Moreover, if the chloroform precipitate be collected, dried, and redissolved in acetic acid, it gives with ferrocyanide of potassium the reactions of albumen. In experimenting on this subject I found that absolute alcohol is even a better agent than chloroform, by which to extract this albumen from the urine, and by its means I was enabled to confirm Gigon's statement regarding the presence of albumen in urine devoid of mucus. The conclusion, however, which I arrived at was, as before said, that this albumen is not like that met with in the urine of disease, but like the albumen which after having undergone the modifying action of the gastric juice, is neither coagulable by heat nor nitric acid.

Experiments on animals have shown that unless the albumen of our food has been properly modified during the digestive process, it cannot be assimilated by the tissues, but acts in the blood like a foreign material, and is as such eliminated by the kidneys. Thus, for example, it has been found that when the albumen of the hen's egg if injected into the blood of dogs it does not become incorporated with the tissues, but is rapidly thrown off along with the urine; whereas if the same albumen be put into the animal's stomach, and digested ere it enters the circulation, it is assimilated, and, consequently, does not appear in the urine in the shape of albumen coagulable by heat and nitric acid. This physiological fact gives us a clue to the well-known circumstance that temporary albuminuria often follows upon disordered stomachal digestion. Stomachal digestion being not only a dissolving, but a transforming process, we can readily understand how, when this transforming process is interrupted, either in consequence of the unsuitable quality of the food, or of some derangement of the digestive system, albumen may be absorbed into the circulation, not sufficiently changed to enable it to become incorporated with the frame, and therefore, as in the case of the dog, appear in the urine.

There can be no doubt that the albumen found in albuminuria is not always in the same form. The mere fact, already alluded to when on the chemistry of the subject, of its occasional capricious behaviour towards heat and nitric acid is sufficient to prove this. There can be no doubt that even the urine itself has a powerful effect in modifying the reactions of albumen. Mr. Alfred H. Smee(e) has shown that while a current of oxygen gas passed through ordinary albumen, or albumen from the fluid of a spina bifida, at the temperature of the human body (98° F.) transforms a certain amount of it into fibrin, the same gas fails to produce any such result when passed through albuminous urine, even when the albumen is in so large a quantity as almost to solidify the entire urine when boiled.

Albuminuria may be produced by the physiologist artificially in animals by a variety of operative procedures. Section of the renal nerves in rabbits produces albuminuria (Michel). Division of the cerebral peduncles (Schiff) as well as section of the fifth pair of nerves within the cranium, is followed by a like result. Section of the spinal cord in the dorsal region of dogs I have found to be followed in the course of a few hours by albuminuria; and all experimental physiologists are aware that puncturing the calamus scriptorius of rabbits, often times causes the urine to become highly albuminous. It has frequently happened to me also to bring on an albuminuria in animals, into whose portal circulation I had injected stimulants, for the purpose of rendering their urine saccharine.

In all these cases the albuminuria is most probably the result of the congestion of the kidneys, which almost invariably, to a greater or less degree, follows upon the above mentioned operative procedures.

(To be continued.)

(c) *Comptes Rendus*, Nov. 21, 1857.
(d) *Union Med. de Paris*, No. 12, 1858.
(e) *Proc.* Royal Society, June 16, 1864.

ORIGINAL COMMUNICATIONS.

CASES OF OVARIOTOMY IN PRIVATE PRACTICE.

By T. SPENCER WELLS, F.R.C.S.,
Surgeon to Her Majesty's Household, and to the Samaritan Hospital.

(Continued from page 519.)

Case 4.—Ovarian Cyst of Eleven Years' Growth—Never Tapped—Ovariotomy—Sixty Pounds of Fluid Removed—Recovery.

On June 2, 1865, I saw an unmarried lady, 34 years of age, in consultation with Dr. Gream and Mr. Hodgson. The abdomen was enormously distended by an ovarian cyst, which had first appeared eleven years before, and which had for several years so deformed her that she had lived a very retired and invalid life, although until within a few months before I saw her she had been able to take walking exercise without much distress; but for nearly six months she had been almost confined to the house, and the suffering from distension was very great. She was much emaciated, but there was nothing in the general condition which led to any fear of a less favourable result than usual after ovariotomy, and it was agreed that I should make a small incision, remove the cyst if it were non-adherent, but only tap if adhesions appeared to be extensive. I should have said that the tension was too great to enable us to give any opinion as to existence or extent of adhesions, and that the patient had never been tapped, and had a strong feeling against any merely palliative treatment.

On June 9 I operated, with the assistance of Drs. Bowen and Gream, Mr. Hey, of Leeds, and Mr. Hodgson. Mr. Clover administered chloroform. I exposed a non-adherent cyst by an incision hardly four inches long, midway between the umbilicus and the pubes, and emptied it slowly through a small trochar, not wishing to remove so very large a quantity of fluid rapidly. As the cyst became flaccid there was a little sickness and coughing, which, with very slight assistance, gradually expelled the cyst entire. The pedicle, which was as thick as two fingers, was long, and sprang from the right side of the uterus. It was secured in the smallest clamp, and kept outside without traction. The opposite ovary was healthy. Not an ounce of blood was lost. The wound was closed with six deep sutures of silk.

The amount of fluid removed at the operation was forty-eight and a-half imperial pints, or sixty pounds by weight. The solid portion of the tumour weighed one pound and a-half.

The tumour might be described as a spherical sac, with a diameter of upwards of fifteen inches, developed in the external angle of the ovary, the rest of which appeared quite normal. The lining membrane of the sac was somewhat velvety to the touch, but at intervals minute solid papillæ no larger than a pin's head were to be felt. These papillæ appeared to be the commencement of dendritic growth.

The patient rallied quickly. For the first three days her condition was admirable. There was but trifling pain, easily relieved by an opiate; the urine was abundant; the pulse never rose above 80, and felt strong and firm. A good deal of serum oozed up by the side of the pedicle. On the evening of the third day uterine epistaxis set in. Next day I removed three of the stitches; the serum still oozed round the pedicle, which was a little prolapsed. On the fifth day the prolapse was more decided, and there was some neuralgic pain in the right hip. I removed the clamp. The patient had rather a restless night, and told us next morning that although the hip was better, she suffered from colic. All day the intestines were somewhat distended. Flatus passed down, however, when a rectum-tube was introduced. On the seventh day a superficial abscess was seen to be forming to the right of the wound. After a consultation with Dr. Gream and Mr. Hodgson, I resolved to remove the prolapsed pedicle, and accordingly, on the eighth day, the patient was put under chloroform while I tightened the wire of an écraseur round the pedicle and cut off the projecting portion. I also applied the actual cautery to the stump, and, as an additional precaution against hæmorrhage, I left the écraseur wire *in situ*. The superficial

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abscess opened, and discharged a good deal of pus. The portion of pedicle removed weighed rather more than an ounce. The patient was a little sick after the chloroform, and complained again of neuralgia in the hip. This ceased next morning, when the wire was found loose, the pedicle having sunk quite out of sight. The abscess was discharging a little, and the patient felt much relieved. On the tenth day there was purulent discharge from the abscess, and fœtid discharge from the lower angle of the otherwise cicatrised wound. The pedicle was quite out of sight, but the cicatrix was depressed, showing that the pedicle had not slipped in entirely.

On the fourteenth day the bowels acted freely after an enema, and from that day the patient rapidly gained strength. She was soon quite well. The catamenia have recurred regularly, and the cicatrix is almost invisible, having contracted to less than an inch in length.

Case 5.—Multilocular Ovarian Cyst—Three Tappings—Ovariotomy—Septicæmia—Death on the Fifth Day.

At the request of Mr. Arthur May, of Crosby, near Liverpool, I saw a lady, on June 4, 1865, who was suffering under an ovarian tumour. She was 54 years old, and had been married thirty-two years, but was sterile. Emaciation was inconsiderable; the lungs and heart were normal, and the digestive organs were still capable of performing their functions tolerably satisfactorily. The abdomen was filled with a semi-fluctuating tumour, which reached upwards to within an inch of the ensiform cartilage. It was rather more prominent on the left side than on the right. The left loin was, however, clear, while the right loin was dull on percussion. The uterus was in its normal position; its mobility was not much restricted. The catamenia had ceased for six months, but previously the patient had menstruated regularly and normally. About a year before I saw her, the patient was troubled with derangement of the digestive organs. Five months later, she discovered a tumour, which rapidly increased in size. On February 20, 1865, Mr. May tapped and removed seven quarts of greenish glairy fluid. The operation was repeated on April 10, and again on May 19, ten to twelve quarts being removed each time. After each tapping, secondary cysts could be distinctly felt in the well of the larger one; and it was observed at the May tapping that this growth had considerably increased in size since the previous month.

I performed ovariotomy on June 10, 1865, assisted by Drs. Bowen and Ritchie, with Messrs. Harrison, of Liverpool, Mr. May, and Mr. Alford, of Camden-town. Dr. Parson gave chloroform. A five-inch incision was made midway between the umbilicus and the symphisis pubis. A few slight adhesions to the abdominal parietes, and a large thin piece of omentum were easily separated. One large cyst was tapped, and when empty was opened. The hand was introduced, and numerous smaller cysts broken up. The tumour was then withdrawn. A good deal of ovarian fluid escaped into Douglas' space, and was removed by free sponging. The pedicle was as thick as two fingers, and was only an inch long. It sprang from the left side of the uterus. To the left of the uterus were felt some hard lumps, like peas, probably phlebolites. The pedicle was temporarily secured in a clamp, and then, as the traction was found to be excessive, it was transfixed, and tied doubly with silk ligature. The ends of the ligatures were cut off short, and the whole was allowed to slip back into the abdomen. There was but little hæmorrhage during the operation, but some of the cysts in the tumour appeared to contain a considerable quantity of blood. The right ovary was healthy and small. The wound was closed with six deep sutures of silk. There was nothing remarkable in the operation, with the exception of the treatment of the pedicle by returning it.

Reaction took place slowly, but towards ten at night, five hours after the operation, the pulse was 112, the skin moist, the respiration slightly laboured, and a little high-coloured urine had been passed.

During the first day the patient suffered neither from pain nor sickness; no opium was required, and there was a fair quantity of concentrated urine. Towards evening there was some abdominal pain, which was relieved by the free passage of flatus. The breathing was but little oppressed. Towards the afternoon of the second day there was a little pain, which was relieved by opium. The pulse rose gradually, and at 11 p.m. it was 120. The patient passed a restless night. Next day there was a little rattling of mucus in the bronchia; but the patient said she felt better. The pulse remained at 120—124 all day. I was called at six on the following morning, as during the night the patient had begun to vomit matter like coffee grounds. I found the skin dusky, but moist; a good deal of flatulence, scarcely, however, amounting to tympanites; some soft fæces in the upper part of the rectum; the vagina hot; Douglas' space empty; the uterus soft, as if uterine epistaxis were about to occur. I took out all the stitches and found that the wound had united well, but that about half a drachm of seropurulent fluid had collected round the upper stitch. Soon after I left, the patient vomited, and shortly afterwards some reddish serum was found to wet the plaster. I removed it, and found reddish serum welling up from the wound, which was open for about the extent of an inch. On separating the edges of the wound a knuckle of intestine was seen. I introduced an elastic catheter into the abdomen, and with the help of a syringe sucked out half a pint of red serum. This became quite solid on boiling. I put in two stitches and closed the wound.

After this the patient gradually sunk, in spite of free stimulation, and the administration of five grains of quinine every hour. She died on the morning of the fifth day, 108 hours after the operation.

Decomposition set in many hours before death, to such an extent that it was almost impossible to sit in the room with the patient.

The following is Dr. Ritchie's description of the tumour removed:—

"The fluid evacuated during the operation measured twenty-eight imperial pints; the solid remainder of the tumour weighed three to four pounds. The tumour was irregularly oval in shape, and consisted of three large loculi, into which projected numerous smaller cysts. The contents of each of the three larger loculi were gelatinous fluid mixed with flakes of lymph and altered blood; the contents of the smaller cysts varied. Some cysts were filled with clear fluid, others were filled with old blood; none of these latter exceeded the size of a walnut. The walls of all the cysts were very vascular. It appeared as if the veins were dilated, this being probably due to the congestion caused by a twist which was observed in the pedicle. Lymph was deposited on some spots of the cyst walls."

Dr. MacNab examined the body twelve hours after death, and reported as follows:—

"Heart healthy, containing a few small clots.

"Lungs perfectly normal; no congestion nor pleuritic inflammation; no adhesions.

"Stomach and intestines generally showing marks of acute peritoneal inflammation.

"In the peritoneal cavity was about a pint of bloody serum. Several clots the size of a hazel nut were found in the immediate vicinity of the ligatured stump.

"The blood in the body generally was perfectly fluid, with the slight exceptions already mentioned. Some blood from the heart was preserved. The uterus and its appendages were removed, and reserved for future examination."

Nothing need be noted, however, as to this examination further than the fact that the ligature had perfectly secured the pedicle; but the part included in the ligature was in a gangrenous condition, and there was no sign of any attempt to capsulate it by an effusion of lymph.

I gave the fluid which I removed from the peritoneal cavity during life—and the blood taken from the heart after death—to Dr. Richardson, who instituted a series of very remarkable experiments with that removed during life. While quite fresh it was intensely poisonous. Dr. Richardson informs me that a drachm proved fatal in eighteen hours to a strong rabbit, and that the fluid serous excretions of infected rabbits proved equally fatal to other rabbits. The symptoms excited in the animals were great heat of skin, rapid feeble pulse, rigors, thirst, and gradual exhaustion, evidently with absence of consciousness for some few hours preceding death, and with jactitation of muscle. Symptoms of peritonitis were only developed in one case out of four, and in that case the process, essentially asthenic, was caused by a slight wound of intestine inflicted by the needle during injection. In all instances the blood was feebly coagulated, and had lost its power to a considerable extent of combining with oxygen.

As Dr. Richardson is preparing for publication a full history of his researches in this most interesting field of inquiry, I shall only add that, in his opinion, he has succeeded in separating from the fluid derived from my patient a small quantity of the actual poison resident in the fluid. The poison he considers is not of the nature of a cell or germ, but when dried is amorphous, and is rather to be considered as an

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animal alkaloid. Should further inquiry substantiate his present views, he proposes to call the poison *septine*.

Case 6.—Adherent Ovarian Tumour—Peritonitis—Both Ovaries Removed—Recovery.

In November, 1864, I saw a lady from Dublin, at the request of Dr. Beatty, who had detected a small ovarian tumour a short time before. She was 36 years of age, and had been married twice: once at the age of 15, and again, after four years' widowhood, at the age of 25. Two children were the fruit of the first marriage, their ages being now 20 and 18 respectively. Two children were born, also, in the second wedlock, the youngest of them being now 8 years old.

The lady had miscarried twice. The second abortion occurred in 1860. On April 1, 1864, the patient, while "unwell," observed a small swelling in the left side of her abdomen, and found that she could move it about at will. It was painless, but she consulted an eminent Accoucheur, who advised her to try and forget its existence, and she gave no further thought to the matter until September of the same year, when there were some symptoms which might have been attributed to a very early abortion, and shortly afterwards the abdomen began to swell rapidly.

On examination, I found that the whole of the lower part of the abdomen was occupied with a semi-solid tumour, which reached upwards to an inch above the umbilicus, while its transverse diameter might be seven or eight inches. The uterus was rather high, and somewhat anteverted; its cavity was five and a-half inches long. The tumour could not be felt *per vaginam*, and movements imparted to the abdominal tumour were not immediately transmitted to the womb. The catamenia were quite regular, with intervals of four to five weeks. The os uteri was open, admitting the finger; the cervix was soft and far back. I wrote the following diagnosis to Dr. Beatty:—"1. Ovarian tumour, semi-solid, non-adherent, left side; but, 2, *possibly* peritoneal fibroid outgrowth of uterus; or, 3, a subinvoluted uterus, with ovarian tumour." As the general health was perfectly good and the tumour gave little uneasiness, I advised delay and careful watching.

The patient returned to Ireland, but was soon seized with a violent attack of pain, beginning in the left groin and extending over the abdomen. She recovered from this attack only to have another, originating in the same spot. A third attack, with a similar commencement, ended in peritonitis so violent in its character that for a time the patient's life was despaired of. She rallied, however, and came to London on May 26, 1865. The tumour had now increased till it reached from five to six inches above the umbilicus. The uterine cavity measured three and a-half inches; the uterus itself felt soft and heavy, as if menstruation were coming on. The cyst was felt *per vaginam* to the left of the womb, which was, however, freely moveable. Fluctuation could be detected in the abdominal tumour, but it was not free: it gave the idea of a thick cyst wall and viscid fluid. The tumour was moveable on the left, but fixed on the right side.

I advised the patient to have ovariotomy performed soon after the next menstrual period. The catamenia began next day, and ceased on May 30. On June 3, I found that the tumour had shrunk very much in size; it appeared as if all its diameters had been shortened by two inches. On June 6, Dr. West saw the patient with me, and concurred in advising that ovariotomy should be performed without much delay,—1, because the peritonitis was probably due to cyst rupture,—a phenomenon which would probably recur, and might kill the patient; 2, because of the great doubt as to local condition becoming more favourable, and the equal probability that they might become less so; 3, the certainty that the case was now a fair average case, while no one could tell what it might become.

Dr. Beatty concurred in this decision, and I performed ovariotomy on June 12, Drs. Ritchie and Bowen assisting me, and Mr. Clover gave chloroform. The incision was commenced midway between the umbilicus and the pubic symphisis, and extended five inches. There was a thick layer of fat, and extensive parietal adhesions, which, however, were easily separated, as were also a few coils of intestines which adhered to the upper part of the tumour. I tapped a large cyst, and finally slit it open, so as to discharge its fibrinous and fatty contents. The Fallopian tube wound round the outside of the cyst, and with its pavilion, which was enlarged and congested and had something of the appearance of a cock's-comb, was separated from the tumour by a double layer of broad ligament. I transfixed and tied the pedicle thus formed in such a way that the Fallopian tube was not included in the ligature. After tying a vessel which bled near the fimbriæ, I cut the ligatures off short and returned them. The opposite (right) ovary was found to be enlarged to six or eight times its natural size, I therefore transfixed and tied its pedicle, and extracted the ovary. Here again, I left the Fallopian tube intact.

Two small vessels in the abdominal wall were tied, and the ligature ends allowed to hang out. The wound was then closed with deep and superficial silk sutures. There was some oozing of blood-red serum after the sutures were applied, but a sponge passed into Douglas's space came out quite clean.

The tumours were very carefully examined by Dr. Ritchie. Both of them were hair cysts.

After the operation, the patient complained of a good deal of pain, "exactly like after pains;" but she passed a fair night. Next day she still had "after pains, darting into the right hip and thigh." There was plenty of urine; the pulse 120; the pupils dilated; the face flushed.

Next day there was no pain, but a good deal of flatulence. During the previous night she had been sick once, vomiting food and mucus. On the fourth day the patient was much better; I removed the stitches. Free uterine epistaxis came on in the afternoon. On the sixth day one of the ligatures came away. The wound had united except where the other ligature kept its edges apart.

The subsequent recovery was very rapid. The patient was able to go shopping and to call upon me on the twenty-first day after the operation. On the twenty-fourth day she left for Leamington, on her way to Dublin.

The rapidity and completeness of this recovery raise a question whether the exclusion of the Fallopian tubes from the ligature lessened the shock of the operation. I have heard very recently that the lady has continued to enjoy perfect health ever since the operation.

(To be continued.)

ON THE USE OF PHENIC ACID FOR THE CURE OF PHTHISIS.

By J. R. WOLFE, M.D.

Our Continental *confrères* have lately been making various experiments with the view of testing some new therapeutic agent for the cure of phthisis. Professor Trousseau, who has experimented largely for the last three years with the inhalation of oxygen, informs me that he found it of no service in any of the stages of tuberculosis; on the contrary, it appears to act as an irritant in that affection. On the other hand, he found it an invaluable modificator in anæmia, the consequence of excessive uterine hæmorrhage, fatigue, protracted bodily and mental suffering, bad alimentation, and nursing—in that anæmic cachexia which cuts off the patient by hectic fever in spite of all treatment. "Many a time," says the eminent Professor of the Hôtel-Dieu, "I had to sigh under a sense of incapacity in dealing with these cases. I have vainly sought for a remedy against them, and I owe it to the labours of my friend and colleague M. Demarquay that I have in many cases been able to recall to life patients whom I have considered as past all help."(a) The remedy consists in making the patient inhale pure oxygen from a caoutchouc apparatus made for the purpose. The quantity inhaled is about six or ten quarts per day. As an illustration, he gives the history of a patient whose appearance was cadaveric, with a pulse from 120 to 130, dry skin, anorexia, who could not sit up for a moment without falling into syncope, but who was cured by the inhalation of oxygen, after iron and tonics had failed.(b) The remarkable feature of that remedy is, that every inspiration of the gas produces in the chest a feeling of agreeable freshness, and the pulse falls eight beats after two or three inhalations, the appetite is revived, and digestion is facilitated.

Some two years ago the eminent physiologist, Prof. Longet, who had an attack of hæmoptysis with tuberculosis, made some experiments upon himself with phenic (carbolic) acid, by which he was greatly benefited. It is owing to the favourable report of that distinguished patient that this substance is now largely employed by some of the French Physicians. Dr. Labori, of the Convalescent Hospital (L'Asile Imperiale de Vincennes), has told me that he administered it to between 200 and 300 patients in different stages of phthisis, with most

(a) "Clinique Médicale de l'Hôtel Dieu de Paris," vol. iii., p. 63.

(b) Ibid.

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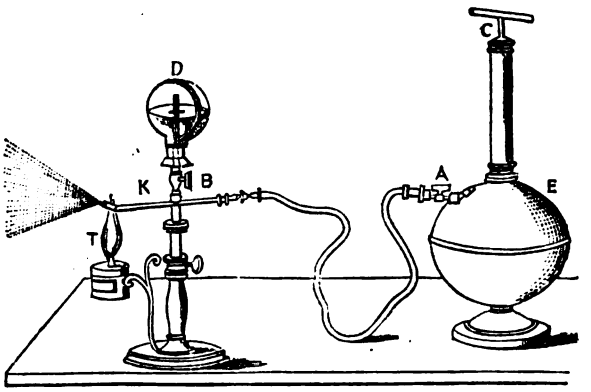
favourable results. The mode of administration is as follows: fifteen drops of the pure acid are dissolved in ʒij. of spirits, and the solution mixed with ʒxxxij. of water. This quantity is administered daily, partly by the stomach and partly by the inhalation of the fluid in a pulverised state.

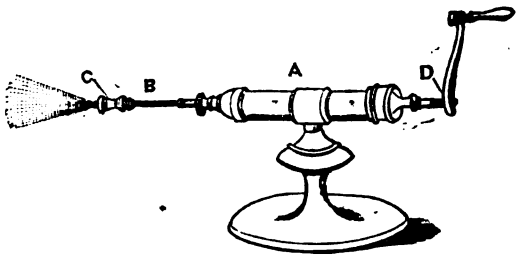
There are several instruments now in use for reducing fluid to fine molecules. No. 1 is the Néphogène, constructed by

Fig. 1.



Mathieu, of Paris, which has for the last eight years been employed by M. Trousseau for the cure of laryngeal and bronchial affections, and which has of late been introduced into the German Hospitals by Frerichs, Oppolzer, and others. The air is compressed in the brass ball (E) by means of the pump (C). The fluid to be pulverised is put into the glass ball (D); in opening the stop-cocks (A and B) the fluid is projected in the form of a fine mist. The mist can be raised in temperature by means of the spirit-lamp (T), which heats the tube (K). The instrument is also used as an eye-douche. No. 2 is that of M. Lüer, of Paris, which I find a very con-

Fig. 2.



venient, neat, and portable instrument. It is a german-silver syringe (A), which has attached to it a flexible metallic tube (B) terminating in a small silver tube with a fine opening (C), through which the fluid is propelled in a pulverised state by means of the piston (D) arranged in the manner of a screw.

Messrs. Weiss and Mr. Krohne, London, have lately constructed inhalers upon the same principle.

The internal administration of creosote and the inhalation of tar vapour have long been recognised as useful remedies in phthisis; but, considering the *modus administrandi* just referred to, it is not quite as if we wanted to introduce an old friend with a new face. The great objection to the inhalation of tar and terebinthinate vapours was, that in order to be effectual it must be persevered with, sometimes for years. Even in the case of that valuable and standard remedy, cod liver oil, when first introduced for the cure of phthisis, some questioned its remedial effects simply for want of perseverance to give it a long enough trial. Now, by means of the pulverising method, the larynx, trachea, and, as has been proved upon animals, the lung tissue, are brought into direct contact with the remedial agent, which is also absorbed into the system, and it has besides the advantage that the patient can regulate the quantity to be inhaled.

As an adjuvant to cod liver oil, it is beneficial in all stages of phthisis; but it is eminently useful in arresting hæmoptysis, in allaying irritation, and arresting the profuse secretion in cases of chronic bronchitis and of cavities in the lungs, of laryngeal phthisis, and of colliquative sweats, and I think it deserves a trial in cases of diphtheria. I would here take the opportunity of strongly recommending the use of the pulveriser. From what I have seen of its efficacy for the last eight years in laryngeal, bronchial, and lung affections, in which various medicines have been administered in that form, I am confident that it needs only to be known to the Profession in order to be generally employed. It opens a new field of therapeutics, and enables us to cope with disease which the gargle, probang, and even the ordinary inhaler could not reach.

The pure phenic acid directly applied is used in bites of the charbon fly or any poisoned wounds. Charpie dipped in a solution of ʒss. of the acid, in ʒj. of spirits, diluted with ʒxv. of water, is used by Maissonneuve and Gosselin for dressing indolent ulcers and suppurating surfaces. A similar dressing answers excellently in open cancer and fœtid discharges of all kinds. The only objection to its use, is its strong and rather disagreeable smell. To obviate this, I have made some experiments, and find that cotton-wool saturated in the pure acid, and then pressed to get rid of the excess of acid, and dried, leaves enough of the acid to act upon the wound without leaving so much as to make the smell disagreeable. The cotton so prepared is kept in a tin box to prevent volatilisation of the acid.

As far as my experiments have gone, I am satisfied with its beneficial results. It causes a healthy granulating surface, counteracting the tendency to hyperplasie and suppuration. But my study of the subject is not sufficiently advanced to enable me to enter into particulars in this communication. I may express it, however, as my opinion that its employment for dressing wounds will greatly lessen the risk of purulent and erysipelatous infection in our Surgical wards.

Aberdeen.

THE

CO-EXISTENCE OF HEREDITARY DEFORMITY WITH MENTAL DISEASE.

By J. DANIEL MOORE, M.D., F.L.S.

Deputy Superintendent to the Lancaster County Lunatic Asylum.

The following case may be of interest as an instance in which hereditary malformation has existed conjointly with hereditary mental disease:—

A. B. a girl about 28 years of age, was a short time since admitted as a patient of the County Lunatic Asylum at Lancaster. She was then somewhat childish, both in manner and appearance, and had occasional outbreaks of maniacal excitement. Her deformity consisted in having an additional digit on both hands and feet. The additional finger articulated with the fifth metacarpal bone, and was not exactly parallel with the other fingers, but directed somewhat outwards. The head of the metacarpal bone appeared to have two articulating surfaces of nearly equal size. One for the fifth finger occupying the inner part of the end of the bone, and a second for the additional digit occupying the remainder of the end of the bone and extending somewhat to the outer side. The finger was well formed, but somewhat smaller than the fifth. It had perfect phalanges, and was capable of flexion and extension; but could only be moved very slightly without a corresponding movement of the fifth finger. There was not the slightest appearance of webbing. When this patient was becoming somewhat better of her mental disease, she informed me that her grandfather, father, and two uncles had had the same deformity, and that her grandfather and one of her uncles had shown some signs of mental abberration.

County Lunatic Asylum, Lancaster.

The "Black Death."—Mr. Seebohm, in an interesting paper in the *Fortnightly Review* for September, advances some very urgent reasons, in part derived from the records of the great mortality among the beneficed clergy, in proof that not less than two million and a-half of people perished in England from the ravages of the celebrated plague of 1348-9, known by the name of the "black death." He shows also that this was about one half the population, which amounted at that period to at least 5,000,000. Many social and economical results in active operation at the present day are traceable back to this sudden depopulation.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

REMOVAL OF THE ARM, CLAVICLE, AND PORTION (REMAINING FROM A PREVIOUS OPERATION) OF THE SCAPULA FOR A RECURRING TUMOUR.

(Under the care of Mr. FERGUSSON.)

At page 62 of the last volume of the *Medical Times and Gazette* we recorded the first operation which was performed on this patient. Then, the disease seemed only to affect the inferior portion of the body of the scapula, and it was hoped that the removal of the greater portion of that bone would, if not entirely remove the disease itself, certainly have given the patient a greater immunity than, it seems, has been the case. As frequently happens in these cases of rapidly-growing tumours, the wound made by the first operation healed quickly and well, and the patient left the Hospital in excellent health, and with very slight deformity, and the almost entire use of her arm. She left a few weeks after the operation, but the disease returned a few months later (about June), and its increase was very rapid up to the present time. Two or three large irregularly-shaped tumours, soft and elastic to the touch, occupied the clavicular and anterior scapular region, entirely filling up the natural hollows above and below the clavicle, and enlarging the sweep of the trapezius muscle to the point of the shoulder. Large tortuous veins were visible on its surface, and one or more spots seemed almost on the point of ulcerating through the integument. On moving the mass, through the agency of the arm, the arm, clavicle, and what remained of the scapula appeared to move all together; the disease seemed to have extended largely into the trapezius, but the mobility of the whole mass would tend to negative its deeper connexion with the ribs. Under these circumstances, Mr. Fergusson determined to perform the operation, which he did as follows:—

November 11.—The patient being placed under chloroform, the tumour was first punctured with a grooved needle, in order to ascertain whether it contained fluid or not. A vertical incision of about two inches in length was then made just external to the origin of the sterno-mastoid muscle, and the clavicle divided with the saw and cutting-pliers, and through this opening the artery was compressed against the rib by the thumb of an assistant (Mr. Wood). Next, an incision was made along the clavicle, and continued round over the back of the tumour, and towards the outer boundary of the axilla; from this point it was extended upwards, over the outer border of the pectoralis major and anterior portion of the tumour, meeting the original incision at about the centre of the clavicle, the mass being thus enclosed in two semilunar flaps. The integuments were then rapidly dissected of the posterior portion of the mass, and the flap turned back; next, that covering the anterior and axillary portion was reflected. Mr. Fergusson then, by grasping the arm, was enabled to rotate it in every direction, and thus completely free it from its attachments by dissection. The division of the vessels and nerves was left until the last, and before this was done the vessels were seized with a pair of strong forceps (sequestrum forceps covered with leather) by an assistant (Mr. Henry Smith); and to make matters additionally secure, a second pair were similarly applied on the opposite side. These structures, which were much involved in disease, were then cut through; not a drop of blood escaped from the subclavian, and two or three strong ligatures were placed on it, just external to the scalenus. There was very little hæmorrhage considering the extent of the operation, and every bleeding point was promptly secured. The flaps were brought together by sutures and strapping, and a large pad (towel) bandaged over all.

After some prefatory remarks on the former partial removal of the scapula in this case, Mr. Fergusson said that he was very reluctant to perform the present formidable operation; but as it was evidently the only means of saving the patient's life, he had resorted to it; when, a few months ago (last January), he had operated, the disease was so circumscribed that only that portion of scapula below the spine was removed, and the tumour ran up along the inferior costa of the scapula; but he was then reluctant to do more, as he hoped that he had taken it all away. The patient made an admirable recovery, and came to show herself from time to time.

A short time after this a swelling appeared under the pectoral muscle, some way from the site of the original disease, in all probability first affecting the bones and extending afterwards to the soft parts, and was increasing so rapidly that if there was any longer delay there would be no chance for the patient. Both pectoral muscles were involved, and seemed laid over the swelling in the form of a thin muscular web, the mass passing backwards through the axilla and round to the back of the shoulders. It was a matter of consideration as to whether the tumours involved the vessels and axillary plexus of nerves; had there been no doubt that they were free, some local operation might have been done, and the mass removed without the formidable alternative of sacrificing the whole upper extremity.

With regard to the steps of the operation, the object of first dividing the clavicle was—1st. That during the manipulation of the mass whilst being removed the shoulder could be more easily moved and more control could be had over it. 2nd. The sternal attachment of the sterno-cleido-mastoid muscle could be preserved; and 3rdly. That by the insertion of the finger of an assistant the artery could be more readily compressed.

By means of the dissection of the large semilunar flap round the shoulder and under the axilla, the skin which covered the axillary portion of the tumour was preserved, which would be of importance in bringing the edges together. During the progress of the operation the axillary plexus and subclavian were less distinct than any other structure, owing to the extent to which they were involved, and some processes of the tumour passed beyond them and lay on the scaleni, but these muscles were apparently uninvolved. In order the better to withstand the hæmorrhage from the subclavian artery when that vessel was reached, it was seized with a pair of strong forceps (large sequestrum forceps covered with leather), and to make things still more secure a second pair were similarly employed further on; consequently very little blood was lost, and the vessel was secured between the scaleni. Mr. Fergusson considered the tumour to be of the recurring fibroid variety.

With regard to the success attending this operation, Mr. Fergusson adduced the testimony of Mr. Syme, who says that from deductions drawn from a case in which he removed the clavicle, scapula, and arm for a large fibro-cartilaginous growth, the entire scapula, either alone or with the arm, may be removed without much difficulty or loss of blood, and that the wound will heal most probably quickly and soundly; or supposing that the arm can be preserved, it may still be strong and useful, as has certainly been the case in a patient from whom Mr. Fergusson lately removed the scapula, whose case we recently reported, and who presented himself after the operation; he was in perfect health, and had a very good use of his arm, mainly owing, no doubt, to the amount of leverage to the arm afforded by leaving the acromion process of the scapula and the muscular fibres attached to it.

This is, we believe, the first time that this operation has been performed in London for disease, although, of course, it has been done, and successfully, for injury. Moreover, there are cases in which the entire upper extremity has been "torn" off and the patient has recovered.

A dissection of the tumour has since been made. The axillary plexus and axillary vessels are so involved in the disease that it is impossible to isolate them from the rest of the mass throughout the whole extent of the axilla. They seem, however, tolerably free below its lower boundary.

The patient has been doing very well up till the present date (November 21). The edges of the wound showed some tendency to slough, but this has passed off, and they are uniting well.

We shall record the further progress of this interesting case.

BIRMINGHAM GENERAL HOSPITAL.

ILLUSTRATIONS OF THE CAUSES OF DEATH IN BRIGHT'S DISEASE OF THE KIDNEYS.

(By JAMES RUSSELL, M.D.)

The information which is gained from a knowledge of the cause of death is in no case more valuable than in the class of diseases designated in the title of this paper. In the acute forms the tendency to death is often direct and rapid, and in

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many cases, at least, it is certainly in our power to "obviate this tendency" if we only understand its nature. In the chronic forms cure is too often out of the question; nevertheless, if the modes in which death is most likely to occur be rightly understood, much may still be accomplished, not only to relieve the sufferings of the patient, but also to prolong his life by retarding the course of the disease. As in phthisis, the course of a case of chronic Bright's disease often admits of being greatly lengthened, by recognising the particular dangers incident to the malady, by adapting the habits of the patient to the condition of his health, and by protecting him from the accidents to which his state is peculiarly exposed.

Now the mode in which death may be produced in Bright's disease varies exceedingly in different cases, and of course the dangers to which the patient is exposed are equally numerous; in every uncomplicated case the ultimate cause is probably the same, viz., the retention of urinary excrement in the blood; but, nevertheless, it is in comparatively few instances that we find this operating directly in the production of death; in a large majority it acts by intermediate agents. The impure condition of blood which is the consequence of the renal affection has a constant tendency to effect organic changes in the various organs or tissues of the body, and such changes are actively concerned in bringing the case to a fatal termination.

This happens very often in the acute forms, in which the poisoned state of the blood operates most directly, and the shortest time is allowed for inducing disease; the blood may be rapidly altered in its composition, acute inflammation may be set up, or dropsical effusions be poured into vital organs. But in the chronic forms there is far larger opportunity for the production of organic changes, and, moreover, the poisoned state of the patient's blood renders him constantly liable to injury from unfavourable influences, so that his life is very much at the mercy of accident; hence very few cases escape serious secondary complications, and such complications play an important part in the work of death.

Another source of complication remains to be mentioned. Chronic Bright's disease is often not the primary malady; in many cases it is but the expression of some constitutional cachexia; and in examining its phenomena we have to discriminate between the effects of the primary cachexia and those of the secondary malady. Or again, the renal affection may be, and often is, consecutive to local organic disease in some vital organ, especially in the heart or lungs; and here, again, the symptoms and treatment will be complex.

Hence it comes to pass that the treatment of Bright's disease involves many different or even opposing considerations. Whilst keeping our attention constantly fixed upon the condition of the blood, as of primary importance, and regulating with great care every function by which impurity may be introduced, and by which purification is effected, we have also to be always alive to the state of the various vital organs of the body, to relieve them of everything which may embarrass their action, and to remove all those causes of disease which would at any time endanger their integrity, and, under present circumstances, would operate with greatly augmented power. I do not propose in the present paper to attempt a complete view of the subject, but simply to furnish illustrations of the immediate causes of death in Bright's disease, as they have presented themselves to my notice in Hospital or private practice.

1. *Death by Asthenia.*—It is probable that every pure case of Bright's disease tends to death by asthenia, when it tends to death at all, and when its course is not altered by intercurrent maladies. That death does, in fact, so seldom occur from this cause is the best proof of what has been already stated—that Bright's disease does not often pursue its natural course; hence the reason why comparatively few of the sufferers exhaust the full term of their malady by dying of asthenia.

The evidence of a tendency to asthenia is very obvious both in acute and in chronic cases of Bright's disease. Prostration is one of the immediate effects of poisoning by urea in experiments upon animals, and in the ordinary acute dropsy very marked symptoms of depression are prominent even amidst the varied and serious derangements which attend severe cases; whilst in the mild cases, which are by far the more frequent, the depression under which the patient labours forms a very important element for consideration in conducting the treatment. Great depression of the heart's power, irregularity of its action, entire loss of appetite, rapidly induced anæmia, are clear indications of the asthenic state.

But in the chronic forms additional causes are in operation to produce the same condition. Enfeebled digestive power, frequently attended by disposition to vomit, which constantly attends the advanced stages of chronic Bright's disease, has an obvious tendency in this direction. The blood, too, is changed in its composition. Its solid constituents are much reduced, partly by drain of albumen, when that substance is present in the urine, but in a far more important respect by diminution in the proportion of blood cells, amounting in extreme cases, according to some analyses by Dr. Christison, to a reduction of 64 per cent. The fascicles of the heart are also liable to undergo degeneration, probably as a part of the general nutritive decay. Of thirty of my own post-mortems of chronic Bright's disease in which I have examined the heart's fibres by the microscope, the fascicles were degenerated in twenty-two. As a result of these, and doubtless of other similar influences, progressive wasting, anæmia, and loss of strength attend the advanced periods of the malady.

I believe it to be in the chronic desquamative disease of Johnson that death by asthenia is most likely to occur, probably on account of the very slow rate at which the disease advances, often comprising years in its duration, and also on account of its frequent pauses, thus affording to other organs sufficient time to accommodate themselves to their altered relations, though at the same time a further result of the same characteristics in the chronic desquamative disease is that the destruction of renal tissue becomes at length so great that the closing period of the case is very liable to be disturbed by the effects of poisoning by a large dose of urea.

In the former of the two following illustrative cases the difficulty of accurately apportioning the share which is taken by the renal malady in producing the symptoms is well illustrated, it being impossible to say to what degree the state of asthenia in which the patient died was produced directly by his habits and by the gouty cachexia which resulted, and to what degree by the renal affection. It is unfortunate that in neither of these cases was a post-mortem examination obtained, though the symptoms during life were amply sufficient to establish the nature of the disease.

Case 1.—Gouty Kidney.

Mr. S., aged 46, a publican, has several brothers who have suffered from renal disease or adipose deposit. Is habitually intemperate, and mixes his liquors; liable to exposure to cold; subject to gout for six years, extending from the feet to all the joints, and also to the muscles. No symptoms of renal disease when first seen; nevertheless, considerable amount of albumen in the urine.

Under observation from May, 1859, to March, 1863. At first well-nourished and vigorous; suffering from gout in various joints, with much mental depression. Absence of uric acid from the urine, much albumen, large number of granular casts (indicating unmistakeably the chronic desquamative disease); albumen and casts rapidly diminished as the uric acid returned. Hence to final illness; repeated attendance for gouty disease in all the joints indiscriminately, large and small, and frequently in the muscles also, attended with much depression, perfect loss of appetite, and violent retching. By degrees the health became more impaired between the attacks, the body wasted, the muscles grew flabby, his complexion anæmic, and his appetite failed him.

Albumen and casts reappeared with each attack, and uric acid disappeared; the former left with the attacks. The final illness was characterised by great depression, entire failure of the stomach, but little prominent disorder; pulse 120—130. He sank very gradually during seven weeks, quite exhausting the process of attenuation. No evidence of disease in any other organ. He had no anasarca from first to last.

Case 2.—Acute Dropsy.

Master H., aged 5 years. Mild scarlatina followed by temporary return of glandular swelling. About the end of the fifth week œdema appeared in the face, and in four days became general, with distressed breathing, vomiting, and bloody urine.

I found him, a week afterwards, still anasarcous, very anæmic, quite intelligent. Took little food; no vomiting. Had suffered from attacks of palpitation for four days, and breathing hurried by movement. Urine bloody, one-third albumen; contained exudation casts.

Improved considerably through two days. Anasarca left; less blood in urine, but albumen still one-third; urates were present; pulse tolerably good; had become very flabby, and took little food.

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On the following day found dying in a state of perfect collapse, after a second severe attack of palpitation on that day. Rapid pulse; sighing breathing; dusky lips; pupils moderately dilated. No effusion in chest nor in pericardium. Blood had left the urine, and albumen was much lessened. Died in my presence.

N.B.—I entertain no doubt that our treatment in this case was of too depressing a character.

(To be continued.)

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SATURDAY, NOVEMBER 25.

THE PUBLIC SERVICES.

Our readers will not be surprised to learn that the authorities have begun to open their eyes to the true state of things. When some men are resigning the naval service, others are being retained against their will, and the outside Profession refuses to come forward and supply the vacancies, we can well imagine the Admiralty feels some alarm lest their Medical Department should become like a derelict ship. A Commission, therefore, as we intimated would be the case in our last number, is sitting at the Admiralty, for the purpose of inquiring into the condition of the naval and army Medical officers. The president is Vice-Admiral Sir A. Milne; the other members, Lord Paulet, Adjutant-General, Captain Douglas Galton, Sir James Gibson, and Dr. Bryan; with Dr. Markham on the part of the Royal College of Physicians, and Mr. Busk of the College of Surgeons. In so far as this betokens some alarm, it is well; but those who are most interested in the matter are not much in love with Commissions. To be of any use, the inquiry should be a public one, and presided over by some disinterested and impartial person in whom the public and the Profession could alike have confidence. That you may prove anything by statistics is allowed; and we venture to think there will be no difficulty in proving—if the evidence be carefully selected, of course—that our public Medical services are all that can be required. A man will speak out things with candour if what he says is to reach the public ear; but a senior officer is very likely "to make things smooth" when disagreeable statements and opinions have to be delivered before admirals, whose friendship and goodwill are essential to his own safety and success. However honestly the proceedings of a Commission may be conducted, so long as these proceedings are private, they must remain unsatisfactory. But, unfortunately, the recommendations of Commissions, somehow or other, fail to get acted upon. What came of that which sat some time ago in reference to the Army Medical Department? Although it leaked out that the results of the deliberation were favourable to the Medical officers, the Ministers refused to lay the Report before the House of Commons, because the inquiry was a private one.

Many young Professional men were deluded by the idea that something was to be done, and candidates were forthcoming. There was no surer way of postponing Government action. So long as the authorities can get candidates they are not such fools—to quote from H.R.H. the Duke of Cambridge—as to yield an atom. We have been told that a great many men came from the Irish schools under the conviction that great changes were to be made in the Army Medical Department. What happened? We know, on good authority, that all was immediately undone which had been accomplished, and that no fruit was garnered whilst the harvest was so promising. It has come to this, that young men will neither remain in nor enter the Navy, and the quantity (and notably the quality) of those who enter the Army falls off more and more. Can it be wondered at, with the numerous and increasing fields for the employment of Medical men, that really good and well-educated men are no longer tempted by a service which holds out forty years' service as an Assistant-Surgeon in all climates on the maximum daily pay of thirteen shillings?

Our correspondent was surely in error in stating that Assistant-Surgeons would obtain their first step in rank as Surgeons-Major. The rank of Surgeon has been done away with as far as any new candidates are concerned. Certainly, but not in the way he supposes, for the case is, we fear, even worse than he puts it. Here is the extract relative to the rank of Surgeon-Major:—"And all *Surgeons* who have already completed twenty years' full-pay service, or upwards, *in any rank*, shall have the rank and pay of Surgeons-Major." From this it would appear that a man must be a Surgeon first of all.

To resume: many a weary eye will be turned to the proceedings of this Commission. They will expect from Dr. Markham and Mr. Busk that the inquiry shall be full and searching, and that the evidence given shall be made public. If so, there will be a chance of reform; none otherwise.

THE PROFESSION AND THE PRESS.

At a public Medical dinner not many weeks ago, a distinguished Fellow of the Royal College of Physicians, in returning thanks for that College, stated that it was at the present time more necessary than ever that the different sections of the Medical Profession should cultivate a feeling of brotherly amity with each other and render mutual support, as he feared it was too true that the Profession was not receiving so high a measure of public respect and appreciation as had heretofore been rendered to it. We do not sympathise with the speaker's misgivings, although we cordially approve of the moral which they suggested. We do not believe that the public opinion of England is to be gauged and tested by a *Times'* article on the shortcomings of "morbi pathology" suggested by the presence of Rinderpest and the fear of Cholera. The diffusion of some smattering of physiology and chemistry amongst the upper and middle classes has doubtless had the effect of sweeping away the last vestige of the superstitious awe with which Medical science and its professors were formerly regarded. But, on the other hand, it has increased reasonable confidence in the resources of our art, whilst it must have offered some check to the progress of many of the quackeries of the day. Even an imperfect idea of the changes which the food undergoes in digestion and the blood in respiration would prove an adequate antidote to the acceptance of homœopathy, for instance; and it is a truth which is proved by every-day observation that the professors of the globulistic theory have met with their chief supporters amongst those classes whose mental habits and studies have led them farthest from the pursuit of natural science.

But, whatever be the estimation in which the Medical Profession is just now held by the public, there can be no doubt that its doings and shortcomings, its internal organisation and freemasonry, and its general relations with the rest of the world, are much more closely canvassed and criticised than formerly. In this, however, it only shares the same fate as the Church and the Law, and most other of our institutions. The appetite for "articles," which at present seems quite insatiable, must

be met with daily, weekly, monthly, and quarterly supplies, and neither publishers nor authors can afford to neglect it. The range of subjects is necessarily limited, and the internal economy of a Profession such as ours offers quite a mine of wealth to "contributors." Hence, after the fair occupant of a first-class railway carriage has finished the monthly modicum of the interminable tale of "Aunts and Cousins," she is invited to give her attention to Medical Etiquette, or to study the subject of Hospital Statistics. We do not complain in any way of this; we only chronicle it as one of the facts of the time. For instance, the last number of the *Cornhill Magazine* contains a long article on Provincial Medical Charities, which is not, as its name would lead us to expect, an account of the Hospitals and Dispensaries themselves, nor of the persons relieved by them, but a criticism pure and simple, albeit not always fair and true, on the Medical staffs of the Hospitals, and the manner in which they are chosen. The article we are commenting on bears internal evidence of having been written by a Medical man, but it is evidently intended for the general public; and the only apology for its exaggerated statements is, that they are merely *sauce piquante* necessary to make the heavy morsel go down. The general public are informed, for instance, that the out-patients of provincial Hospitals are seen at the rate of three per minute; that it is usual for the poor patients coming from all parts of the country to be kept waiting in crowded, unventilated rooms from eleven in the forenoon until half-past three in the afternoon—the former being the hour at which the Physician or Surgeon is advertised to attend, the latter the hour at which he really does attend; and that the Physicians are in the habit of prescribing *in rotation* the compound mixture of gentian, the compound mixture of soda, the tonic mixture, and the acid mixture, which are kept prepared in the Dispensary. Now, the Medical Profession well know that such statements are gross exaggerations; and if they receive the slightest colour of truth from the existence here and there of an exceptional instance of neglect, they are evidently and completely refuted by the diligent and careful manner in which the great mass of Professional services in connection with Hospitals and Dispensaries throughout the country is performed. But the general public know little of our unrequited toils, and there is just enough of surface truth in the article to insure its reception as a whole. We believe that the Profession will generally acquiesce in the moral drawn by the writer, which is, that Assistant-Surgeons and Physicians should be attached to provincial Hospitals, and that the offices of their Medical staffs should be thrown open more widely to the Profession. But we think that advice to young Medical men as to the manner in which they should examine Hospital patients would be more likely to have a good effect if published in the pages of a Medical journal than in those of the *Cornhill Magazine;* and we also think that the young and old ladies who read that absorbing serial will not have their respect for, and confidence in, their Medical advisers enhanced by the garb of narrow selfishness and petty jealousy in which the writer has gratuitously and charitably dressed his brother Practitioners.

ICE BAGS IN CHOLERA.

It is now nearly two years since the *Medical Times and Gazette* announced to the Profession that Dr. John Chapman, a gentleman of whose critical acuteness and originality there could be no doubt, had devoted himself to the study and treatment of diseases of the nervous system; and as a first instalment we published some singular results which had followed the persistent application of ice over the spinal cord in epileptic patients. The result was, that the fits had diminished in frequency; but, alas! knowing how common and delusive a sequence this is of most new plans of treatment, we set no great store by it. What was really singular was, that the patients expressed themselves as comforted by the constant application of the ice bag, and that their feet, which before were habitually cold, had appeared to be made warmer by that means.

We believe that the theory which led Dr. Chapman to use ice to the spine is based on Claude Bernard's researches into the functions of the vaso-motor branches of the sympathetic nerve. Lessen the activity of this nerve, and the arteries and capillaries dilate and carry on a more active circulation. Galvanise or excite the nerve, and it makes the bloodvessels contract and lessens the flow of blood. On the theory that an epileptic fit depends on a contracted state of the arteries of the brain, and that this depends on surexcitation of the sympathetic, and may be lessened by applying cold to the back, the ice was applied, and the results were, on the whole and at first, favourable.

We know it to be the truth, and trust that there will be no offence in saying, that the friends of many an epileptic patient were delighted that a man of acuteness and energy had begun to unravel the mystery of that most intractable malady, and had hit on a system which promised some good if patiently worked out. They were, and are, eagerly waiting for histories of cases of cure or of alleviation, with further records of the collateral effects of the ice-bag upon the health in general, and upon various organs in particular. It was with some feeling of regret that they observed Dr. Chapman, instead of following up his epileptic studies, which are almost enough for one man, directing his energies and using his new and powerful remedy in cases of the greatest variety. We believe that he asserts that the ice-bag and its correlative, the hot water-bag, are remedies for female complaints, such as amenorrhœa, dysmenorrhœa, and menorrhagia; for sea sickness; for hæmorrhage, diarrhœa, and cholera; nay, further, that they possess a controlling power in all diseases whatever (and if we understand the author rightly), even over all growth.

For our own parts, we have the profoundest distrust of all new remedies which come to us with the recommendation that they are "based upon the soundest physiological principles," etc., etc. Any one who knows anything of Medical literature knows but too sadly how many remedies, obsolete and, as we now think them, ridiculous, have been ushered into notice with similar credentials. On the other hand, we have the profoundest veneration for experiment, and verily believe that any one does a service to mankind who will try any remedy not absolutely inert which seems to hold out some prospect of benefit in any obstinate disease, and will fairly chronicle the results. With regard to the ice treatment, then, whether of epilepsy, dysmenorrhœa, or cholera, let us know the results in the hands of different men of independent position and of sufficient Medical experience to make us sure that they know what they are treating, and that the effects of the remedy are real, and not the mere imagining of enthusiasts. As for the facts, when we get them, they will take care of themselves. We understand that a majority of the Medical men at Southampton express themselves favourably as regards the ice treatment in cholera. No doubt we shall soon hear more particulars. It must be remembered that ice is not the first remedy which has appeared to do good in this hopeless malady. There were the saline injections, for example, based upon "incontrovertible physiological principles, evident to the most uninitiated," etc., etc.; there was the small dose of calomel, and a host of others; and what we desire is, a statement of the excess of benefit derived from the ice over that from careful treatment without drugs (which we pray for, should we have cholera ourselves), and over other systems of medication. When we say careful treatment, we mean the giving of nourishment and the comforting the patient in those small details which can only be attended to by a kind and skilful Medical attendant, who does not conceive himself bound to *try* something for the sake of appearances.

Whilst, then, we look out for, and shall gratefully record

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any facts, we may employ ourselves in criticising the theory of the ice-bag, since it has made its way into the newspapers, and has been even honoured with one of those odd, quasi-Greek names (*neuropathy*) which seem so attractive to the popular ear.

To begin, then. We want more information, derived from comparative trial, as to the effects of heat or cold to the spine, and heat or cold applied to the skin of the trunk in various places. Patients with bronchitis, for example, have been treated from time immemorial by the external application of heat. Every one uses linseed and other poultices to the front of the chest, the sides, and the back, all together or in turn. They are used of all temperatures—hot, to redden the skin; cool, to soothe and comfort. The effect of such applications is known to be beneficial; they generally cause a universal glow on the skin and gentle perspiration. Are we to believe that a poultice applied over the spine between the scapulæ would behave as an old-fashioned poultice, or that it would excite the sympathetic and make it cut off part of the supply of blood to the irritated bronchial membrane? If the latter, what collateral signs are there? Would a warm poultice to the back, for example, diminish the circulation in any part of the skin? which it ought to do, if Dr. Chapman's hypothesis be correct. Can Dr. Chapman show that a hot water bag to the centre of the back between the scapulæ relieves pulmonary congestion, more or less, or otherwise, than a hot water bag applied to the ribs, or sternum, which we know to do good?

Dr. Chapman says he has cured constipation by applying heat to the spine. Many Practitioners have cured it by applying cold. A cold sitz-bath is a favourite and valuable remedy. Dr. Chapman cures hæmorrhage by applying heat to the spine, to excite the sympathetic to contract the arteries. There is the old remedy of cold to the nape of the neck for checking nose-bleeding; and we want to know which is right, because "upon strict physiological principles" both cannot be.

It may seem impertinent, but we really desiderate some proof that an ice-bag does really affect the temperature of the spinal marrow; but we suppose Dr. Chapman is prepared with this.

Now, let us turn to sea-sickness. If we understand Dr. Chapman aright, this is a direct effect of an excitation of the spinal cord. This delicate part is shaken and irritated by the horrid up and downs of the vessel, and so becomes congested or loaded with blood; being full of blood, it generates more nerve-force; this nerve-force contracts the arteries of the brain and of the stomach; by some (hitherto unknown) law, much mucus is secreted when the supply of blood to a mucous membrane is diminished; and the muscular fibres of the stomach and bowels become restless and irritable under want of nourishment, and so execute those peristaltic movements whose effects are known as vomiting and diarrhœa.

We certainly find it not easy to treat this kind of pathological reasoning gravely. Certainly the end of this chain of slap-dash deductions seems a great way from the beginning, and we have much doubt as to the safety of a good many of the links. For example, sea-sickness is but one of half-a-dozen similar kinds of sickness which depend, without doubt, on some similar condition of the nervous system; and what is true of one is probably true of all. There is sea-sickness, sickness from being whirled or spun round, sickness from looking suddenly over a precipice, sickness from undulating movement of visible objects so as to produce a subjective sense of unsteadiness, sickness from wearing spectacles which dazzle, sickness at the sight of blood, sickness from tobacco. We suppose that Dr. Chapman can prove that in sea-sickness (as in diarrhœa, etc., etc.) the spinal cord is really hyperæmic—for this, the foundation-stone of his system, cannot have been left as a probability merely; but what proof is there of congestion in the spinal cord in any of the other analogous forms of sickness? If the gentlest undulations of a ship make the spinal cord hyperæmic, what does a hard-trotting horse do? All these things strike one as unfavourable to the theory. So do the ordinary *juvantia* and *lædentia*. But let us wait for the facts. Do ice bags cure sea-sickness? If so, we have something valuable in hand, and a sound theory will follow.

As for the ice bag in cholera, as we have before said, we await the facts in all humility. If Dr. Chapman succeeds in proving that they contribute anyhow to the safety or comfort of the patients, he will not miss his reward. But we must confess to strange misgivings as to his theory. That assumes such a surexcitation of the sympathetic as to constrict every artery in the body, but especially those of the intestines. Now, here is a point on which surely pathological anatomists have evidence to give. If we can't inspect the spinal cord during sea sickness, unluckily, opportunities enough are found of inspecting the mucous membrane of the bowels after death by cholera. And what is found there? What are the records of the post-mortem inspections made in '31, '49, and '54? Was the spinal cord congested? Was the mucous membrane of the alimentary canal deprived of vascularity? Was there ground for the theory of secretion of mucus as a consequence of diminished supply of blood? Who does not recollect in the worst cases of cholera in '49 and '54 not mere rice-water stools, but *red-currant-jelly stools*; florid blood poured out from the mucous membrane and mixed with the rice-water? Do we hear nothing of intense injection and ecchymosis? And this from a membrane whose arteries are closed? A good theory is like a bit of india-rubber, and will fit almost everything; but we can't see how by any stretching Dr. Chapman's ice theory can fit the facts as to the state of mucous membrane after death by cholera.

Here we must stop. We do not in the least doubt but that the ice and hot water bags will be found available as remedies in several conditions, more particularly where least expected. But we must confess that the system of *neuropathy*, as a whole, simply ignores all the physiology and pathology and animal chemistry of the last thirty years. It ignores all we know about the intrinsic powers of growth inherent in the cell or germinal element of tissues, and about the influence of the composition of the blood. It takes us back to that dreamy time, from 1680 to 1840,—up to the end of the John Hunter era—when the state of the blood-vessels was the beginning and end of Medical hypothesis, and when patients were bled and physicked in accordance with the "latest physiological principles,"—no matter whether these hung upon Cullen's "spasm" of the vessels, or John Hunter's "increased action" of them.

THE WEEK.

EXCISION OF ENLARGED SPLEEN.

For the first time in England, and for the third time only in the history of Surgery, an enlarged spleen has been excised from a living human being. Mr. Spencer Wells performed the operation in Marylebone last Monday, and showed the spleen at the Pathological Society on Tuesday. It weighed six pounds four ounces. The patient was a married woman, 34 years of age, who was dying from the pressure caused by the enlarged spleen, and (as far as Dr. Jenner and Mr. Wells could discover) was otherwise likely to live. We hear that forty-eight hours after the operation, the patient was "as well as could be expected." A full account will appear in our next report of the meetings of the Pathological Society; but we mention the case here as one of historical interest.

MEDICAL KNIGHTHOOD.

The Royal *Gazette* announces that Her Majesty has conferred knighthood on Inspector-General Dr. Hilditch, late of Greenwich Hospital. This worthy officer must even now be proud

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of the honour conferred; but we are not wrong in thinking that it would have been in a higher degree a source of congratulation from his brother officers if the Admiralty had recommended this step long since, while he was actively serving the Crown. To carry into retirement this proof of faithful service is pleasing to the individual; but to possess it while engaged in the very business of life is not the less so, while it is beneficial as a stimulus to juniors to be equally zealous in their calling, looking forward to obtain a similar reward. If we look back on the naval Medical service of twenty years ago, we shall find there were several officers with this title then serving at home and abroad; whereas now the few thus distinguished are on the retired list. During the international festivities at Portsmouth, it was remarked that at the naval tables there sat only one veteran Medical officer of the navy wearing the Cross of the Bath. Our French *confrères*, to whom the Cross of the Legion of Honour is a frequent reward, might have inferred that the navy of Great Britain is without modern glories in which their Profession had taken part. We trust that the authorities, who now seek a supply of Medical candidates, will take this into consideration, and hold out the inducement of equal chances of honours, in Navy or Army, by furnishing repeated instances of such distinctions—albeit earlier in the Surgeon's career than this which we have now the satisfaction of noticing.

THE PATHOLOGICAL SOCIETY.

The meetings of this Society are as largely attended as ever, and the session promises to be a most successful one. The Council, we think, will soon have other grounds for leaving the room in Berners-street than those of differences of opinion with the older Society on the question of rent. The room was more full than comfortable last Tuesday. This large attendance is of course very encouraging, and it seems likely to increase to a much greater extent, if we may judge by the long list of applicants for admission. The Society still largely represents the younger section of the Profession; and especially it seems now almost a matter of course for those who are looking forward to Hospital appointments to become members. The Pathological is essentially a working Society, and therefore is to a great extent recruited from the class who have time for scientific work. The specimens on the list for admission were twenty-nine in number, and were of most varied interest. Dr. Crisp exhibited a series of drawings and casts to show that sheep might and did suffer from the plague affecting cattle. Mr. Nunneley had come from Leeds to bring before the Society a series of ovarian tumours removed by ovariotomy. Mr. Spencer Wells brought forward the remarkable case to which we have already called attention. The long list seemed scarcely likely to be finished in an hour and a-half, and as is well known, there is a great disinclination to add even a quarter of an hour to the usual time. It turned out, however, that there was time to spare, and the last half-hour was rather desultory. This was owing to the fact that some members whose names were down for specimens did not even attend. As there is great uncertainty whether an exhibitor will be able to show his specimen, if he give notice but a short time beforehand, a practice has arisen of sending notice to the Secretary the meeting before the one at which he intends to be present to show it. This tends to crowd to the bottom of the list more valuable specimens obtained but a short time before the meeting. It would be well, we suggest, to make some exception in favour of those specimens which especially spoil by keeping. Such a rule would present difficulties in practice, as it would not be easy to define what specimens should or should not be included in that category; but at all events, casts and drawings should always give way. Such a rule would press hardly on those who attend, perhaps, at great inconvenience, for the sake of exhibiting a particular drawing or specimen; but we must remember that the Society meets to study Pathology, and not for the sake of the individual exhibitors of specimens. There already exists to a great extent a courteous readiness to give way in such matters. Indeed, on Tuesday last several members who had waived their rights to exhibit specimens, were called on towards the close of the evening to show them.

FROM ABROAD.—THE RIBERI PRIZE—ALLEGED POISONING OF FOREIGN ASSISTANTS IN ENGLISH LABORATORIES—INCREASE OF MILITARY APTITUDE IN FRANCE.

The adjudication of the great Riberi Prize is likely to be rather a troublesome affair for the Turin Academy of Medicine, for the candidates are numerous, and it seems there is some doubt whether the prize, according to the provisions of the testator, can be legally divided among several competitors. In fact, there is often a great laxity in the provisions made in these kinds of bequests which much hamper the action of those who have the troublesome and thankless office of awarding them. Thus, in the case of our own Astley Cooper prize, by some curious oversight no provision has been made for declining to award the prize at all if no satisfactory essay is presented; so that a candidate, provided he be the sole one, is certain of obtaining it, however unworthy his essay may prove. The awarders of the Riberi prize are not driven to this strait, having no less than sixty candidates to choose between, out of which number it is at least to be hoped that some may be found deserving of reward and encouragement. But in fact the provisions of the Riberi bequest are injudicious enough, for in place of furnishing a sum of money for a prize in perpetuity, it confines the donation to the next twenty-one years, offering the magnificent sum of 20,000 lire, or above £800, seven successive times at intervals of three years. That a sufficient number of really valuable essays, deserving of such a recompense, are likely to appear within so limited a period is not very probable. However, the period for the first prize —1862-64—having expired, the Academy has been for the last ten months engaged in the examination of the productions of more than sixty candidates, and naturally is not likely to come to any decision yet, especially as, in case of the prize not being legally disposed of, it will lapse to the heir of the property. While this first prize is in this state of dubitation, the period for the second will terminate on December 31, 1867, until which time manuscripts or works printed between 1865-7 relating to Operative Medicine (written in Italian, French, or Latin) may be sent in.

We reproduce the following statement of a London correspondent, which has appeared in journals of such wide circulation as the *Cosmos* and *Union Médicale*, being convinced that there must be some exaggeration about it which admits of explanation:—

"The following sad narrative stands in no need of commentary, and will, without doubt, open the eyes of many intelligent young men about to enter upon a scientific career, under the name of 'assistants,' in a distant country. For some time past a number of young chemists, whose scientific education is more or less complete, have arrived in London from the laboratories of Liebig, Dumas, Wöhler, Bunsen, etc., having as their sole resource their knowledge of chemical manipulation. For the most part they find only miserable engagements at the Schools of Chemistry and those of the London Hospitals, their salaries, of about 1000 or 1500 francs, just sufficing to keep body and soul together. With all this they run the chance of being poisoned or dangerously wounded by the work given them to do by the Professor,—work which he cannot or dare not execute himself. Listen to the following scandalous narrative:—

"At the laboratory of St. Bartholomew's Hospital two of these youug men worked under Professor Frankland. Among the organic compounds of late 'manufactured' by the Professor is the *methylure de mercure*. Requiring a large provision of this body, Mr. Frankland directed his assistant (M. C. U., a German, 30 years of age) to prepare it, and kept

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him at this detestable employment for near three months. The consequence was, that the poor man was poisoned, and entered the Hospital in a deplorable condition on February 3, suffering from paralysis, deafness, swelling of the gums, imperfect vision, and indistinct speech, followed by delirium at intervals. He died on the 14th. The other assistant (M. T. C., aged 23), of a delicate constitution, was obliged to work at the same preparation of mercury for fifteen successive days, and on March 25 was admitted into the Hospital also suffering from mercurial poisoning. The last account received of him was on July 24, to the effect that he was entirely idiotic, recognising no one.

"Now, is it allowed to kill one's assistants in this way?—poor young men, who come to learn with the hope of themselves becoming some day Professors, and not to lead the life of slaves. Did Gay-Lussac, Thénard, or Davy thus immolate their assistants to their own reputation, although far more dangerous compounds than the *methylure de mercure* formed the subjects of their investigations? And after all, what is there so extraordinary about this substance that the lives of two assistants should be sacrificed in order to insure a provision of it?"

The last number of the *Mémoires de la Société d'Anthropologie* contains an interesting paper by M. Boudin "On the Increase of Height and Military Aptitude in France," and we may notice some of the conclusions he arrives at. (1.) The exemptions on account of defective height have undergone a very sensible diminution in France during the last thirty years, the class of 1860 compared with that of 1831 presenting a diminution of 3290 exemptions per 100,000 young men examined. (2.) During the period 1850-59 the minimum of exemptions was 22 per 1000 in the department of Doubs, and the maximum was 176 per 1000 in the department of Haute-Vienne. (3.) Comparing the period 1837-49 with that of 1850-59, it is found that the number of exemptions has rested stationary in 4 departments, increased in 19, and diminished in 63. (4.) The proportion of young men of more than 1·732 metre (the height of the cuirassiers) in a contingent of 10,000 recruits, was below 5 per cent. in 18 departments, from 5 to 10 per cent. in 48, and more than 10 per cent. in 20 departments. (5.) The diminution of exemptions may be attributed to the fact of taller men marrying more frequently since the cessation of the wars of the first empire. (6.) A greater height than 1·895 metre has only been met with in 18 departments, and one greater than 1·922 in 5 departments. (7.) The geographical distribution according to height is before all things dependent upon race. (8.) The number of young men declared apt for service increased from 619 per 1000 examined in 1837-49 to 674 per 1000 of those examined in 1850-59. (9.) The number of exemptions per 1000 examined were as follows in seven European nations:—France, 58·7; Belgium, 134·0; Austria, 140·2; Denmark, 150·6; Sardinia, 195·0; Saxony, 211·0; Prussia, 257·0. (10.) The military aptitude of these countries per 1000 is thus represented:—Saxony, 259; Prussia, 283; Austria, 497; Denmark, 522; Sardinia, 598; Belgium, 630; France, 682. (11.) In order to have 1000 soldiers, the following numbers had to be examined:—In France, 1466; Belgium, 1587; Sardinia, 1672; Denmark, 1915; Austria, 2013; Prussia, 3533; Saxony, 3861. (12.) The utility of fixing a minimum of height is very doubtful, and it would be preferable to leave this point to the revising Council when the man presents all other conditions of military aptitude.

THE ADMIRALTY COMMISSION.

(*From a Correspondent.*)

THE naval and military papers of Saturday last informed us that a committee was about to assemble with which Vice-Admiral Sir Alexander Milne, K.C.B., was to be associated, for the purpose of taking into consideration the present general position of the Medical officers of the navy; and I have since learned from private sources that the committee is constituted as follows, viz.:—

Sir Alexander Milne, President; Sir E. Lugard and Capt. Galton, from the Horse Guards; Dr. Bryson, Director-General of the Navy; Sir J. Gibson, Director-General of the Army; and a representative from the College of Physicians and another from the College of Surgeons. The Committee was expected to assemble early in the present week, but whether to decide on recommendations with or without taking evidence, was unknown.

Seeing that the subject to be inquired into concerns the naval branch of the public service, your readers may be at a loss to understand why two military officers should be appointed on the Committee. Even Dr. Gibson appears to be out of place. But as an inquiry concerning the supply of Medical candidates for the Navy, it is difficult to understand what military officers have to do with it. However, so it is; the Committee appears to have been appointed after the manner stated, and we can only hope that the members of it will make themselves thoroughly acquainted with the subject before coming to a conclusion.

As Professional journalists, you have felt it to be your duty from time to time to bring under the notice of your readers the many things of which Naval Medical officers have had to complain. Will you, however, permit me on this occasion to recapitulate, for the benefit of the Committee, some of the main grievances and a few of the most important demands of those officers?

The main grievances are, *compulsory* half-pay and a too great paucity of the inspectorial appointments, coupled with an inadequate scale of full and half-pay for officers of and above the rank of Staff-Surgeon. I consider the pay of the Assistant-Surgeon to be adequate, and that no increase of pay at the outset will encourage candidates to come forward.

I believe that *with continuous service*, the Surgeon under twenty years' service would be satisfied with the present scale of full pay; but if the present system of *non-continuous* service is to be persisted in, it is evident that the Naval Surgeon of fifteen years' *service* ought to stand on a footing of equality with the Army Surgeon-Major. All increase of full and half-pay should be triennial, instead of quinquennial; and, as an encouragement to service, the increase should take place at and after thirteen years' full-pay time—counting the time served as an Assistant-Surgeon.

After the Royal Commission of 1840 had made their report, the Admiralty appointed Deputy-Inspectors-General to act as Surgeons in flag ships on foreign stations. This gave great encouragement to the Naval Medical Officers at that period, and Surgeons were induced to serve by the hope of promotion But those appointments were allowed to lapse, and the members of the corps became apathetic as before for the want of a sufficient inducement to serve. The practice should be again resorted to, and, as a further encouragement to men to serve, the grade of Deputy-Inspector-General should be enlarged by the appointment of officers of the rank of Deputy-Inspector-General to the Royal Naval Hospitals at the Cape of Good Hope, Lisbon, and Haulbowline.

In the selection of Surgeons to fill Staff appointments at home and abroad, and for promotion to the rank of Deputy-Inspector-General, more regard should be had to seniority and service, and less to the goodwill and pleasure of First Lords of the Admiralty and Commanders-in-Chief. The Navy should observe the seniority rule as fully as the Army does, and the retiring ages of the Naval Medical officer should be reduced to an equality with, if not lower than, the Army.

Lastly, there should be permission to retire at twenty years' service, and that retirement should be compulsory after twenty-five years' service, with the rank and *half-pay* of a Deputy-Inspector-General on the active list. But, whatever be the recommendations of the Committee, their efforts will be useless unless they succeed in convincing the Board of Admiralty of the necessity of keeping better faith than they have hitherto done with the Medical officers of Her Majesty's Navy.

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CHOLERA AT NAPLES.

(From a Correspondent.)

NAPLES, November 15.

THIS is the thirty-third day of the epidemic. In thirty-two days there have been 2055 attacks, and 1035 deaths. The first days were the 13th to 14th October, and up till the 25th there were not more than five cases daily. Then up till the 4th November they went from twenty to thirty and fifty. On the 5th there was a sudden increase to 162; the 7th and 8th 216 and 221; then a slight decrease; but on the 14th there were 262 attacks, and 151 deaths. Dr. Sim is using quinine in large doses (20 grains), and finds it very useful in cholera. Calomel and squill from the first. Hypodermic injections of a solution of 5 or 10 grains of quinæ sulph., with no excess of acid, brings about reaction in a very remarkable manner, but must be repeated, and chloroform and brandy given to keep it up. In the first case where he used it, the poor fellow, a sailor, said, "I feels like a new un now." He died nevertheless next day—uræmia. He had had diarrhœa for four months, and only went to sea with his brother, who was skipper, for his health. He was seventeen hours ill before Dr. Sim saw him, and was completely collapsed.

A PARISIAN PROFESSOR ON CHOLERA.

DR. BARTH continued the subject of cholera in his lectures on the 14th and 16th of the present month.

Having rapidly recapitulated the symptoms of the disease, he proceeded:—That between the two extremes of rapidly fatal cases, and of those in which the symptoms were but slightly marked, there were some cases of an intermediate character characterised by severe diarrhœa and violent cramps, and followed by great prostration. Some cases assume somewhat of a remittent character. Intelligence usually remains perfect until death. Most fatal cases terminate in the first stage; but others tide over this, the various symptoms diminish, and reaction occurs. In favourable cases, this is moderate, and comes on gradually; but often it is excessive, and new evils arise. The pulse becomes more and more rapid, the face becomes red, and the surface of the body much heated. The capillary circulation is very rapid, and there are general symptoms of fever. In fortunate cases, this excessive reaction may moderate; but often a state of congestion of various parts occurs, shown by coma, dyspnœa, etc. Intense prostration supervenes, and the patient falls into a typhoid state. Frequent stools, consisting of but little more than a small amount of mucus, indicate irritation of the intestines. There are various nervous symptoms, such as contraction of the muscles of the arm. The skin is affected with various eruptions, principally of an erythematous character. There is swelling of the parotid and other glands, and diphtheritic deposits occur on the tonsils and pharynx, and sometimes portions of the skin which have become abraded are also affected.

The duration of the disease varies from a few hours to several days. When reaction has once been established, the patient, if he do not recover, may live some days. In some cases the cure is rapid, the disease having departed in two or three days; but at times great weakness protracts the recovery.

Diagnosis.—The inquiry here is twofold—first, whether the case be one of cholera; and, secondly, whether it be sporadic or epidemic cholera. Dr. Barth considers *immediate* diarrhœa, the evacuations being those known as rice-water, to be the best diagnostic sign of cholera. In acute peritonitis, there is no purging; and in cases where diarrhœa and vomiting arise from indigestion, the character of the matters evacuated is sufficient to prevent mistake. A sporadic case may generally be traced to some act of imprudence.

The circumstances which will principally influence the prognosis are, the hygienic conditions in which the patient is placed; his physical and moral condition before the attack, the strong and healthy, and those not affected with great fear of the disease, being most likely to survive; the period of the epidemic in which the attack occurs, cases being most likely to terminate favourably towards its close. Violent cramps and great oppression are bad signs.

The post-mortem appearances are often slight, being confined, when death has occurred in the first stage, to considerable development of the follicles and the presence at times of a serous alkaline fluid. After reaction has taken place, the intestines are generally found injected, and at times there is evidence of great inflammation and ulceration.

The physiological view of cholera appears to be, that it is a disease characterised by most violent purging, causing a great drain from the system of the serum of the blood; the bloodvessels become very empty, the veins, however, retaining a certain amount of black thick blood; an insufficient supply of blood is sent to the lungs, also to the nervous system, giving rise to the violent cramps; there is great thirst and intense weakness.

Dr. Barth does not subscribe to the disease being an internal eruptive fever, since the fever does not appear until reaction occurs; nor does he think it to be an intense intermittent fever, since the miasm of ague is not infectious in the way in which cholera is; nor do large collections of people tend to propagate the disease.

Treatment must be preventive and curative. For the prevention of the disease, every means must be adopted to ensure the utmost cleanliness. All dirt must be carefully removed which would be likely to cause noxious emanations, and in all cases the most enlightened hygienic regulations should be enforced. Large meetings, such as markets, should be as much as possible avoided, and troops should not be marched through infected districts. Means should be taken to prevent any but wholesome food being eaten, and a house-to-house visitation is advisable.

Individuals should choose healthy residences, possessing a pure water supply. They should carefully avoid cold and damp, overwork, and great fatigue of all kinds. The usual diet should be followed, provided that it be nutritious and wholesome. Excess in alcohol and iced drinks should be avoided. Diarrhœa should be checked at its first appearance.

When a case of cholera occurs, the patient should be placed in a large, well-ventilated room. There should be relays of nurses, so that remaining in the sick room for any long time may be avoided. The dejections should be immediately thrown away.

Almost the whole Pharmacopœia has been tried in attempts to cure the disease. In reviewing the most important of the substances used, Dr. Barth, in referring to purgatives, thought their use a mistake, since there was no ball of irritating matter in the intestines to be cleared away. Calomel might be useful as an alterative. Stimulants should be given in moderation, lest excessive reaction should be excited. Quinine might be useful when there appeared to be remissions. Strychnine had been given, to stimulate the nervous system.

There was, in truth, no specific. The attempt should be made to stop, and to make up for, the loss of serum; cold should be combated, and means used to allay the cramps; astringents should be given by the mouth and in enema; give stimulants, especially ammonia; rouse the circulation by frictions, warmth to the surface, mustard baths, hot air baths, etc.; allay the thirst by abundant drinks, and if there is vomiting give ice and seltzer water.

If the reaction is excessive it must be moderated by appropriate treatment. Safety consists in obtaining reaction and combating subsequent bad symptoms.

In conclusion, Dr. Barth said that our best hope for the future must be in improving the sanitary condition of towns and their inhabitants, and by attempts to root out cholera at its source. He thought that restrictions on the caravans of pilgrims to Mecca might be imposed with advantage.

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THE MEDICAL TIMES & GAZETTE SPECIAL REPORT

ON THE

EPIDEMIC OF CHOLERA:

WITH A PRACTICAL HISTORY OF THE DISEASE.

Chapter XVII.

The Progress of the Present Epidemic, continued.

The Government of France has announced, through the *Moniteur*, that the proportion of deaths daily occurring in Paris from and during the present epidemic of cholera has not exceeded one in twenty thousand persons, and that the ordinary daily average of mortality has only been increased one-half by the number of deaths attributed to cholera.

The epidemic is now virtually at an end in Paris, and is about to pass into the events of the past. The Emperor Napoleon has behaved admirably in this crisis, and one of his latest acts in connection with the outbreak will be received by the Medical Profession, here as well as in France, with signal favour.

"The Marquis de Lavalette, Minister of the Interior, accompanied by M. Haussmann, Prefect of the Department of the Seine, and M. Boitelle, Prefect of Police, visited the Hôtel-Dieu and the Hospital Beaujon. The Minister of the Interior announced that the Emperor, sensibly touched by the indefatigable zeal of the House Surgeons and students in the Cholera Hospitals, and desiring to recompense their entire body in the persons of two who had particularly distinguished themselves, had named M. Legros, Surgeon at the Hôtel-Dieu, and M. Lelion, of the Hospital Beaujon, Chevaliers of the Legion of Honour.

"The Minister of the Interior presented the Cross of the Legion of Honour to MM. Legros and Lelion in the cholera wards."

The Naval Prefect of Toulon and his wife, the Viscountess Chabonne, have also received a most gratifying reward for their unremitting labours in behalf of the sufferers from cholera around them. A deputation of fifty delegates, accompanied by three thousand artisans, waited on the Prefect and his wife on the 26th ult. to express their best thanks. Thence the vast crowd passed to the Sub-Prefect, M. Coupier, to convey to him the same expression of gratitude.

The theory of the animalcular origin of the disease has been revived by Dr. Cauniere.

On the whole, this week we may report favourably as to the general condition of Europe. In England the Registrar-General's returns are free of all report of cholera, and in Spain the epidemic has ceased. In Malta there was a brief recurrence of the disorder on the 4th, at Fort of Elmo, but the attack was short in its duration, and since the 10th we have not heard of a fatal case. In Naples the disease is still violent, but we can get at no authentic records, showing the precise number of cases and deaths. We regret, however, to have to relate that an English lady of great talent succumbed from the disease on November 5, after a short illness. This lady was Miss Mary Reeve, the daughter of Mr. Reeve, Surgeon, of Lamb's Conduit-street, and sister of Dr. John Reeve, of Sackville-street, London. Miss Reeve was a friend of Garibaldi, and by her power and influence as a writer has done much to evoke and sustain a good feeling between this country and Italy. Her last literary work was an essay on the Italian Cabinets, published in the November number of the *Social Science Review*.

The most notable event in respect to the further progress of the epidemic is that it has been carried to America. America has always suffered from Europe, and on the present occasion the disease has been carried by a passenger ship called the *Atlanta*. This vessel, having sixty passengers on board, touched at Havre and took up over a hundred other passengers. Amongst these was a child with cholera. The malady soon spread through the crew, and at the time the vessel reached New York there were sixty cases on board. The ship was kept in strict quarantine, and no land cases had occurred at news of last mail. Should the disease break out in New York, we regret that the sanitary condition of that city is not enviable. There is bad water in New York.

REVIEWS.

A Description of the Diseased Conditions of the Knee-joint which require Amputation of the Limb, and those which are favourable to Excision of the Joint. By the late P. C. Price. Edited by Henry Smith. London: John Churchill and Sons. 1865.

Within the last few years so much has been written upon excision of the knee-joint that, were it not for the exceptional merit and interest of this essay, we should have been unwilling to revive such a controversial subject.

> "Yet once again, ye laurels; and once more,
> Ye myrtles green, with berries never sere,"—

yet once more we notice the work of as gentle and bright a spirit as ever laboured in our calling, and we feel sure our readers will not blame us,

> "For Lycidas is dead, young Lycidas."

The little volume before us, of 192 pages, is edited with much judgment by Mr. Henry Smith, whose name is sufficient guarantee that the contents are of practical value; and we must congratulate that gentleman upon the excellent taste with which he has related the sad short story of enthusiasm and goodness which prefaces the strictly Professional part.

There is a photograph of Price as the frontispiece, which to those who saw him shortly before his death may be of value, but it does not resemble what we remember, when his merry laugh rang through the dingy old King's College Hospital,—dingy indeed! When we look back upon that hideous old house, with its landscape of gravestones, and its utter contempt for fresh air, we are filled with wonder at the courage and energy of those who have made that rotten pile of bricks an honoured institution. King's College Hospital at that time was the centre of Surgical polemics. An old student, not being able to obtain its hideous likeness, hung on his wall a print of the old man-of-war hulk by Turner, called the "Fighting Temeraire," and there never was a place better deserving the name. In its place has sprung up a splendid building, where the patients are doctored *à la Russe*, the tables covered with flowers, and the drugs out of sight. But this is a peaceful, lukewarm place compared to the one where P. C. Price in 1850 first began to study Medicine. At that time there was much jealousy between the Medical Schools of the metropolis, students went from one to the other Hospital far more for the purpose of criticising the operators than for learning. Nay, it was not confined to the students, for the various teachers, although they did not actually beat each other in the streets, as did Bell and Gregory in Edinburgh in our fathers' time, and were apparently good friends, yet would they sometimes "sacrifice a lamb" as victim to some favourite theory, and made large incomes by teaching men the crotchets of various gentlemen who under other circumstances would not have hurt a fly, but when sitting at an examination table were most dangerous. The writer has unfortunately heard much strong language; but he heard when he took his diploma at the Royal College of Surgeons in one hour what would have entitled any one of the grey-haired persons present to the Chair of Morals and Belles-lettres at Billingsgate, should such a superfluity exist. All that is changed now, and distinguished Surgeons no longer use foul language to a frightened lad because he forgot what they themselves don't know. There was then undoubtedly among the younger members of the Profession a feeling that sometimes unfairness prevailed, and that all schools were not equally represented at the examining boards. We allude to this because we wish to disclaim any suggestion of the kind as applying to the three eminent men who were selected by the College of Surgeons to decide upon the merits of the essay before us which was sent in to compete for the Jacksonian Prize of 1860.

At this date the subject for the Essay was absurd, to begin

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with, for how could any man compare the result of a few years' trial of an operation—perhaps a few dozen cases—with the mass of varied material on amputations general and special? This was a great mistake; but, starting absurdly, the referees had the rare good fortune of being able, without much trouble, to follow a consistent course. It was very much the same as if one were to propose as subject for a theme,—"Compare the poem, by John Milton, called 'Paradise Lost' with 'The Busy Bee,' by Isaac Watts." No one would dream of denying that the principles of both are analogous, though he would find rather a lack of material in the latter favourite work. But Price, who had taken great interest in the subject, and being young and rational in his ideas, determined to work his knowledge on the subject into an essay; he added to that knowledge by gleaning from others in all directions; for information he travelled in all directions, and corresponded with those Surgeons whom he could not personally visit. Valuable preparations were beautifully painted by Dr. Westmacott, and they, done as they are by a skilled pathologist as well as artist, are *singly* worth the money charged for the whole book. Everything to be known *then* on excision of the knee-joint Price had down upon paper; had he put a corresponding amount of what was known on *amputation*, his essay would have been as large as the people's Charter petition, so he gave only what he deemed was absolutely necessary on that subject, and stuck to the knee-joint. Unfortunately, the three eminent Surgeons to whom the essay was referred had but little experience of excision of the knee-oint; only one of them had performed the operation. They did not see then what no doubt they would acknowledge now j—its great merit; and Price's work came back to him as unworthy of the Jacksonian Prize. He was of far too manly a nature to complain, and it would be idle for his friends to do so now.

Price begins his essay with a good, but not very minute, account of the anatomy of the knee-joint. It might, perhaps, have been fuller, especially with regard to the first stage of flexion and the last of extension,—how they are influenced by the *position* of insertion of the ham-string tendons, and the peculiar curve of the internal condyle. Any one passing through Edinburgh would find it well worth his while to ascend the dissecting-room stairs, and examine the sections of the knee made by Mr. F. Paull, now of Sunderland, when he acted as Demonstrator to Professor Goodsir. We might also have expected a little of the homologies, especially as to the ligamentum mucosum, and whether there is any difference as to which condyle by preference attaches; but why *should* Price have transcribed from Humphry, Weber, Meyer, and others, passages so hard to understand that, as Lord Byron said of Bowles's sonnets, they should be *boiled* before being read? As a proof of this, the Editor has not corrected many printer's errors, which his quick eye would soon have detected if he had glanced over the chapter. The truth is, introductory anatomical disquisitions are bores, but, nevertheless, they are very useful to refer to, and Price makes his very clear.

The operation of excision of the knee is, perhaps, except in cases of anchylosis, one of the very easiest in Surgery, and the "Surgery Made Easy" instruments, now and then recommended, are the most dangerous things connected with it. Who would think of spoiling a good knee-joint in the dead-house by cutting the popliteal vessels? And in the cases where the vessels have been bent or pulled to one side, and cut by saw or knife, no difference would have been made by the shape of either instrument.

Mr. Price lays down minutely how much you can remove of the bones with great minuteness. Any one about to do the operation would do well to ponder over his remarks, as he really writes Surgical Anatomy like one who acquainted himself with it through a practical application of the works he refers to. Quoting from the Chapter on Pathology would only mutilate what it must have taken great labour to condense into a lucid and instructive whole. With characteristic modesty he does not allude to himself, at p. 35, where he discusses the circumscribed tubercle we often meet with, looking generally like a little cheese pressed into the cancellated structure, Plate 7, although he it was who undoubtedly first described this condition itself. The history of the operation is treated of at p. 48, where the operation is again alluded to, and afterwards the various lines of incision described. It seems to us that in excision of joints you can lay down no *rule* for constant applcation. Mr. Fergusson now uses but a single incision; many use a single semilunar one; but the hearts of Surgeons still seem to cling to the old H incision of the Moreans. It is not the line of incision which distinguishes the Surgeon, but knowing how to deal with the diseased portions of hard and soft tissue. Many seem to think that cutting into a diseased joint and giving it a scrape is all that constitutes excision. Others cut off slice after slice, and each of the latter are handed round for inspection while the Surgeon waits to hear their opinions and each visitor digs his thumb nail into it.

This we have seen. But Price made up his mind before hand, and not only attended to the cutting, but the after-treatment of the wounds he had to make. He thus followed the example of the great Surgeon to whom the book is dedicated, and of the firm friend who edits it and fills it with valuable remarks.

To Mr. Fergusson this essay is very properly inscribed as the great advocate of all good Surgery, and among the other monuments to his power in the guidance of Surgical instruments through dangerous parts, of his power over the minds of his brethren, or the influence he has on such men as Price, is the short but brilliant career of the author of the essay we have been talking of, and the useful, learned little work itself.

Orthopraxy: the Mechanical Treatment of Deformities, Debilities, and Deficiencies of the Human Frame. A Manual, by HENRY HEATHER BIGG, Assoc. Inst. C.E., Anatomical Mechanist to the Queen, to the Royal Hospitals, etc., etc. London: John Churchill and Sons, New Burlington-street. 1864.

THAT without Surgical mechanists Surgeons would often be helpless babes in the wood, aye, and the iron too, is a very old discovery. In every capital town of Europe there are several scientific men who are always ready to advise a Practitioner what to do, and give or take suggestions about Surgical instruments; but it is a great loss of time to both parties, and therefore we gladly welcome a work by such a distinguished artist in his line as Mr. Bigg, though the name did startle us a little, and our first idea was ORTHOPRAXY had something to do with the cattle plague. Would not "Mechanical Surgery" have been enough? What's in a name? A very great deal, as Mr. Bigg evidently thinks. "ORTHOPRAXY" (p. 16), our author tells us, "is the legitimate *culmination* of mechanics as applied to therapeutics," and for the future we shall always associate the word with those who, travelling for health, get themselves pulled up a mountain;] and to realise how *culminating* is managed, would refer members of the Alpine Club to page 21, where a woodcut from Vidus Vidius exhibits, not only "culmination" feet up, but also "succussion" head down. This chapter will be found very amusing, but it is rather hard to laugh at our predecessors and their prescriptions, and really we must take the liberty to tell Mr. Bigg that it was not ridiculous to give tonics and alteratives to children who threatened to be deformed, though it may not have been "orthopraxy," and just as queer things may be seen in the nineteenth century. The proposal by a certain Surgeon, quoted by Parè (p. 31), of drawing up a rupture by a loadstone, is not more absurd than trying to restore the shape of a hip distorted by chronic arthritis by applying "*drawing* poultices" to the sole of the foot, or to alter the shape of an overgrown bone by "Harrap's plasters;" we have seen patients undergoing both modes of treatment. At p. 55 there is a list (from M. Andry's book "L'Orthopédié," &c.) of the deformities which sometimes the human hand exhibits, numbering no less than *fifteen varieties*. No. 9 is called in the Orthopraxy language "Tailor's thumb," No. 13 is "Shoulder of mutton hand;" then we have nine ways in which our nails may distort themselves, viz., (a) ragged, (b) hooked (see "Macbeth," by W. Shakspeare), (c) too short, probably from biting them in remorse, (d) are, as might have been expected, "deciduous and *ass-backed* nails!" What can produce an ass-backed nail? It must be scratching the head. Then there are others spotted, split, and livid; all expected to wear gloves. What manner of men could our forefathers have been? He who adjusted the young lady in Fig. 10, p. 65, never did *that* for the first time. She is between two posts, with the small of her back resting on something like the roller of a mangle, which a big handle turns; her head is in a cage, and another handle pulls her head up, all the while she lies helpless on an inclined plane, and "stretched to such an extent as to place the body on tiptoes." If a man did so now he would be prosecuted under Martin's Act; and

yet mothers looked on, and, I daresay, took their turn at the handle with Mr. Sheldrake in those days.

The pages 70-71 treat of gymnastics, charming things for every one; but why should a "*Gymnasiarch* be needed?" (What is he? not surely our old friend the drill-master—more likely a dignitary of the Greek Church.) Why, we could not jump over a chalk mark on the floor with a *Gymnasiarch* looking at us. Can he who has been writing such pleasant and instructive papers in *Macmillan* lately be one? If so, a "G." must be one who knows the art of developing physical strength safely.

Having now finished his introductions, our author, leaving erudition behind, enters upon orthopraxy, and in the first chapter draws a curious comparison between the relative tendency of the head and neck to distort as compared with the trunk and extremities; and the feet win the race. At p. 82 Mr. Bigg tells us that "the head is naturally disposed to rotate within any instrument constructed for its detention;" also, that "he is often trammelled to the greatest degree by the natural anxiety of patients for the concealment of the instrument beneath the dress." And no wonder. Who would like her friends to know that she was in the perpetual embrace of a metallic daddy-long-legs? (Fig. 13.) Let him read Lady Wortley Montague's letters from Constantinople, and see what the Turkish girls thought of her ladyship's stays.

We now come to p. 95, on Distortions of the Nose. As orthopraxy means setting straight, it is with keen curiosity we turn to it; and there is an instrument which seems well adapted for the purpose. Every Surgeon knows how difficult it is to return to position the nasal bones, which have, perhaps, for several days been obscured by swelling. It is impossible to give in a notice such as this any idea of the ingenuity of the Surgical mechanist. For instance, the palsied hand, affected with what is termed "wrist drop," can, "with the use of this mitten, obtain control over a knife, fork, stick, or artificer's tool;" and the supplying of deficiencies is marvellous. At p. 171 is a hand with "spring thumb," which can "write tolerably well, hold a brush for cleaning the *nails*" (oh, come, Mr. Bigg! it's got none: he means the other hand); and at p. 176 we are told the artificial arm only weighs ʒxvii. With this *a veteran* was enabled to "*pick up a pin.*" "*Judge,*" say the Commissioners of the Great Exhibition, "of the *joy* of this veteran." In treating of spinal curvatures, at p. 250, the author states, as "an indisputable fact, that a portable apparatus, when carefully adjusted, gives much more actual rest to the spine than any couch, and with this signal advantage, that a patient's health does not suffer injury from a protracted state of forced inactivity."

We must pass to p. 347, where a young lady is seen disporting herself in what looks like a sedan chair for the use of suicides, it is so full of opportunities for strangulation; but it is Mr. Bigg's gymnasium, and here, combining business with pleasure, sits a young lady busy making her back straight by pulling two bell-ropes, treading pedals, and has the power of "drawing towards her in all directions." This attractive young person can thus take exercise of every kind. It must be rather monotonous, however, and have a curious savour of "the mill."

At p. 557 there is a very interesting description of Garibaldi's case. The author came to the conclusion that "there were semi-anchylosis of the ankle-joint and movement below the astragalus and scaphoid, the pain being engendered by pressure between the mal-placed facets of these bones. In a word, that there was no true axial movement, but only a shifting of the scaphoid on the astragalus." The object then appeared to keep the toes from touching the ground, and thus tripping him. So an india-rubber cord was adjusted, which enabled the General to walk across his drawing-room without any pain and with a greatly improved gait. The rough ground of Caprera has destroyed this, and the Liberator must come back to England and have another made.

This volume at p. 678 closes with a hope that orthopraxy may take its place "among the different branches of Medicine." There is also an appendix on "*Deficiency of Cheek*" which had been omitted. We did not miss it, we must confess. May orthopraxy *culminate* everywhere!

The Climate of San Remo. By Henry Daubeny, M.D., M.R.C.S. London: Longman and Co. 1865. Pp. 39. 8vo.

In this little pamphlet Dr. Daubeny, who speaks from personal experience, strongly recommends San Remo as a suitable winter resort for those who find our climate too rigorous. An Italian city, situated on the Western Riviera, San Remo will no doubt soon become as fashionable as Nice or Mentone. Its climate is considerably more equable than the former, and being built on an argillaceous soil its atmosphere does not become over dry and irritating during the great heats, as is often the case in Nice and Mentone, which stand upon sand or gravel.

Dr. Daubeny's pamphlet is got up with care, and will be found useful by those who think of wintering in the north of Italy.

GENERAL CORRESPONDENCE.

MIDWIFERY PRACTICE.

Letter from Dr. James C. L. Carson.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have been engaged in the practice of my Profession for more than twenty-seven years. During that time I have done a full share of the Midwifery practice of a large district; and I am glad to say that up to the present date I have never had the misfortune to lose a woman in her confinement. Under these circumstances, it cannot be considered out of place or egotistical if I detail, for the benefit of the junior members of the Profession, the causes which appear to me to have produced so favourable and unusual a result. I consider it a point of the first importance that I had the benefit of a practical education as a resident pupil in one of the Dublin Lying-in Hospitals. No man can over-estimate the value of a practical education. Theory is comparatively of trifling importance at the bedside of a patient. The midwifery diploma which is obtained after the residence at a good lying-in Hospital, although discarded from the Medical registry, has more intrinsic value than those which are granted by all the universities and colleges combined. The one is a test of practice, the other of theory. During my residence in Hospital, I took a decided stand for abdominal support during the expulsion of the child, as well as for a deviation from the orthodox plan of waiting for the expiration of a certain period before having recourse to instrumental interference. The popular doctrines on these points have produced more disastrous consequences in the world than could well be told. That "meddlesome midwifery" was bad, was eternally ringing in our ears, and was extensively put forth in the text-books of the day. My rebellion on this point got me into trouble, as I wrote a report of a fatal case, where the consulting Surgeons of the Hospital refused to interfere with the "natural efforts," till symptoms of danger began to manifest themselves. I feel so certain that this patient might have been saved by early interference, that I have ever since acted on the principle of using the forceps in suitable cases, so soon as the os uteri was fully dilated, and the soft parts sufficiently relaxed, provided I felt completely satisfied in my own mind that the labour would be extremely protracted, or that the instruments would ultimately have to be used from any cause. I never permitted symptoms of exhaustion or inflammation to supervene. This plan has worked well, as I have had no death, no rupture of the uterus or bladder, no sloughing of the urethra or vagina, no fistula, and no permanent injury whatever. Injuries from instruments, to either mother or child, nearly all result from want of hands and judgment. He must indeed be a coarse Practitioner who will injure the soft parts as much by instruments as they will be injured by the protracted pressure of the child's head. Fistulas are almost invariably produced by the sloughing which results from long-continued local pressure.

During my Hospital career, I was often asked by my fellow students to go to their assistance in the removal of retained placentas, in their out-cases through the city. I was surprised at the number of hour-glass contractions and hæmorrhagic cases which occurred. In reflecting on this subject, and comparing the management of a midwifery case, with a case of tapping for ascites, I came to the conclusion that if abdominal support was necessary during the operation of tapping, it was equally necessary during the expulsion of a child. Pressure over the abdomen supports the circulation in the large vessels, prevents the patient from experiencing a sensation of sinking, and secures a uniform contraction of the uterine walls. I have never seen a case of hour-glass contraction, or retained placenta, where the uterus was very firmly supported during

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the expulsion of the child's body. Hour-glass contraction results from irregular action in a uterus which is suddenly emptied and not properly supported. The plan I adopted in the Hospital, and have carried out ever since, was to instruct the nurse how to perform it, and then to see that she made a firm and steady pressure with her left hand, whilst standing or kneeling at the patient's back, through the abdominal wall on the surface of the fundus uteri during the birth of the child's body. If this is properly, firmly, and steadily done, in the right direction, from the time the head passes the os externum till the bandage is secured after the birth is completed, there will be no hour-glass contraction, and the placenta will be certain to be sent into the vagina by the last pain which expels the child. In this way the removal of the placenta will give no trouble, and the risk of hæmorrhage will be greatly lessened. In order to prevent unnecessary disturbance after the birth, it is well to put the bandage in its place, next the skin, at the commencement of labour. When the navel-string is firmly tied by three hard cords,—two next the child, to secure against hæmorrhage, and one next the placenta—and the child is removed, the Surgeon may release the nurse by placing a good-sized pledget of hard towels, properly folded, over the uterus, and then pinning on the bandage as tight as he can over the pledget. If there is any reason to dread hæmorrhage, or very troublesome after-pains, it is a most excellent plan to put a breakfast-plate into the folds of the pledget so as to get its concave surface over the fundus uteri. This accomplished, the placenta should be removed by a slight rotatory motion from the vagina, where it is sure to be found. The patient should not be permitted to move about or turn in bed for four hours, and the Medical attendant should never, on any account, leave the room for two hours after the birth of the child. By strict adherence to this last rule, I have saved several lives which would have been lost from unexpected hæmorrhage. No person should ever go to a midwifery case without being supplied with tincture of ergot and tincture of opium. It will never do to be obliged to look for ergot when a burst of blood appears; it should always be in the room, as a few minutes may determine for life or death. This is a Medicine, however, which, though invaluable against hæmorrhage, should be cautiously and wisely used. It is seldom required, and must never be had recourse to for the purpose of saving time to the attendant. If administered when the os is rigid, or the bones are contracted, it will be extremely liable to kill the child, or rupture the uterus. Its exhibition should be confined to those cases in which the birth is delayed solely by insufficient uterine action, or, in which the life of the patient is threatened from hæmorrhage.

There is another point on which, at an early period, I made a deviation from the routine of practice, namely, the support of the perineum. My plan has been to avoid support until it is absolutely necessary to prevent rupture. If the support be long continued, it will inflame the part, obstruct the circulation, and predispose to sloughing. It should always be relaxed in the interval of the pains, in order to avoid congestion from pressure. But what I have found of more importance than anything else, in relation to the perineum, is that the pressure, in place of being made in the ordinary way, should be made from the two sides towards the centre. If the perineum be carefully drawn by the fingers, over a fine cloth, from the sides to the centre, it will be so much relaxed in the middle line, where fissure usually occurs, that there is exceedingly little danger of rupture. Indeed, I think I might safely say that if this is properly done, rupture of the perineum will never occur, unless it results from instruments applied in an improper direction. The perineum will be sure to suffer if the Practitioner gets excited and forgets the axis in which he should draw his forceps during the different stages of delivery. I have seen difficulty occurring on this point from having the patient placed in a bad position for instrumental delivery. If the body is up and down, instead of being placed fair across the bed, with the pelvis well over the edge, the legs of the patient will obstruct the operator in bringing the head in the proper line through the outlet.

I am, &c.

JAMES C. L. CARSON, M.D.

Coleraine, Ireland, Oct. 28.

AT a meeting of the Linnæan Society on Thursday evening, November 16, Mr. J. Baxter Langley, M.R.C.S., was formally admitted, having been unanimously elected a Fellow of the Society at the preceding meeting.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, NOVEMBER 7.

DR. PEACOCK, President.

MR. W. ADAMS showed a specimen of

TUMOUR OF THE ARM NECESSITATING AMPUTATION AT THE SHOULDER-JOINT.

The woman, 37 years of age, from whom it had been removed had had pain in her arm for two years. The pain had been considered neuralgic, and had been treated by galvanism. Four months ago the disease increased rapidly, and at length involved the humerus from the Surgical neck to the elbow. The operation was done May 31, and the patient recovered. Although the disease was encephaloid, the patient was still well a fortnight ago.

AMPUTATION OF THE ARM AT THE SHOULDER-JOINT FOR OSTEOID CANCER OF THE HUMERUS.

Mr. T. CARR JACKSON showed a specimen of osteoid cancer the size of a small cocoa-nut, involving one-half of the right humerus, taken from a boy aged 16; the growth had been remarkably rapid, attaining its size in four months. Mr. Jackson had removed the limb by amputation at the shoulder-joint October 11, the boy, so far, making a good recovery. A longitudinal section of the bone showed that the cancellous structure of the part enveloped by the tumour had disappeared, its place being occupied by a mass of fibrous tissue infiltrated with amorphous bony particles, the shaft of the bone above and below the tumour being bounded by hard bony matter. Microscopically the soft external part consisted of ovoid fusiform cells, presenting well-marked characters of cancer, with nuclei in muscular fibres running over it.

Mr. BRYANT then exhibited specimens from a

CASE OF HYDATID CYST DEVELOPED IN THE PELVIS, CAUSING RETENTION OF URINE AND CONSTIPATION—THE SUCCESSFUL REMOVAL OF UPWARDS OF THREE QUARTS OF HYDATIDS.

This case occurred in the person of a healthy farmer, of Buckingham, 50 years of age, who had had on two previous occasions retention of urine, coming on suddenly, in which catheterism was impossible, and in which the bladder relieved itself suddenly after the expiration of a week. During the intervals he had been pretty well, although his bladder could never retain much urine. His present attack came on suddenly on November 1. When seen by Mr. Bryant it had existed four days. Catheterism had been attempted, and had failed. Mr. Bryant found a large abdominal tumour passing upwards from the pelvis as high as the pit of the stomach; it was not symmetrical, being more prominent in the right side of the abdomen, but extending higher in the left. The pelvis was also completely blocked up. Attempts were made to draw off its contents through the rectum by means of the trocar and canula, but without benefit, consequently a perineal incision was made, and the cyst opened, a large outlet being made by extending the perineal wound into the rectum. Upwards of three quarts of hydatids were thus evacuated and the cyst washed out. The bladder, which had been pushed out of the pelvis into the left iliac fossa, was then punctured through the perineum, and a quart of urine drawn off. The canula was then fastened in. The patient when left was very comfortable.

Mr. BRYANT also exhibited a specimen of Hydatids of the Breast, and one of Adenoid Tumour of the Breast. These cases we shall report in detail elsewhere.

Mr. SPENCER WATSON exhibited a specimen from

A CASE OF CROUP IN WHICH TRACHEOTOMY WAS PERFORMED.

A boy, three years old, was attacked by croupy symptoms on September 6 or 7, 1865. He was seen first by Mr. Watson on September 11, when all the symptoms were aggravated in spite of active treatment by antimonials and mercury. On September 13, tracheotomy was performed; and though respiration ceased during the operation, it was restored quickly by having recourse to Silvester's method of artificial inflation. The child rallied, and his breathing became tranquil; but a state of exhaustion ensued, terminating in death thirty-six hours after the operation. On examining the lungs after death, the lower lobes were found to be hepatised, and the croupy membrane extended from the glottis to the ultimate ramifica-

tions of the air tubes. The heart contained pale yellow and rather firmly adherent coagula.

Dr. Crisp begged permission of the President to be allowed to make

AN EXPLANATION.

It had been reported in the *Lancet* that he had recommended that the diseased meat of animals affected with cattle plague should be eaten by the public. He had made no such recommendation to the Society, but, on the contrary, he had publicly expressed his opinion elsewhere that he did not recommend such meat to be eaten. The annotator who had made this error, and who had called the supposed advice "disgusting," he (Dr. Crisp) hoped would, in common fairness, correct it.

Mr. Holmes brought forward specimens from, and gave the particulars of, a case of

OPERATION FOR A SOFTENED FIBROID TUMOUR OF THE UTERUS,

in mistake for ovarian disease. Mrs. S., married, two children, aged 29, was a patient in St. George's Hospital in the summer of 1865, in consequence of a tumour which filled up the whole abdomen, and which was producing rapid emaciation, increasing dyspnœa, occasionally recurring in paroxysms, and threatening even to prove fatal. She had been previously a patient in St. George's Hospital under the care of Dr. R. Lee, and again of Mr. Brodhurst, and she had been for some time in the Samaritan Hospital under Mr. Spencer Wells, in the early part of the year 1864. In Dr. Lee's opinion the tumour was ovarian, but closely adherent to the uterus. Under Mr. Wells the disease had been diagnosed as being due to the presence of three fibroid tumours of the uterus. (a) She was never known to have had any uterine hæmorrhage. (b) The tumour was of four years' known duration, and was accidentally discovered by herself, by touch. At that time there were no symptoms connected with the disease. Latterly, however, she had been losing flesh and strength rapidly, and was urgently desirous that some operation should be done if possible. The whole of the anterior part of the abdomen was dull to percussion, but there was slight resonance in either flank; motion of the body had no apparent effect on the mass. There was doubtful fluctuation in most parts. Examination by the vagina and by the rectum showed that the pelvis was filled up by the mass. The os uteri was natural. The cervix could be felt, but not the body, and it was impossible to discover whether or no the uterus moved on the tumour. In the month of July, as the dyspnœa had become very urgent, paracentesis was performed by Mr. Holmes; only very little fluid (about half a pint) escaped through the trocar, it was almost colourless, and of a gelatinous consistence, but after the withdrawal of the instrument, as much as a gallon of the same kind of fluid exuded slowly in the space of about twenty-four hours. This gave her great temporary relief; but the tumour again increased, and one night the House-Surgeon was called suddenly to her, as she was thought to be dying of dyspnœa; this was in the month of August, during Mr. Holmes's absence from town. Paracentesis was again performed, and the result was reported as being almost exactly the same as on the previous occasion, that is to say, very slight flow at the time, followed by a copious exudation with great relief to the breathing. On Mr. Holmes's return in September, the woman was anxious that the question should be settled. She had become greatly emaciated, and the pulse was very small and weak. She knew that she had not long to live, and was very desirous of taking the chance of an operation, if it was judged to be justifiable. She had, however, been informed of Mr. Spencer Wells's diagnosis, and was aware that an attempt to remove the tumour, if uterine, would prove fatal. A careful examination was made by Dr. Lee and by the Surgeons of the Hospital, and the idea of its being a case of fibroid tumour was rejected, mainly on account of the absence of uterine symptoms, the great extent of the tumour, and the large quantity of fluid evacuated from it. Dr. Lee only took part in the consultation so far as the diagnosis was concerned. The Surgeons of the Hospital agreed that it was justifiable to attempt an operation under all the circumstances, and this was accordingly done on September 20. Before operating, Mr. Holmes explained to those who were present, as he had previously to the patient, that the operation must be looked on as exploratory only, as his opinion was almost equally divided between ovarian tumour and the fibrocystic degeneration of the uterus which so closely simulates it, and of which illustrations and cases are found in the *Transactions* of this Society (vol. xiv., pp. 198, 204), and of which a specimen exists in the Museum of St. George's Hospital. However, on cutting down upon the tumour, these doubts no longer were entertained; it looked so exactly like an ovarian tumour that none of the Surgeons present doubted that it was so. There were a good many very firm adhesions in front to the abdominal walls and to the omentum, which was spread over its anterior surface, and the vessels in which were of very large size, giving rise to pretty copious hæmorrhage. In some parts it was necessary to use the knife. When the anterior part of the tumour had been cleared as far as possible, the trocar was introduced, but no fluid would flow through, until by squeezing and cutting freely into the tumour its bulk had been so far diminished that it seemed possible to extract it from the wound, which had now been extended to the whole length of the abdomen. The adhesions, however, were universal, and were of extreme density in the neighbourhood of the liver and spleen, necessitating the cautious use of the knife here again. When these had been overcome, the tumour was found to be still more firmly adherent behind to the mesentery, and almost incorporated with the small intestines. The patient had now become excessively exhausted, and in separating as rapidly as possible the tumour from its posterior connexions the small intestine was torn. This, it is believed, took place from the weight of the tumour. The peduncle was of small size, about the circumference of the thumb. A piece of stout wire was twisted round it. The patient rallied after the operation, but after the first rise in the pulse she suddenly sank, as though from internal hæmorrhage, and died the same afternoon, about four hours after the operation. The main tumour which had been removed was of very large size, and weighed above 11 lbs. even after it had been drained of fluid. Its texture was spongy or reticulated, without any actual cysts, but with very large spaces in some parts between its meshes of fibres. It appeared to have resulted from the softening of an ordinary fibroid tumour. It was attached by the small stalk above mentioned (which was not above 1½ in. in length) to the top of the fundus uteri. The walls of the uterus were full of fibroid tumours of various sizes, the whole forming a mass about as large as a cocoa-nut. This mass formed the second tumour spoken of in the above description of the case. A third tumour, about the shape and size of the spleen, was attached to the fundus uteri on the right side by a pedicle, and was lying in the right iliac fossa. The cavity of the uterus was elongated, measuring from os to fundus about five inches. The peritoneal cavity contained a large quantity of blood, and this hæmorrhage seemed to have been the proximate cause of death.

Mr. Holmes then made the following remarks:—The above case is presented to the Society as one in which there were unusual difficulties, leading to an error in diagnosis which was not discovered even when the tumour was exposed to the sight. There was, on the one hand, the clear history of a careful diagnosis by so experienced a Surgeon as Mr. Spencer Wells; but, without any discredit being cast on that diagnosis, the main tumour might still have been ovarian. Of the coexistence of ovarian cysts of large size with fibroid tumours of the uterus, an example is published in the last volume of these *Transactions*. So that it was quite possible that the woman, when under Mr. Wells's care, might have presented no visible indication of the ovarian cyst which had grown to such large proportions afterwards. At the time of her last stay in St. George's Hospital, the main tumour masked everything else; and if two of the uterine tumours (supposing them to exist) had been covered and concealed by the larger mass which filled the abdomen, why not the third? Again, the large size and rapid growth of the tumour was much more like ovarian than uterine disease. The great quantity of fluid which the growth yielded on paracentesis was another very deceptive feature in the case, and so was the absence of uterine hæmorrhage and of any perceptible uterine displacement. On the whole, it may be said that no sufficient elements for an exact diagnosis existed at the date of her last stay in St. George's Hospital without an exploratory incision. The operation, however, was only undertaken as an exploratory one; and here one of the most unfortunate peculiarities of the case comes in—viz., that the appearance of the tumour

(a) Mr. Holmes was afterwards favoured with the loan of a note-book belonging to the Resident Medical Officer of Mr. Wells's Hospital, in which the situation of these tumours is figured with perfect exactness. One lying in the right iliac fossa, another near the middle line, and the third and largest (the one which was the subject of operation) projecting into the abdomen, about as far as the umbilicus.

(b) In the note-book above referred to, however, there is a notice that she had had "flooding" in the commencement of the year 1863, after a cessation of catamenia for three or four months.

and its uniform semi-fluid consistence were so deceptive that, even after it was exposed, no one doubted that it was an ovarian cyst. This led to persevering attempts at its extraction, and these attempts were necessarily attended with great embarrassment on account of the extensive adhesion of the tumour and the impossibility of lessening its bulk without much violence and consequent loss of blood. It had been found in the early stage of the operation that the lower part was free and pedunculated, and this was an additional encouragement for persisting with the operation. But the abdomen had to be laid open from one end to the other, and the patient was greatly exhausted before the hand could be passed round the upper part of the tumour. When this had been effected, the most difficult part of the operation commenced—viz., the separation of the tumour from its posterior connections. It was in doing this, necessarily in much haste, for the patient's condition was very critical, that the intestine was lacerated; and thus the fatal event was made certain. But even without this it is most improbable that she would have survived long—in fact, she appeared actually to die from hæmorrhage rather than from extravasation of the contents of the intestine. The case is put on record as an interesting example of the great difficulties which surround diagnosis in such cases, and also of the formidable nature of the connections which solid tumours form when growing among the abdominal viscera.

Mr. Bryant remarked on the interest of the case brought before the Society, and alluded to a preparation which had recently come under his notice at Guy's Hospital which bore upon it, as well as upon a preparation brought before the notice of the Society by Mr. Wells some time since. He was quite unacquainted with the history of the preparation which he had examined, but he had seen enough to satisfy himself that it was one of cystic disease of the uterine structure, for the uterus was evidently much enlarged by the development of cysts within its walls. These cysts were of great size, and contained fluid said to have been like the fluid of an ovarian dropsy. The tumour had a smooth outline, and doubtless, before death, had simulated that of an ovarian dropsy. The external aspect of the tumour was, however, very different from that exhibited in ovarian disease, for it had a fleshy, fibrous aspect, and would necessarily have suggested to a Surgeon during gastrotomy the question of its ovarian nature, and the probability of its being a tumour. Mr. Bryant was unable to say whether the uterine sound had been employed in the case to which he had alluded; but if it had, the cavity of the uterus would have been found much enlarged. A full account of this preparation, with its history, would doubtless be brought under the notice of the Society during the session.

Dr. Graily Hewitt asked if the uterine sound had been used?

Mr. Holmes replied that it had not. It is hardly likely, considering the pressure to which all the parts were subjected by the superincumbent mass, that it would have been possible to pass this instrument to the bottom of the enlarged uterine cavity. Still it may be a matter of regret that it was not used.

TWO CASES OF AMPUTATION AT THE HIP.

Mr. Holmes exhibited the femora in two cases in which he had recently performed amputation at the hip, with success,—at least, as far as recovery from the operation went. The first was that of a boy, between 6 and 7 years of age, who had been originally admitted into the Hospital for Sick Children, on account of long-standing disease of the hip. For this he had been under treatment in various institutions for long periods of time, but was not benefited. Finally, Mr. Holmes determined to try the effect of excision of the head of the femur. The acetabulum was found but slightly affected, but the femur was very soft, almost rotten; and though a good deal of it was removed, it was found impossible to expose more healthy bone. The boy went on pretty well at first, then alarming cerebral symptoms came on. He had fits of screaming, followed by very severe convulsions, in which it was thought probable that he would die. He partially recovered under the influence of counter-irritation, the head being shaved; but the screaming fits still continued. The limb could not well be maintained in position, and the upper end of the femur protruded, and became dead. A sequestrum about two inches long was drawn out with the fingers. Still the screaming fits did not cease, and he suffered greatly from pain, coming on in nocturnal exacerbations. An abscess now formed near the knee, and the probe passed down into softened bone, in the lower part of the femur. It seemed possible that the irritation of the diseased femur was keeping up the cerebral disturbance, and as the limb was clearly useless, it was decided to give the child the chance of life afforded by its removal. This was done on September 6. The aorta being held by Mr. Marsh, of St. Bartholomew's Hospital, by manual pressure, no blood was lost. A large anterior flap was cut from the skin towards the interior; then the connexions between the ilium and femur were severed, and the posterior flap cut from within outwards. The vessels were tied, and the acetabulum, which was somewhat softened, was freely gouged out. At the position of the old wound, the cicatrix was so adherent to the os innominatum that it was impossible to bring fresh edges together. Much of the wound healed by first intention, and the child greatly improved in health and general condition; the fits of screaming ceased, and he passed tranquil nights. There was still a little discharge from the position of the old wound when he was sent to the Margate Infirmary, about a month after the operation. Here, however, after a short time, the cerebral symptoms recurred, and at the time of the exhibition of this specimen, he was reported to be sinking from the brain disease. The specimen shown to the Society (with a coloured drawing) exhibited the results of osteo-myelitis, or acute and total disorganising inflammation of the whole shaft, which was separated from the epiphysis, and lying dead, and in most parts loose in a periosteal case of new bone—the epiphysis and the encasing bone being very vascular. The medullary cavity was full of pus, and the tissue of the dead bone was also infiltrated with pus. The case was brought forward as a good example of this disease, and also as bearing on the question of the feasibility of amputation in chronic disease of the hip, if excision has failed. There are, in Mr. Holmes's opinion, many cases of hip disease in which the local affection is the only disease under which the patient labours—which are in no more strict sense constitutional diseases than the common chronic (so-called "strumous") disease of the knee. This latter disease is every day treated successfully by excision or by amputation—why not disease of the hip? The answer, of course, is that in diseases of the knee the femur can be divided above the part affected, which is impossible in the case of the ilium. It is well known, however, that in a certain proportion of cases of hip disease (as in this) the disease is, if not limited to the femur, at any rate far more extensive in it than in the acetabulum. If in such a case excision has been performed and has failed, so that the patient can never hope for a useful limb, yet seems likely to survive for a long period, is it not more reasonable to give him the chance of an operation than to leave him to certain death? The operation in a child, where the aorta can be thoroughly commanded, need not be a bloody one; and the acetabulum is so completely exposed that it can be removed to any extent which may be judged necessary. Even if perforated, the whole might readily be taken away, without in all probability much increasing the risk of the operation. The second case was that of a woman, aged 36, a patient in St. George's Hospital, who had twice submitted to the removal of a large tumour, of the recurrent fibroid variety, situated at the back of the thigh. At the time of the first operation, in the early part of the present year, the tumour, though of large size, was comparatively superficial and easily removed. This operation was performed by Mr. Tatum. She left the house with the wound healed, and enjoyed an interval of about three months' health. The tumour had been pronounced to be of the recurrent fibroid variety at the time of the operation, after microscopic examination by Dr. Dickinson. It recurred beneath the scar, and grew rapidly, with much shooting pain down the course of the sciatic nerve. The second operation was performed on June 29 by Mr. Holmes. The mass was ill-defined, infiltrated among the muscles of the limb, and extending from the neighbourhood of the trochanter to the popliteal space. A great deal of the muscular structure was removed, including about four inches of the entire circumference of the biceps muscle, and the sciatic nerve had to be carefully dissected from the mass, which adhered to, and apparently infiltrated, its sheath. The deep parts of the wound, however, appeared still infiltrated with the same morbid deposit, though it was followed round the femur quite to the inner side of the limb. The operation was of course long-continued and bloody, and she recovered from it but slowly. Lint, saturated in a solution of sulphate of copper, was stuffed into the wound, so as, if possible, to induce sloughing of the fragments left behind of the tumour. The only noticeable symptoms in her convalescence were the persistence of pain in the course of the sciatic nerve, and a very severe attack of secondary hæmorrhage, which occurred on July 23

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without any very obvious cause. This was so severe that it was decided to amputate the limb if it should recur. However, local measures stopped it. The tumour, however, soon began to fungate out of the wound, and to grow in the deeper parts, accompanied by exhausting discharge and by sloughing of the fungating portion. As her health was rapidly sinking, it was decided to give her the last chance of amputation at the joint. The tumour had spread so far upwards that a flap could only be obtained from the front; and even here the muscles were much infiltrated on the inner side, so that the flaps had to be formed chiefly of skin. The operation was performed on September 14. Mr. Lister's tourniquet was applied on the abdominal aorta; but the instrument was somewhat too large, and did not entirely control the hæmorrhage. Still, it very much checked it; and by commanding any bleeding orifices with sponges and finger pressure any great loss of blood was avoided. The anterior flap was cut from the skin inwards, the muscles not being divided till close to the groin, so as to avoid all diseased tissue. The knife was brought straight out at the back, little or no flap being available in the buttock. She was at first in great danger of sinking, and suffered severely from vomiting—the result of chloroform. Her strength was supported by nutrient enemata as long as possible; but then a slight attack of diarrhœa threatened to complete her exhaustion. From this, however, she rallied; much of the stump united by first intention, and it never required any dressing. The silver sutures were left in for a fortnight, when the adhesion of the wound was tolerably complete. She left the Hospital on October 24 to go to a neighbouring charitable institution, where she still remains. Her general health is good, but she suffers severely from pain in the stump, though the latter is very well formed, and there is no present evidence of any return of the disease.

These two cases seemed of some interest as examples of recovery from amputation at the hip performed under very unfavourable circumstances on patients much exhausted by previous disease and operation. This success Mr. Holmes attributed mainly to the aortic pressure, by which excessive hæmorrhage was avoided.

OBITUARY.

DR. J. A. EASTON,

Professor of Materia Medica in the University of Glasgow.

THIS distinguished Physician and worthy man died suddenly on the 12th inst., at his residence in Blythewood-square, Glasgow. Fully two years ago the Doctor was assailed by a sudden illness, which for a time wore a very serious aspect; but he speedily recovered, and resumed the full discharge of his extensive Professional duties. In August last, however, he had a slight paralytic attack on the face, from which he also came round quickly and resumed his work; but it was apparent to those who knew him intimately that the attack had left traces of weakness behind, and henceforth his family experienced some uneasiness regarding him. On Sunday morning he was up about eight o'clock, and went into a plunge bath as usual, but on retiring from it he felt ill and went to bed. Rapidly becoming worse, Medical aid was called in, and Drs. Fleming and Coats were in attendance without loss of time; but their aid was of no avail. It was evident to these gentlemen that their friend was suffering under a fatal attack of apoplexy, from which he breathed his last at 11 o'clock. The news of the sad event spread rapidly over the city, and created everywhere the deepest regret for the loss of one who had endeared himself to all classes of the community, and universal sympathy for his bereaved family.

Dr. Easton, who had completed his 58th year, was born in India, in which, we believe, his father belonged to the Medical service. While still a boy, he was sent to a relative in this city for his education, and in due course entered the University. He chose the Medical Profession, and was licensed by the Faculty in 1828. At first his practice was very limited, as it is in the case of all young Medical men who have to depend entirely upon their own ability and exertions for advancement in the world. His first public appointment was that of district Surgeon, in which capacity he laboured amongst the poor with singular zeal and success. Meanwhile his private practice was extending; he was becoming known as an earnest, accomplished, and experienced Physician, for he had taken the degree of M.D. in 1836; and when the office of Surgeon of the Police Force became vacant in April, 1840, he was selected out of ten candidates for the appointment. He filled this situation till October, 1855, when he resigned that part of it which involved the attendance upon cases of accidents in the Police Office; but he retained the office of Surgeon to the Force till November, 1859, when he resigned it on account of the great extension of his practice, especially amongst the highest class in the community, to which had now been added the duties of his Professorial chair. He was succeeded in the police appointment by Dr. M'Gill, who had for some years previously been his assistant. In the meanwhile he fulfilled appointments in the Medical Institutions in the city, and contributed important papers to the Medical periodicals in this and other cities. He officiated for some years as lecturer upon Materia Medica in the Andersonian Institution, and when the Professorship of Materia Medica in the University became vacant in 1855, he was appointed to the chair by the Government.

Dr. Easton's Professional life has been characterised by a well-balanced application to both the scientific and the practical, keeping pace with all that was promulgated by the best authors, whether British or foreign, on the numerous branches of Medical science. As Professor of Materia Medica his attention was, of course, more specially directed to the wide field of elementary and compound agents which are used in the treatment of disease. The knowledge essential to the successful cultivation and teaching of so vast a subject required an intimate acquaintance with chemistry, botany, natural history, pharmacy, and therapeutics—in all of which he was deeply and accurately learned. As a teacher he had many elements of popularity. He wrote with ease and classical elegance; his illustrations were appropriate and ingenious; and though at times his style and rhetoric may have been rather ornate for a severe and fastidious taste, he never failed to convey to the youthful mind, in a clear and perspicuous manner, a knowledge of whatever subject was under consideration. His kind and genial manners, and the warm interest he took in his students, made him at all times a great favourite among them, and to the confidence with which he inspired them, as a Physician and a friend, he owed much of that practice as a Consulting Physician he was so rapidly obtaining.

During the time he held the appointment of Police Surgeon in this populous city, his opinion and evidence were sought in all the important cases which occurred, involving questions of legal Medicine. In this difficult and delicate branch of his Profession he soon acquired a well-deserved fame. His reports were marked by a clear and comprehensive judgment, bringing out the salient points of the case in bold relief, the less important being neither overlooked nor unduly expanded. His calm self-possession in the witness-box at once commanded respect, and showed that he was thoroughly master of the Medical bearing on whatever legal points were before the Court. He was possessed of quick and accurate powers of observation, perhaps the most valuable attributes of a learned practical Physician, and was ever ready to give a fair and impartial trial to any remedy brought forward on rational or scientific grounds. These qualities, combined with his long and extensive practice among all ranks of society, had stored his mind with great practical experience as to the mode of operation, and the distinctive powers of curative agents on the diseases which afflict mankind; and while at the bed of the sick they rendered him ample in resources, they obtained for him the confidence and respect of that numerous circle of our citizens who sought his Professional aid.

We have merely to add that the lamented deceased was a truly earnest and pious man, and, like Havelock, he had so ordered his life that he could meet death without fear, at any time, when his Master called him hence. He has left a widow, a son, and two daughters, to deplore his loss. Young Mr. Easton has also adopted the Medical Profession, and is at present abroad.—*Glasgow Herald.*

M. JOBERT DE LAMBALLE.—Our readers will regret to learn that this celebrated Parisian Surgeon is at present the inmate of a private Lunatic Asylum, with little hopes of recovery.

MISTAKES IN SURGERY.—"Mistakes in Surgery," observes J. L. Petit, "are only faults when we have the courage to publish them; but they become crimes when our pride induces us to conceal them."

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MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College, at a meeting of the Court of Examiners, on the 16th inst.:—

James Henry Wardle, L.R.C.P. and L.R.C.S. Ed., Stalybridge; Isaac Taylor, York; Richard Bottomley Nowell, Manchester; James Hopkins Walters, Barnstaple; Richard Girdlestone Lubbock, Norwich; Francis Manley Boldero Sims, Colchester; Henry Cribb, jun., Bishops Stortford; Frederic William Hodder, M.B., Toronto, Canada West; William Leigh, L.R.C.P., Chiswick; Charles Bailey Greenfield, M.B. Edin., Cheltenham; Frederick Sydney Coombe, Trafalgar-square, Chelsea; Charles Jas. Harris, L.S.A., King William-street, Strand; John Edward Montague Finch, B.A. Cantab., Fisherton, Salisbury; David Gregory Tuckwell, Oxford; James Mare Taylor, L.S.A., Hanley, Staffordshire; William Roberts, Retford, Notts; Nicholas Hall, Salford, Manchester; and David Anderson Moxey, M.D. Edin., Turnham-green.

It is stated that out of the sixty-nine candidates who offered themselves for examination, only seven were referred back to their studies for the usual period of six months.

NAVAL SURGEONS.—At a meeting of the Court of Examiners of the Royal College of Surgeons, on the 16th inst., the following gentlemen passed their examinations for Naval Surgeons:—

Rinso Robert Siccama, L.S.A., of the Royal Naval Hospital, Haslar diploma of membership of the College dated July 27, 1857; Samuel Bamfield, L.S.A., of H.M.S. *St. George*, Portland, July 18, 1859; Charles John Fennell, L.S.A., of H.M.S. *Wellesley*, Chatham, July 19, 1859; Henry Rickard, L.R.C.P., of the same ship, December 6, 1859; John Sampson Levis, M.D., Queen's University, Ireland, of the Royal Naval Hospital, Haslar, November 15, 1860; and Robert Nelson, Lic. Fac. Phys. and Surgs., Glasgow, June 12, 1860, Royal Naval Hospital, Haslar.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, November 16, 1865:—

Richard John Lupton, Stanhope-street, Hampstead-road; Geo. Rendle, 40, Newington-causeway, S.E.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Clutton Union.—Mr. Boodle has resigned the Midsomer Norton District; area, 9408; population, 9661; salary, £105 per annum.

Durham Union.—The Western District is vacant; area, 15,530; population, 7016; salary, £20 per annum.

Edmonton Union.—The Southgate District is vacant; salary, £16 10s. per annum. Also the Winchmore Hill District; salary, £16 10s. per annum.

West Ward Union.—Dr. Fothergill has resigned the Morland District; area, 22,170; population, 2575; salary, £25 per annum.

APPOINTMENTS.

Bridgwater Union.—William J. Bonnor, M.R.C.S.E., L.S.A., to the Chilton Polden District.

Cambridge Union.—Robert Ransom, M.D., M.R.C.S.E., L.S.A., to the Workhouse.

Clun Union.—Robert Jones, M.R.C.S.E., L.S.A., to the Clunbury and Hopesay District.

Great Ouseburn Union.—William T. Crawford, M.D. Edin., L.R.C.S. Edin., to the Second District.

Leominster Union.—John Davies, L.R.C.P. Edin., L.F.P. & S. Glasg., to the First District and the Workhouse.

Lexden and Winstree Union.—Aynott John J. Chitty, M.R.C.S.E., L.S.A., to the Seventh District.

Llanelly Union.—William E. Humphreys, M.R.C.S.E., L.S.A., to the Kidwelly District.

Pontefract Union.—Thomas E. G. Bywater, M.R.C.S.E., L.S.A., to the Second District.

West Derby Union.—James Anderson, M.R.C.S.E., L.S.A., to the North Municipal District.(a)

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ALDRIDGE, JOHN P., M.D. Aber., has been elected Mayor of Dorchester.

BAILEY, J. C., L.S.A., has been appointed one of the Resident Medical Assistants at Middlesex Hospital.

CLARK, J. B., M.B., has been elected an Assistant House-Surgeon to the South Dispensary, Liverpool.

COLLIER, T., M.R.C.S. Eng., has been appointed Resident Medical Officer to the York Dispensary.

DAVIES, EBENEZER, M.R.C.S. Eng., has been appointed Officer of Health for Swansea.

DAVIES, W., L.R.C.P. Edin., has been elected an Assistant House-Surgeon to the East Dispensary, Liverpool.

(a) This appointment was, by an error, inserted on the 21st ultimo, under the head of "Liverpool Union."

DROSIER, WILLIAM H., M.D. Cantab., has been appointed Assistant to the Professor of Chemistry in the University of Cambridge.

DUNLOP, R., M.D., has been appointed Surgeon to the Doura and Eglinton Collieries, Ayrshire.

GIBSON, ROBERT C., M.R.C.S. Eng., has been elected Resident House-Surgeon to the Brighton and Hove Lying-in Institution.

HUMPHRY, GEORGE M., M.D., F.R.S., has been appointed Assistant to the Professor of Anatomy in the University of Cambridge.

LATHAM, PETER W., M.D. Camb., has been appointed Assistant to the Regius Professor of Medicine in the University of Cambridge.

LESTOURGEON, CHARLES, F.R.C.S. Eng., has been appointed Assistant to the Regius Professor of Medicine in the University of Cambridge.

MARTIN, ANTHONY, M.R.C.S. Eng., has been elected Mayor of Evesham.

MAY, GEORGE, M.R.C.S. Eng., has been elected Mayor of Maldon.

MORGAN, WALTER, M.R.C.S. Eng., has been appointed Medical Officer for the Workhouse of the Pontypridd Union.

NELL, R. F., M.R.C.S. Eng., has been appointed Junior Assistant Medica Officer to the Gloucester County Asylum.

OKELL, GEORGE, M.R.C.S. Eng., has been elected Mayor for the Borough of Over.

SHAW, Mr. H. S., has been appointed Junior House-Surgeon to Middlesex Hospital.

SWAIN, ISAAC H., M.D. St. And., has been appointed Medical Officer for the Shaftesbury Workhouse.

WAYLEN, GEORGE, M.R.C.S. Eng., has been elected Mayor of Devizes.

WERRY, AUGUSTUS, M.D. and L.M. Edin., has been appointed Surgeon to the Hospital of St. Roch, at Smyrna.

WIGHTMAN, WILLIAM, M.D. St. And., has been elected Mayor of Halifax.

WORTHINGTON, J. C., M.R.C.S. Eng., has been appointed Senior House-Surgeon to Middlesex Hospital.

YATE, FREDERICK, M.R.C.S. Eng., has been elected Mayor of Godalming.

DEATHS.

CHAPMAN, MATTHEW J., M.D. Edin., at 25, Albemarle-street, Piccadilly, W., on November 15, aged 69.

EASTON, JOHN A., M.D. Glasg., at Blythswood-square, Glasgow, on November 11.

HIRON, THOMAS W., M.R.C.S. Eng., of Snittorfield, Warwickshire, at sea, on board the ship *Renown*, on September 16, aged 46.

JEAFFRESON, WILLIAM, F.R.C.S. Eng., at Framlingham, Suffolk, on November 8.

SAUNDERS, CHARLES, M.R.C.S. Eng., at Foulsham, Norfolk, on November 3 aged 51.

THE HEALTH OF THE KING OF THE BELGIANS.—A telegram dated Brussels, November 20, states that "Dr. Jenner, Physician to Her Majesty Queen Victoria, arrived here yesterday, having been instructed by the Queen to report upon the exact state of King Leopold's health. Dr. Jenner will be enabled to give a reassuring account of His Majesty's condition."

THE COLLEGE FELLOWSHIP.—During the past few days there have been examinations going on at the College of Surgeons for the Fellowship of the College, when ten candidates presented themselves—viz., four seniors and six juniors. The following were the questions submitted to the candidates on the 21st inst.:—*Anatomy and Physiology.*—1. Give an account of the structure of voluntary and of involuntary muscular tissue. 2. Describe the cartilages, ligaments, muscles, and nerves of the larynx, and their several uses in reference to the production and modulation of the voice. 3. Describe all the varieties in the course of vessels to be remembered in performing the operation of tracheotomy. 4. Describe the ganglia found about the head and face, their situations and relations; the sources whence they derive motor, sensitive, and sympathetic branches. 5. Give an account of the form, the boundaries, and the contents of the axilla, and the relations the contents hold to each other. 6. State the relative position of the duodenum to all the adjacent parts; describ ethe anatomical structure of the duodenum; enumerate the various secretions entering it, and explain their physiological purposes. On November 23:—*Pathology and Surgery.*—1. What are the causes of hæmaturia? State the reasons which would induce you to believe that the blood came from the kidney, the bladder, the prostate gland, or the urethra, and give the treatment you would adopt in such case. 2. Enumerate the diseases of the female breast, and give the constitutional and local treatment you would pursue in each disease. 3. How would you treat fracture of the pelvis complicated with laceration of the membranous portion of the urethra? State the symptoms which may arise, and the difficulties you may have to encounter in the treatment of the case. 4. In what case of injury or disease would you puncture the urinary bladder? Name the part of the bladder you would prefer to open, and your reasons for selecting that part. 5. What are the diseases of the prostate gland? Describe the symptoms and treatment of each disease, and the changes which they produce in the urinary organs generally. C.

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Describe the symptoms of an urgent case of strangulated intestinal hernia of a few hours' duration; and of an intestinal hernia of long standing which has become strangulated. Explain the means you would employ for the reduction of the intestine in each case, and the treatment, both constitutional and local, you would pursue.

TREATMENT OF CATTLE PLAGUE BY THE SULPHITES.—The following letter appears in the *Daily Review*:—"I have had a number of cases on a farm which I occupy. On seeing Dr. Smart's recommendation and prescription for dosing all the unaffected animals with sulphite of soda as a disinfectant, I immediately set to work and had each given its quantum—viz., one and a-half ounce in a half bottle of water almost daily. I beg now to state that all the animals dosed previous to being seized have recovered under the treatment of the inspector, while those who were not dosed all died.—G.D."

CENTRAL CRIMINAL COURT.—The jury have found a true bill in the case of "Dr." Hunter.

SUICIDE OF A HOSPITAL PATIENT.—On Monday last Mr. Payne, the City Coroner, held an inquiry at Guy's Hospital with respect to the death of Sarah Connor, late an inmate of the Hospital, who had committed suicide by throwing herself from a window. From the evidence it appeared that the deceased had been in the Hospital from October 6, her illness arising from heart disease and dropsy, and on Saturday afternoon she attempted to take her own life by cutting her throat. She was not put under any restraint, and it was not thought necessary to do more than remove from her reach all articles with which she could do harm, and order the nurses to pay her more than ordinary attention. During Saturday night she showed no suicidal or violent tendencies, but early on Sunday morning, while the nurse's attention was directed to some other duty, the deceased suddenly opened one of the ward windows and threw herself out, causing herself such injuries as proved fatal. A verdict of "Suicide while labouring under an unsound state of mind" was returned.

DISCOVERY OF THE BODIES OF FOUR CHILDREN.—An inquest has lately been held by the City Coroner on the bodies of four children which were found in the cellar of a house in Milton-street, Cripplegate. The cellar had been formerly rented by an undertaker. The Medical evidence given by Mr. F. Hamilton, Surgeon, went to show that the child that had died last had been dead some years. It was quite impossible to distinguish the sex. The child No. 2 had been dead for a longer time. It was doubled up in a manner that seemed to indicate that an attempt had been made to conceal the body. It was apparently an eight months' child. The child No. 3 was a nine months' child. It was wrapped up in a piece of calico of a check pattern. There was lime in the coffin. The fourth child was also of full development, and must have been dead many years. The bones were all entire, and no fractures were visible on any of the skulls—a circumstance which led him to infer that the children had not died from violence. The jury returned the following special verdict:—"That the four children in question were found dead in a cellar, but whether they had been born alive or still-born, or, if born alive, how they came by their deaths, there was no evidence to show; and the jury find that the conduct of the undertaker was most reprehensible, and that the attention of the Commissioners of Police ought to be called to the matter."

DUBLIN OBSTETRICAL SOCIETY.—The first meeting of the twenty-eighth annual session of the above Society was held on the evening of Saturday, the 18th inst., in the Pillar Room of the building known as the "Rotundo," adjoining and in connection with the Dublin Lying-in Hospital. There was a very large attendance of members and visitors. The chair was taken at half-past 8 o'clock by Dr. Churchill, President of the Society. The report having been read, and a ballot having been opened for the election of officers, the President delivered a most interesting and instructive address, giving a comprehensive sketch of the progress of obstetrical science during the last thirty years; a progress which the establishment of the Dublin Obstetrical Society, originated by Dr. Evory Kennedy during his Mastership of the Hospital, and the subsequent formation of the kindred Societies of London and Edinburgh, had largely contributed to promote. The ballot having closed, Dr. Churchill declared the following officers duly elected for the ensuing year:—*President*: Dr. M'Clintock; *Vice-Presidents*: Drs. Hardy and Johnston; *Treasurer*: Dr. Halahan; *Secretary*: Dr. Kidd; *Committee*: Drs. J. A. Byrne, Churchill, Cronyn, Denham, and J. R. Kirkpatrick. The new President having taken the Chair, a vote of thanks to Dr. Churchill, proposed by Dr. Beatty, President of the King and Queen's College of Physicians, and seconded by Dr. Sawyer, was passed unanimously.

AT their recent annual meeting, the Plymouth Medical Society presented to Dr. Cookworthy two elegant dessert stands, each bearing an engraved glass bowl for flowers or fruit, supported by three camels of frosted silver. The stands rest on fluted plateaux with mirrors reflecting the whole, to correspond with the plateau of the large centre-piece given him by the Governors of the Plymouth Public Dispensary on his retirement, after a service of fifty years as Physician of that Institution. On the dessert stands is the following inscription:—"Presented by the members of the Plymouth Medical Society to J. Collier Cookworthy, Esq., M.D., in token of their personal regard, and of their high appreciation of his most valuable and conscientious services as their secretary and treasurer for forty-two years."

NORTH STAFFORDSHIRE MEDICAL SOCIETY. — The annual meeting of this Society was held at the North Staffordshire Hotel, Stoke-upon-Trent, on the 16th inst. After the retiring President (Samuel Goddard, Esq.) had read his address — which touched upon many of the topics now engaging the attention of the public, as well as the Profession (vaccination, public sanitary regulations, and the cattle plague being most prominent)—the election of officers for the ensuing year took place, and the result was as follows:—*President*—W. Haslam Davis, Esq. *Treasurer*—James Yates, Esq. (re-elected). *Honorary Secretary*—Ralph Goodall, Esq. (re-elected). *Committee*—Dr. Arlidge, John Alcock, Esq., Dr. Cream (re-elected), C. Orton, Esq. (re-elected), and Dr. Herbert Taylor (re-elected). From the Report of the Secretary, which was read and adopted on the occasion, we are glad to observe that the finances of the Society are in a very satisfactory condition; that it has held its usual number of meetings during the past year, each replete with most excellent "papers," curious or instructive cases, or good pathological specimens, and all giving rise to what is, after all, the great advantage of such societies—extremely practical discussions. Moreover, Medical ethics engage the attention of the Society from time to time, and apparently with the best results. Before the meeting separated it was agreed upon, after some debate, "That the Secretary do convene a meeting by circular for the 14th proximo, at the North Staffordshire Hotel, Stoke, of all the Medical Practitioners of the district, to consider the present condition of the 'club system,' with the view to its better administration." Considering the miserable pay Medical men have long consented to receive from "clubs," the way in which charitable institutions are abused by "establishment subscriptions," thus depriving Medical Practitioners of their legitimate fees, and and other similar grievances, we are glad that a step is to be made in the right direction, and earnestly hope that as the remedy is in the hands of the Profession itself the necessary unanimity will prevail.

NOBLE EMPLOYMENT OF CARRIAGES. — During the height of the recent epidemic of cholera at Madrid, several of the most noble and distinguished families placed their various carriages and equipages at the disposal of the charitable committees for the use of the Doctors employed by them, in order to lessen the fatigues consequent on visiting so great a number of patients.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Our present arrangements do not permit the insertion of births and marriages.

Obstetric.—We understand there will be a meeting of the Midwifery Board early in December. Write to the Secretary.

Student.—Emanations from ipecacuanha bring on spasm of the air passages in some persons; but the quantity of the drug given off is quite enough to account for the effect when applied in that way.

Peregrinator.—1. The Universities of Erlangen, Giessen, Marburg, and Jena. 2. Yes, if you sign a declaration that you do not intend to practise in the country where you take the degree. 3. From £10 to £25. 4. No. 5. No; but you may be examined in the Latin language if you prefer it.

A Candidate.—The names of the successful candidates for the Fellowship of the College of Surgeons at the recent examinations will not be known until having received the sanction of the Council, which will meet about the middle of December.

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Melbourne.—If people choose to spend their money in establishing an Hospital, we suppose they may claim to appoint what duly qualified candidates they please as Medical officers.

Claim of Priority.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—That two Medical Practitioners, studying the pathology of the same disease, may arrive at the same conclusions is probable; but the Profession usually gives the credit of the discovery to the one who has first pointed out a pathological fact. My attention has been called to your leading article on "Cholera Atmosphere," in your number of the 4th instant, in which you say "that purgative medicines were apt to act, when cholera is epidemic, with unexpected violence, and that there was a curious train of nervous symptoms, accurately described by Dr. Babington, and noticed by ourselves, to which many of the population was subject."

With submission, Dr. Babington is not entitled to claim this as his discovery. If you refer to "The Result of an Inquiry into the Invariable Existence of a Premonitory Diarrhœa in Cholera," published by me, and printed, in February, 1854, by Messrs. Churchill and Sons, at page 26, you will find the influence of the cholera atmosphere correctly laid down, as manifested by the action of purgative medicines on the human frame, when epidemic cholera exists; and if you will refer to my letter, dated August 28, 1854, page 272, of the *Medical Times and Gazette* of September 9, 1854, you will see five cases reported by me, where purgative medicines were administered to persons who were thought, by their friends and Medical advisers, to require purgative medicines, who all were attacked with cholera; and one died in consequence.

As Dr. Babington's address to the Epidemiological Society was published in the *Medical Times and Gazette* on November 18, 1854, it is possible that he may have seen what I had published in your journal of August 28, 1854, and especially what I had stated, at page 26, of the result of my researches on the invariable existence of a premonitory diarrhœa in cholera, published in February, 1854, as I had the advantage to put into his hand a copy of my pamphlet, and as he has referred to the actual doses of a purgative medicine which I have stated are dangerous to be administered where cholera is epidemic. Therefore I respectfully submit that whatever credit is due for having pointed out this change which takes place in the human constitution when cholera is epidemic is not due to Dr. Babington.

I need not point out to you the importance of this pathological fact,—that it at once directs us to the rational Medical treatment of cholera.

As I have no object in view but the advancement of our knowledge of Medical science, I trust the above few lines will find a place in the *Medical Times and Gazette*. I am, &c.

DAVID MACLOUGHLIN, M.D., Member of the Legion of Honour.

36, Bruton-street, Berkeley-square, W., London, Nov. 20.

Treatment of Cholera.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following treatment of the cholera, adopted by my father with great success during his long practice, both abroad and in England, has been copied from a letter, written from memory and at the instance of a gentleman residing at Florence.

When this terrible scourge broke out in St. Petersburg, in the summer of 1831, my father was appointed Director of the Cholera Hospital of that city, which post he held for some time during the epidemic. Nothing or little was then known of the disease, its origin, causes, and progress being questions much agitated by the Profession. The treatment was of the loosest, nay, even of the wildest kind, when my father was fortunate enough to strike out a path for himself, the remedies which he devised proving of the greatest benefit wherever they were employed. The cholera originating in the jungle and swamps of India is of a low vegetable type, suppressing, as it travels from east to west, or rather as the earth rolls into the current of the miasm from west to east, the functions of the serous membranes, and attacking the vital organs, so as to cause instantaneous circulation being often so suddenly arrested as to cause instantaneous arrest, and vomiting of a serous or death. The symptoms are briefly sunken appearance of the countenance, rice-water kind, griping, shrivelling of the face and the whole cutaneous surface, cold-flaccidity of the skin of the extremities, and, at the worst, cramps, collapse, and death. The prognosis is always most critical. The indications of the treatment are to neutralise as far as possible the specific vegetable poison, to combat the symptoms as they appear, to support the failing powers, and to resuscitate the activity of the skin and other secretory organs, as the surest means of removing the heavy strain upon the intestinal tract, which, in this illness, has been converted into the sole vicariating agent for the serous and other secretions.

Upon the first appearance of the illness one of the following powders should immediately be given in a little rice-water:—℞. hydrarg. chlorid. gr. i.; pulver. opii gr. ½; sacchar. lact.; carbon. animal. ää gr. iii.; f. statim sumendus. Half an hour after the patient should take five of the following drops in a powder containing equal parts of gum arabic and sugar of milk, to be repeated every half or full hour, according to the frequency of the diarrhœa:—℞. Tr. myrrh; tr. castor. ää ℥ ii.; ol menth. pip. gutt. v.; spir. ammon. arom. ad. ℥ss; s. gutt. 5 quaque horâ c.p.t. The extremities, particularly the lower, may be rubbed with hot flannels, sprinkled over with a little spirit, till warm; at the same time two small mustard poultices, or fly blisters, should be applied to each side of the umbilicus. To allay the pain, injections of starch-water are useful, either with or without opium.

The preservation of the smallest remnant of the organic heat being of the highest importance, the abdomen should be bound with a silk handkerchief, and covered with a light pillow, a plumeau of cider-down being slightly placed over the bed clothes. As the thirst is intense, the regulation of the beverage is of the utmost consequence, the most suitable drinks being rice, toast, gum, or barley water, flavoured with a few drops of the tincture of wormwood, which the patient may be allowed to partake of frequently and in moderation. Sometimes the swallowing of small bits of ice instead often proves of the greatest advantage both in allaying the thirst and checking the diarrhœa, extreme cold, like dry heat, being the best antidotes to suppress the luxuriance of a low vegetable or animal poison.

The diet should at once be bland and nutritious, consisting of arrow-root, soaked biscuits, rice, chicken broth, and beef tea, with barley or rice water. Where the powers are fast sinking, stimulants are allowable, yet with caution and at regular intervals. In the stage of collapse, ammonia may be used in the usual doses. In Russian practice a few drops of the oleum animale (Dippel) have been given in extreme cases with success, repeated every quarter of an hour. It need scarcely be said that the remedies should be discontinued by degrees in proportion as the virulence of the symptoms begins to abate.

The apartment should be dry, sufficiently warm, and well ventilated. As a disinfectant, small jars of coal and wood tar should be placed in the sick room, and the house fumigated twice a-day with juniper berries, spread upon a pan or shovel of live coal. F. E. JENCKEN, M.D.

COMMUNICATIONS have been received from—

Mr. W. J. SQUARE; APOTHECARIES' SOCIETY; Dr. J. R. WOLFE; STUDENS: Dr. FLEMING; PEREGRINATOR; Mr. W. WATMOUGH; MEDICUS; Mr. ALFRED ROBERTS; Dr. D. MILLER; Dr. C. KIDD; Dr. T. ORME DUDFIELD; Dr. LUMLEY EARLE; Mr. RALPH GOODALL; Dr. D. MACLOUGHLIN; WESTERN MEDICAL AND SURGICAL SOCIETY OF LONDON; Dr. FOTHERBY; Dr. W. B. EATON; OBSTETRICAL SOCIETY OF LONDON; ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 18, 1865.

BIRTHS.

Births of Boys, 1052; Girls, 1022; Total, 2074.
Average of 10 corresponding weeks, 1855-64, 1798·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	767	748	1515
Average of the ten years 1855-64	680·4	646·2	1326·6
Average corrected to increased population..	..	..	1459
Deaths of people above 90	..	1	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	1	11	6	..	9	4	4
North ..	618,210	1	10	14	..	4	21	7
Central ..	378,058	..	1	8	2	2	8	4
East ..	571,158	8	9	11	5	11	18	8
South ..	773,175	2	14	16	..	16	17	9
Total ..	2,803,989	12	45	55	7	42	68	32

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·042 in.
Mean temperature	44·8
Highest point of thermometer	54·7
Lowest point of thermometer	41·5
Mean dew-point temperature	S.E. & S.W.
General direction of wind .. week	
Whole amount of	0·39 in.

APPOINTMENTS FOR THE WEEK.

November 25. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

27. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Special General Meeting for Consideration of the Laws of the Society.

28. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. Dr. Waters, of Liverpool, "On the Morbid Anatomy of Pneumonia." Drs. McDonnell and Gordon, of Dublin, "Case of Trephining of the Spine." Mr. Barwell, "On Lateral Curvature."

29. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

HUNTERIAN SOCIETY (Council, 7½ p.m.), 8 p.m. Dr. McDonnell, "Case of Tubal Fœtation, with Remarks."

30. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

KING'S COLLEGE MEDICAL SOCIETY, 8 p.m. Mr. Fenn, "Pathology of Epilepsy."

December 1. *Friday.*

Operations. Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Meeting of Council.

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Mr. T. Holmes, "On Sub-periosteal Resection, Illustrated by a Case of Resection of th entire Shaft of the Tibia."

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As the best restorative for strength, used and recommended by all Physicians in cases of WEAKNESS and PROSTRATION. Kept ready for use in Half-pints, Pints, and Quarts, by Mr. DONALD, St. James's Hall, Regent-street, W.

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PULLNA, FRIEDRICHSHALL, &c., direct from the Springs; also the Artificial Mineral Waters prepared by Dr. Struve and Co. at the Royal German Spa, Brighton.—Agents, W. BEST and SONS, 22, Henrietta-street, Cavendish-square, London, W.

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Efficacious in Stomach, Liver, and Renal Diseases; Gout, Rheumatism, Diabetes, &c.

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VICHY PASTILLES, the best Digestive Lozenges; and VICHY SALTS for Baths. Also, other French and German Natural Mineral Waters.
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The Mineral Water of Geilnau (Nassau), an Acidulous and slightly Alkaline

and Chalybeate Water, of very agreeable and refreshing taste, owing to its large proportion of carbonic acid; a valuable Dietetic Beverage in many morbid tendencies through its antacid, diuretic, and tonic qualities.
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Begs to inform the public that he has appropriated a convenient room above his vaults at 7, MINCING-LANE, E.C., London, where every description of Hungarian Wines can be tasted free of any expense.
Ready for supply, sample dozen cases, each containing two bottles of six different kinds of such wines, which are highly recommended by the Medical Faculty. Prices at 24s., 30s., 36s., and 42s. per case. Carriage free. Cash on delivery.
Country orders to be accompanied by P. O. O. or cheques crossed the East London Bank.

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From the Vineyards of **Mr. R. SCHLUMBERGER**, VÖSLAU, Vienna.
Juror International Exhibition, 1862,
SOLE PROPRIETOR OF THE VINEYARDS OF GOLDECK AND STEINBERG.
Prize Medals:—Vienna, 1845, 1852, 1857; Munich, 1859; Paris, 1855; London, 1862; Dublin, 1865.

"*These wines, now coming into common use, are not cheap by reason of inferiority; they are actually superior for intrinsic worth of material to many sold at double their price. A pure wine, however cheap, if good of its kind, is a refreshment that none need be ashamed to offer to a duke; an impure wine, however expensive, is no drink for gentlemen.*"—WINE AGAINST PHYSIC, "All excessive, is no drink for gentlemen."

"*The Physician should bound lation of alcohol, or the nutritive virtues he wants; is it the powerful stimulant it be wine. How often I have wished that the patient you prescribe wine, let sary could have had a bottle of pure wine instead of the 'mixtures' we dispense away. A Hospital committee would be putting new tools into the Surgeon's hands who should let him give his patients pure wine.*"—Dr. DRUITT'S "Report on Cheap Wines." (See p. 121, on Austrian Vöslauer Wines.)

AUSTRIAN CLARETS.		Per doz.			Per doz.
RED	Vöslauer	24s.	WHITE	Vöslauer	30s.
	Do. Goldeck, Vint. 1862	36s.		Do. Goldeck	36s.
	Do. do. Cabinet ..	42s.		Do. Steinberg Cabinet	42s.

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Sample Cases, containing one dozen each, comprising seven distinct sorts, forwarded, carriage free, on receipt of a post-office order for £1 19s. 4d.
A reduction on twelve dozen or more of the Still Wines. Terms, net cash. Post-office orders payable Brewer-street, Golden-square, W. Bankers—London and Westminster Bank, St. James's-square; and Lothbury, City.
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The following Waters as usual:—Potash, containing 18 grains of the Bicarbonate in each bottle; Citrate of Potash, 80 grains; Soda, 15 grains; Ammonia, 10 grains; Seltzer and Vichy from their respective analyses, and a very delicious, as well as useful, MINERAL ACID WATER.
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ELLIS'S, RUTHIN, POTASS WATER.
ELLIS'S, RUTHIN, SELTZER WATER.
ELLIS'S, RUTHIN, LEMONADE.
ELLIS'S LITHIA AND POTASS WATER,
An excellent internal Remedy for Gout.
The public are particularly requested to observe that every cork is branded "R. Ellis and Son, Ruthin," without which none is genuine.
May be obtained from all respectable Chemists, Confectioners, and Hotel-keepers; and, Wholesale only, from R. ELLIS & SON, Ruthin, North Wales.

Old Marsala Wine, guaranteed the

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PURE SODA, 3s.; PURE POTASH, 3s. 6d. per dozen.
HOOPER'S LITHIA WATER, 5s. 6d. per dozen.
5 grs. in each Bottle.
Six dozen carriage free, assorted or otherwise.

NATURAL SELTZER WATER.
Hamper, as imported, of 25 pints .. .. 14s. 0d. } Hamper
Do. do. 25 quarts .. .. 18s. 9d. } included.
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Struve's Seltzer, Spa, Kissingen, Vichy,

and other MINERAL WATERS. Under Her Majesty's especial patronage.—ROYAL GERMAN SPA, BRIGHTON. The bottled waters are sold at the Pump-room, NOW OPEN for the forty-first season; also by GEORGE WAUGH and CO., Pharmaceutical Chemists to the Queen, No. 177, Regent-street, London, W.; and by other respectable houses in London and the provincial towns, where Prospectuses, with the highest Medical testimonials, may be obtained gratis.
CAUTION.—Owing to the use of Struve's bottles by other parties attempting imitations, sold as "BRIGHTON Seltzer," "BRIGHTON Vichy," &c., an analysis of some of which has shown an utter disregard of their true chemical composition, please to observe that STRUVE'S name is on the label, and red-ink stamp affixed to every bottle of Struve's manufacture.
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Several years' experience in the manufacture has suggested improvements in manipulation that enable him, with great economy, to obtain a very superior product, which he can supply to the Profession, in sealed bottles, at the following prices:—
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ORIGINAL LECTURES.

ON LOCAL CHEMICAL DISORDERS ARISING FROM SUBOXIDATION, AND THEIR MECHANICAL RESULTS.

By H. BENCE JONES, M.D., F.R.S.

PART II.—LECTURE VII.

EFFECTS OF INTENSE COLD—FROST-BITES—CHILBLAINS—GENERAL AND LOCAL FATTY DEPOSIT AND PRODUCTION.

(Concluded from page 542.)

There are at least three different conditions, under any of which fatty deposit is likely to occur in any part of the body. First, fat is likely to be deposited when an excess of fat food, or of food capable of becoming converted into fat, is taken into the body. In such circumstances the amount of oxygen which passes into the body is insufficient to oxidise the excess of fatty matter, and consequently it accumulates and is deposited in the cellular tissue. The fattening of man and animals, from aldermen to Strasburg geese, demonstrates the general state of suboxidation from this cause on which the accumulation of fat depends.

Secondly, fat is deposited when no excess of fatty food is taken, but when the conditions of oxidation locally and generally are so reduced that the ordinary amount of substances taken as food and capable of becoming fat are not oxidised.

Thirdly, fat accumulates and may be deposited when, from imperfect oxidation, the nitrogenous substances—albumen, fibrin, gelatine—do not pass down, through alkaloids, acids, and neutral substances, into urea and sugar, or urea, carbonic acid, and water, but give rise to fatty products of decomposition in consequence of an imperfect supply of oxygen. The least oxygenated substances, as sugar and fat, are thus produced; and the most carbonaceous fatty substances are formed by the least supply of oxygen.

These three conditions, which, separately or together, determine the deposits of fatty matter, mark three different degrees of suboxidation in the body. In the first degree there is no deficiency of oxygen, but oxidisable materials are in excess, whilst in the second and third degree there is a deficiency of oxygen which is insufficient to make, first, the non-nitrogenous, and, secondly, the nitrogenous oxidisable substances pass off in the most perfect state of combustion.

First, when there is an excess of non-nitrogenous food with no deficiency in the supply of oxygen, the deposit of fat which arises becomes excessive, and constitutes a general disorder; and as some remarks on this general state will make the local deposition of fat more intelligible, I shall occupy your attention with it before passing to the consideration of the local disease.

In my first lecture I have already pointed out the relationship of the fatty to the saccharine diathesis. The evil that results from excess of farinaceous and saccharine food, and the good that immediately follows from omitting these substances from the food marks the strong resemblance between these very different complaints. The difference between them is well shown in the good which cream, butter, oil, and fat effect in diabetes, and in the harm which results from these articles of diet when there is an excess of obesity.

Innumerable experiments have in the last few years been made on the reduction of the fat of the body by abstinence from starch, sugar, fat, and butter; and on the increase of weight scarcely less conclusive experiments have been made by giving cod liver oil to human beings, and oil cake or fattening food to animals.

For example, Mr. Banting, by leaving off "bread, butter, milk, sugar, beer, and potatoes," reduced his weight from 202 lbs. to 156 lbs. in fifty-two weeks.

Mr. Lawes states that by fattening, oxen increase in fat from 16 to 30 per cent.; sheep, 18 to 23; pigs, 22 to 44. "Starch and cane sugar have nearly equal fattening values, and fat or oil have probably about two and a half times the value of starch for the purpose of storing up of fat in the body."

The second cause is too little oxygen to burn the non-nitrogenous food. This becomes apparent in the ordinary fattening of advancing years, when with no change of diet the amount of air and exercise falls so far below the proportion it should bear to the food eaten that a deposition of fat takes place. I have already pointed out how, in old age, under the same circumstances, sugar in small, but distinct excess is apt to occur in the urine.

The want of oxidation and deposit of fat consequent on destruction of the blood globules is another instance of the action of this cause. To this I shall shortly return.

The third cause is want of proper oxidation in the nitrogenous substances. This has been assumed as the special cause of fatty degeneration. Observations upon the production of so-called adipocere and microscopic examinations of textures, have led to the belief that fibrin forms adipocere, and syntonin instead of splitting into inosit and kreatin, gives rise to fatty and nitrogenous matter. The following results obtained by Dr. Ormerod are worthy of attention, though in the progress of chemistry the word "margarine" will not be used here, and "adipocere" will entirely disappear.

The amount of fat present in healthy beasts, chiefly margarine, varied from 0·22 to 2·14 per cent.. In decidedly fatty animals the oily matter varied from 0·48 to 2·74.

A weighed portion of healthy muscular substance of the heart exposed to a slow stream of water gave no adipocere.

A weighed portion, containing 2·14 per cent. of fatty matter, chiefly margarine, left to soak for twenty months in dilute nitric acid, specific gravity 1·42, gave only 1·1 per cent. fat.

Two hundred and fifty grains of fibrine from bullocks' blood, freed from all fat by ether, treated the same way and for the same time, gave no trace of fat.

A portion of muscular substance, containing 2 per cent. of fat, was left for eight months in dilute alcohol (1 to 7). At the end of this time it contained 1·92 per cent. of fat.

In every local deposit or production of fat, one or all of the three causes of general fatty accumulation are in action. Locally, either there is an excessive supply of fatty matter, or the ordinary amount of non-nitrogenous food is not consumed in the textures because the oxidation is deficient; and when this occurs, the sugar even may part with some of its oxygen, and pass into some higher carbonaceous fatty compound; or, thirdly, from insufficient oxygen, the nitrogenous substances of the body,—albumen, fibrin, syntonin, gelatin—instead of passing through urea and sugar into urea and carbonic acid and water, give rise to one or many less oxidised series of products of decomposition by which more or less highly-carbonaceous fats may be produced.

Local deposits of fat without general deposit probably rarely occur from excessive supply; but when this cause acts together with imperfect oxidation, then local deposits and productions of fat take place anywhere. The vast local deposits of fat which constitute fatty tumours depend chiefly on the existence of a cyst in which the process of oxidation is at its lowest point. Whatever fatty matter is brought to the cell remains unchanged, and if an excess of fatty matter is taken, the deposit of fat increases in proportion to the quantity of fat that is brought within the cyst. When the imperfect oxidation extends to the nitrogenous substances, then in a few hours even the texture of a part may be entirely changed by the insufficient supply of oxygen.

The chief cause of insufficient oxidation is insufficient supply of oxygen from insufficient supply of red blood, and this depends on insufficient pressure of the circulation, insufficient iron, and a thickened condition of the internal capillaries belonging to the part; in other words, on mechanical and chemical imperfect actions. Probably the most striking instance of acute fatty disease that I can give you was published by Rokitanski in *Zeitschrift der Wiener Aerzte*, No. 32, 1859:—

A girl tried to poison herself by phosphorus matches. She was soon sick, and, after this, appeared well. In a day or two she appeared slightly jaundiced; soon after she became wandering, had dark brown vomiting, and convulsions; on the sixth day she died. On post-mortem examination, the body was well nourished; the skin yellow; membranes and brain bloodless. In the throat, bloody, frothy, very tough mucus. In the pleuræ, mediastina, and base of the heart, ecchymoses, in some places of considerable extent; a slight pleuritic effusion on the left side. Lungs full of blood. Liver to a high degree fatty, pale yellow-reddish, pasty, and empty of blood. In the gall-bladder and gall-ducts, a slimy fluid. The mucous membrane of the stomach swollen, and containing a brown, thick fluid. In the small intestines, a brown, bloody, pappy stuff, and in the large, some matter more lumpy. The spleen small and brittle. The kidneys large, very light yellowish-white, slightly jaundiced, apparently very fatty. In the bladder, a few drops of a thickish yellowish fluid.

Microscopic examination of the kidneys showed that the epithelium of the tubes of the cortical structure was distended with small and large fat cells, and the tubes themselves were full of fat.

Another case of a girl of 13, who poisoned herself with phosphorus, has been reported by E. Wagner, who found not only a remarkable increase of fatty matter in the liver and kidneys, but also in the muscular structure of the heart and in the muscular coat of the small intestines and bronchial tubes.

The discovery of a relationship between fatty liver and poisoning by phosphorus led to a multitude of experiments on animals during the last four years in Germany and in France. Of all these, the work of Dr. Munk and Dr. Leyden on "Acute Phosphorus Poisoning" contains the most striking experiments, and leads to the most distinct proof of the influence of the state of the blood-globules in the deposition or production of fatty matter.

Frogs had phosphorus dissolved in oil injected under the skin; they died in two days, and the liver and kidneys and flesh of the heart were fatty. Rabbits had the phosphorus of from five to twelve phosphorus matches, or 1 to 2½ c.c. (6 grs. to 1 oz.), of oleum phosphoratum injected into the stomach; they died mostly in two or three days, but even in one day the liver and kidneys were always fatty, and the muscular structure of the heart was frequently so. Dogs killed with small doses of phosphorus showed the same deposit of fat in the liver, kidneys, and muscular structure of the heart. In rabbits ecchymoses were found in the pleuræ and in the texture of the lung and bloody urine, in one case without a trace of blood globules. In dogs ecchymoses in the heart and blood stains in the mediastinum and gums and blood throughout the bowels. Whether these symptoms are produced by the phosphorus as such or arise from some of its compounds had then to be determined.

After poisoning by phosphorus in no part of the body could the most delicate test detect phosphorus, nor could the authors find any action of phosphorus on the blood globules out of the body, so they made a strong solution of 8 or 9 grains of phosphorus to the ounce, and injected this (2 or 3 c.c.) into the blood of rabbits and dogs. Phosphorus acid vapours in each case were expired through the nostrils, violent inflammation was set up in the lungs, but none of the peculiar signs of phosphorus poisoning were produced. Further experiments were made to prove whether phosphoretted hydrogen and hypophosphorus acid were the poisonous substances, but neither these substances nor phosphorus acid produced the effect. With this last acid, specific gravity 1·12, they made experiments on frogs and rabbits, and though it proved poisonous yet it did not dissolve the blood globules; and after poisoning by phosphorus, phosphorus acid could not be detected in the organs by the most careful research. There remained then the action of phosphoric acid. Experiments were made with frogs, rabbits, and dogs. Phosphoric acid, specific gravity 1·16, was used, and 1 or 2 to 6 c.c. of this acid were injected under the skin or into the stomach or jugular vein, and the effects on the blood, on the heart and circulation, on the respiration, on the stomach and bowels, the kidneys, liver, and the nerves and muscles were determined.

The blood globules were dissolved as by the bile acids; extravasations of blood were frequently found. The pressure of the blood in the jugular, measured by the manometer, was seen to sink after the injection of the acid. The temperature of the blood fell. The muscular structure of the heart became granular and even distinctly fatty, whilst the transverse striæ disappeared.

When the acid was injected into the stomach the strongest marks of corrosion of the mucous membrane extended to the small intestine. The kidneys were congested, and the epithelium of the tubes was distinctly fatty; the urine became albuminous, with blood and fibrinous cylinders. The liver became most evidently fatty. In short, the phosphoric acid, with the exception of the local symptoms of erosion and jaundice, produced all the symptoms and appearances which phosphorus itself does when it acts as a poison.

Having thus shown that after poisoning by phosphorus no phosphorus, phosphoretted hydrogen, hypophosphorus, or phosphorus acid can be found by the most delicate tests, and that phosphoric acid will give rise to all the symptoms and appearances which phosphorus produces, it remained only to show how phosphoric acid acted.

The action of phosphoric acid is twofold—first and chiefly, on the blood globules; and secondly, on the nerves and muscles.

Any substance that can dissolve the blood globules produces the greatest derangement of their functions, and this affects the nutrition (and oxidation) going on in the different organs. We may even assume that the great mass of the blood globules by the action of acids would lose their power of nutrition and their property of taking up oxygen before they would become perfectly dissolved. The heart more especially shows the effect of the altered (unoxygenated) blood in its power of work; and the voluntary muscles are not less sensible of its influence. Great feebleness, tremor, and paralysis result. The functions of the nerves are interrupted, and coma and convulsions finally appear. These phenomena may chiefly be set down to the want of nutrition (and oxidation) in the different organs, in consequence of the altered blood, although a part of the effect may result from the direct chemical action of the phosphoric acid on the different substances that exist in the nerves and muscles.

In other directions, the effect of altered (unoxygenated) blood on nutrition (and oxidation) makes itself evident. The authors, in a paper on poisoning by sulphuric, nitric, oxalic, and tartaric acids, have shown that all substances which dissolve or destroy the blood-globules cause fatty metamorphosis of the tissues and organs. The direct mixture of the poison with the blood is the most important determining cause, the fatty appearances being most evident in the experiments on animals with sulphuric acid when the corrosion in the stomach or duodenum was greatest. Hence, in those that died quickest, the fatty degeneration was most apparent. In the cases of poisoning by sulphuric acid, the fatty metamorphosis was most evident in a patient who lived only three hours, in another who lived thirty-five, and in a third thirty-six hours. Sulphuric and nitric acid corrugate, contract, and destroy the blood-globules; the oxalic, tartaric, and arsenic acid dissolve the globules. All these acids cause very similar symptoms—viz., diminished power of the heart, the muscles, and the nerves, arising from the stoppage of the actions of nutrition (and oxidation) in the organs in consequence of the partial or total destruction of the function of the blood-globules.

It is a certain fact that in organs deprived of the flow of red blood, fatty metamorphosis of the textures occurs. This action may be seen in the neighbourhood of embolism of the vessels and in thrombosis of the arteries of the brain; in the neighbourhood of embolism of the arteries of the spleen and kidney, and even in that of the coronary artery. Experimentally it may be caused at will in the kidney by tying the artery or the vein. In all these cases, fatty metamorphosis quickly occurs.

Traube, with the help of the kymographion, has shown that salts of the bile acids injected into the jugular vein were carried to the right heart, and through the coronary arteries into the capillaries of the muscular structure. The red blood-globules were changed in their structure, or destroyed so that they could not carry the charge of gas which the blood-globules generally contain, and hence the normal amount of oxygen could not act on the muscular substance.

The sinking of the temperature after the injection of phosphoric acid is another evidence of the action on the blood-globules by which the change of matter (oxidation) is lessened. Of all muscles, the heart does most work, and therefore it shows most the effect of unoxygenated blood acting on its muscular fibres.

In the kidneys and liver, the same retardation of the changes of nutrition (and oxidation), in consequence of the injured and dissolved blood-globules produces the same altered condition of the epithelium and other structures, if death does not occur before the accumulation of fatty matter takes place.

Dr. Pavey, on "Diabetes," p. 82, says:—"The introduction of an acid into the system, so as to alter the natural quality of the blood, I have found to produce saccharine urine. This effect has followed the injection of phosphoric acid into the general venous system, and also its introduction into the intestinal canal."

If I had devised a series of experiments for the purpose of proving the existence of local suboxidations in the body, the evidence must have fallen far short of that which these researches on the action of acids offers to you.

Moreover, in addition to the stoppage of oxidising action in consequence of the destruction of the oxygeniferous blood-globules, there is another action of the acid which, probably, is concerned in determining the production of fat in the kidneys. In the second part of the *Philosophical Transactions* for 1849, I have shown that when sulphuric acid in large doses is taken, it cannot be proved to pass into the urine, but tartaric acid gives very distinct evidence of its passage; and this confirms the generally-received opinion that vegetable acids do

pass so rapidly from the stomach to the kidneys, that a portion of the acid is unneutralised, when it escapes into the urine; but another and a considerable portion of the vegetable acid and all the mineral acid must combine with the alkali of the blood, and must make this less alkaline than it was before the introduction of the acid; and the liquor sanguinis being made less alkaline, the immediate effect must be that the lymph in all the textures must be made less alkaline, and thus a check must be given to all the oxidation that takes place outside the blood-vessels; and in the case of vegetable acids this must occur to the greatest extent in the secreting structure of the kidneys, in which, for a time, no free alkali at all may be present, and hence the products of suboxidation should most readily appear in the kidney.

There is another part of the body in which the three conditions on which the production of fat depends are likely to occur. This is the liver; for, first, an excess of non-nitrogenous oxidisable matter is always present there; secondly, the least oxygenated blood goes there; and, thirdly, the conditions necessary for promoting the action of oxygen on the nitrogenous matter are least there also.

I need only to remind you that the liver is supplied directly with saccharine and fatty matter from the food, that it contains an amyloid substance derived from albuminous substances, that cholesterine and the fatty acids of the bile are evidences of the small action of oxygen in its structure; that no blood is so deoxidised as that which enters the liver, having already parted with oxygen and absorbed carbonic acid in the systemic capillaries; and lastly, that the blood going to the liver has lost all its pressure, and consequently moves at a rate which in the lowest degree promotes the action of the oxygen on the substances in contact with it.

If the different organs and textures of the body were arranged in a series according to the different amount of fat-producing or fat-depositing action that takes place in each, the liver would occupy the highest place and the lung the lowest. The order of the series would vary with the exercise taken, the age reached, the accidents or inflammations that affect the circulation. Whatever increases the circulation in any part lessens the fatty disposition, and whatever retards the circulation diminishes the oxidation, and thereby increases the tendency to the deposition or production of fat.

No perfectly accurate separation can be made between fatty deposit and fatty production, or so-called degeneration. It has been said that wherever the microscopic appearance of fat is greatest *around* the cells or fibres of any structure or organ, there the fat proceeds from deposit, and that where the appearance of fat is greatest *in* the fibres or cells there it is caused by degeneration, in consequence of imperfect oxidation and imperfect removal of the albuminous structures of the tissues or cells. But it must not be forgotten that the same cause may be in action at the same time both within and without the textures, and that the imperfect oxidation which allows the deposit of fat to accumulate may, in consequence of the pressure thus produced, soon increase, so that fatty production may quickly come on; and this may so interfere with the nutrition of the blood-vessels or muscles, that they may become mechanically unequal to the resistance of the pressure of the blood; and thus mechanical apoplexy, or mechanical rupture of the heart, or mechanical albuminuria, may be produced by this primary chemical complaint.

A Precocious Demonstrator.—It is narrated of the celebrated Surgeon, J. L. Petit, that he first attracted the attention of Littre, the great anatomist, by performing a vivisection on a rabbit when quite a child. From the age of 7 years he was a regular attendant on Littre's lectures, and at the end of two years he had become such a proficient in anatomy that the charge of the anatomical theatre in which the demonstrations were made was placed solely in his hands; and the remarkable sight was exhibited of a lad between 9 and 10 years of age, who to be seen had to be mounted on a chair, delivering demonstrations, which were listened to with pleasure even by connoisseurs. After six or seven years of this anatomical practice, he devoted himself to Surgery with a like passion; and Maréchal, the Senior Surgeon of La Charité, relates that, repairing to that Hospital early in the morning, he several times found young Petit sleeping on the steps of the portal, in order to be able to secure a good place at the bedside of any patient on whom a serious operation was about to be performed.

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.(a)

By GEORGE HARLEY, M.D., F.R.S.,
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Lecture XI.

ALBUMINURIA WITH AND WITHOUT DROPSY;—IN CONNEXION WITH BRIGHT'S DISEASE, HEART AND LIVER DISEASE, PREGNANCY, FEVERS, ETC.—ITS CHEMISTRY, PHYSIOLOGY, PATHOLOGY, AND TREATMENT.

(Continued from page 570.)

Pathology.

Since the introduction of the improved methods of chemical and microscopical investigation, the subject of albuminuria has undergone an entire revolution, and the time may now be said to have arrived when a philosophical arrangement of the different pathological conditions giving rise to it is not only desirable, but absolutely necessary. To grapple with preconceived notions, trample upon cherished theories, re-arrange data, and promulgate new principles, is, no doubt, a task not to be entered upon without serious consideration. Nevertheless, as we all know, if Medicine is ever to take her place among the exact sciences, some one of her votaries must gird on his armour, and boldly run the risk of obloquy in attacking old dogmas. While waiting the advent of a more able exponent, I shall, trusting in the support of the emancipated among my brethren, attempt to handle the subject of albuminuria in a similar manner to that in which I have elsewhere treated jaundice.

Unfortunately, however, at the very outset, there is an important difficulty to be overcome as regards the meaning to be attached to the term "Bright's disease," the united labours of Basham, Johnson, Christison, Virchow, Parkes, Bennett, Goodfellow, Begbie, Aitken, Quain, Stewart, Dickinson, Wilks, and others having shown that the term "Bright's disease" is at present indiscriminately applied to widely-differing pathological conditions, such as nephritis, cirrhosis, fatty and waxy degeneration of the kidneys, etc.,—renal affections which have no clinical connexion beyond what they derive from the associated symptoms of albuminuria and dropsy. If we desire to keep pace with the progressive advance of science, it is absolutely necessary for us either to limit the term "Bright's disease" to one particular form of renal affection, accompanied with albuminuria and dropsy, or to abandon it altogether. The latter alternative I am in no wise inclined to adopt, for the name of the man who first discovered the connexion of dropsy, albuminuria, and renal disease is, I opine, well deserving of perpetuation to all time. I therefore would venture to propose that the name of Bright be perpetuated by associating it with that form of disease which is not only the one most frequently met with, but also that with which Dr. Bright was most familiar, namely, the albuminuria of nephritis. By so doing, we shall not only be enabled to make a philosophical arrangement of the different morbid states upon which albuminuria depends, but at the same time render justice to an honoured and deserving name.

In studying albuminuria, there are two things that must always be borne in mind: first, that there are certain forms of albuminuria with dropsy, and certain forms without it; and, secondly, that all cases of permanent albuminuria are, in the long run, always associated with an organic change of structure in the tissues of the kidneys, and that even in those cases in which the renal organs were not primarily at fault, as, for example, when the albuminuria springs originally from passive portal congestion induced by heart or liver disease, paraplegia, or hemiplegia. Contrary to what some authors affirm, I assert that permanent albuminuria is in all cases the *result*, and not the *cause* of renal derangement, just in the same way as pus is the *result* not the *cause* of an abscess. And just as an abscess may be due to a great variety of causes, so may renal derangement originate in a number of different morbid conditions—some constitutional, some local. When Johnson, Walsh, Aitkin, and other authorities, say that the textural changes in the structure of the kidneys are only the local

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—Ed. *Med. Times and Gaz.*

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expression of the constitutional disorder, as suppuration in a gland may be but the local expression of constitutional struma, I perfectly agree with them; but when they go so far as to say that the excretion of albumen by the kidneys is due to a constitutional cause, and not to a local structural change, I beg to differ from them *in toto*. 'Tis true that in a limited number of cases of albuminous urine the healthy kidney is only eliminating a foreign material, for, as already shown in the physiological part, when mal-digested albumen enters the blood, the tissues of the body being unable to assimilate it, the renal organs are forced to excrete this form of albumen as they would any other noxious material; but these cases are not only few in number, but have no similarity whatever with the pathology of the ordinary forms of permanent albuminuria. So small, indeed, is the proportion of cases of permanent albuminuria in which the primary cause cannot be directly traced to the kidney itself, that they do not even, as a whole, amount to more than 20 per cent.

With these few remarks as a proviso, I may at once enter upon my task, and as, the great art in explaining a difficult subject is to use as few and as simple words as possible, I shall venture to put my views of the pathology of albuminuria, as I did those of jaundice, into a tabular form. It must be borne in mind, however, that as all diagrammatic classifications labour under the disadvantage of being more or less arbitrary, it will be necessary, in order that the views of the pathology of albuminuria here enunciated be thoroughly understood, that the chemistry and physiology of the subject be previously studied. Moreover, if the subjoined table is to be turned to practical as well as theoretical account, the explanations to be subsequently given of the different forms of albuminuria, as met with at the bedside, must be carefully considered.

ALBUMEN IN URINE.

- **Normal** (not detectable by heat and NO^5)
  - Always during health small quantity.
  - Detectable by absolute alcohol and chloroform.
- **Abnormal** (Detectable by heat and NO^5).
  - **Primary Albuminuria** (cause originating in kidney).
    - Temporary
      - Bright's disease.
        - Traumatic,
        - Idiopathic, and
        - Scarlatinal nephritis.
    - Permanent
      - Fatty,
      - Waxy,
      - Chronic hypertrophy.
      - Cirrhosis.
      - Cancerous,
      - Tuberculous, and
      - Scrofulous degeneration.
      - Suppuration
        - Simple abscess.
        - Renal calculus.
  - **Secondary Albuminuria** (cause not originating in kidney).
    - Digestive System
      - Improper food.
      - Imperfect digestion.
    - Nervous System
      - Hemiplegia.
      - Paraplegia.
      - Injury to brain.
      - Lesion of renal nerves.
      - Pregnancy—Reflex nerve irritation.
    - Organic Disease (Passive renal congestion).
      - Cardiac.
      - Hepatic.
      - Pancreatic.
    - Febrile.
      - Small-pox,
      - Typhus,
      - Typhoid,
      - Scarlet,
      - Yellow,
      - Puerperal,
      - Rheumatic, and
      - Remittent fevers.
    - General Affections (Active renal congestion).
      - Non-febrile.
        - Pneumonia.
        - Pleurisy.
        - Bronchitis.
        - Phthisis.
        - Peritonitis.
        - Gout.
        - Scurvy.
        - Erysipelas.
        - Purpura.
        - Cholera.

With the albumen present in the urine of health we have now nothing to do, so I at once pass to the consideration of the first great class; namely—*Primary Albuminuria*, that form of the affection in which the cause of the albuminuria is to be found in the kidney.

As indicated in the diagram, primary albuminuria naturally divides itself into two well-marked varieties—a temporary and a permanent variety—the former being by far the most common, the latter the most dangerous. Each of these will now be specially and separately considered.

Bright's Disease.—The pathology of this temporary form of primary albuminuria is simple enough, and may be summed up in one word—namely, "nephritis;" for, be the exciting cause what it may, the immediate cause of the albumen in the urine is an engorged or an inflamed condition of the kidney. Thus, for example, it may be the result of direct injury to the loins, or arise from an attack of cold, either in a perfectly healthy individual or in one rendered abnormally susceptible to the affection by intemperance or other debilitating cause; and lastly it may follow upon scarlatina, in consequence of the kidneys having an excess of work precipitately thrown upon them by a sudden check being given to cutaneous exhalation. The diagnosis of the nephritic form of albuminuria, which is almost always acute and curable, is in general easy; for, besides the history of the case, we have a most important guide in the condition of the urine.

Should the nephritis be the result of injury, the case is clear enough, for pain in the loins, the albuminous urine, and the dropsy will be found to follow in its immediate wake. On the other hand, when the disease is the result of cold and wet, it is sometimes so insidious in its march as to give no indication of its presence until the existence of dropsy attracts the

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attention of the patient. In the most common of this class of cases, however, the general history is, that after exposure to cold the patient suffers more or less malaise; is chilly and feverish, occasionally even shivering; has pain in the lumbar region, with scanty and high-coloured urine; next a puffiness is noticed under the eyes, the feet begin to swell, and the belly is observed to be enlarged. Should the attack be a severe one, not only do the limbs become decidedly œdematous, but the abdomen gets so filled with fluid that the patient is unable to wear his ordinary clothes. All this may occur in a very few days, and what is still more alarming to the patient and his friends is, that the effusion does not always stop here, but continues rapidly to extend until the whole trunk and upper extremities are included in one general anasarca. Before this time, however, Medical aid is generally sought, and the progress of the dropsy thereby arrested. In men, I have occasionally observed that one of the most distressing results of the effusion has been an excessive œdema of the genital organs, the prepuce becoming, in some cases, so enlarged and distorted as to obstruct micturition. At other times the liquid is chiefly diffused into the cellular tissue of scrotum, giving to it the appearance of an immense scrotal hernia. In the spring of 1864 a little boy, aged 8 years, was brought to me at University College Hospital with the cellular tissue of his scrotum so distended with fluid that it was as nearly as large as his head, the tense skin being at the same time so bright and glistening, and the effusion so transparent, that most of the students took it for an enormous hydrocele. As I pointed out to them, however, the diagnosis between these cases and hydrocele is very easy; for in the one case the fluid is in the subcutaneous cellular tissue only, and consequently the skin retains the impress of the finger; while in the other, the fluid within the fibrous tunica vaginalis, prevents the retention by the tissues of the impress of pressure, however firmly it may have been applied. It has been hinted that we frequently meet with cases of Bright's diseases with so little or no pain, or even malaise. I may now add that we occasionally encounter others in which the œdema, especially at first, is so trifling that it would fail to awaken alarm in the patient, were it not accompanied with considerable discomfort, and scanty and high-colonred urine. The smoky, red, or bloody-looking urine at the some time generally yields a copious dark-coloured deposit on standing, which further aids in arousing the suspicions of the patient, which suspicions the Medical attendant is able, by the aid of a little nitric acid and heat, at once either to confirm or dispel. To diagnose the case properly, however, it is not alone sufficient to prove the existence of albuminuria; for that, as seen in the table, may occur under a great variety of circumstances, and even when the urine is so loaded with albumen as to allow of its being transformed into a solid mass—so solid that the tube may be inverted without danger of any falling out—we are still unable to certify to the existence of renal disease until we have called the microscope to our aid. If the case be one of Bright's disease, in the urinary sediment will be found blood corpuscles, epithelium scales, renal tube casts with their epithelial lining, amorphous urates, and, perhaps, even crystals of uric acid or oxalate of lime.

Fig. 1.

(To be continued.)

Modification in Canquoin's Caustic Paste.—This valuable caustic would be still more employed were its application not somewhat difficult; and one of M. Demarquay's pupils has contrived a modification in its composition which renders its application very easy and effectual. The paste thus formed consists of chloride of zinc ten, flour twenty, and glycerine four parts. So prepared it can be applied to the part to be destroyed with great facility, however varied this may be in shape or direction, and can as easily be washed away. M. Demarquay has frequently employed it, and finds the paste thus prepared with glycerine instead of water far preferable, both with respect to its application and the results. —*Bull. de Thérapeutic*, September 15.

ORIGINAL COMMUNICATIONS.

REMINISCENCES OF THE CHOLERA AT ST. GEORGE'S HOSPITAL IN THE YEARS 1849 AND 1854.

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Considering the attention which, owing to existing circumstances, is being given at the present time to the subject of cholera, and believing it to be expedient that all possible additions should be made to the common stock of information on so vast and threatening an evil, I venture to place on record the following contribution to the statistics of this disease.

During the two epidemics of so-called cholera maligna of which I am able to speak from personal experience, I find, on reference to the archives of our Hospital practice, that we had as many as 86 fatal cases of cholera. Of these, 14 occurred in the year 1849, one in 1853, and 71 in the year 1854. It is out of my power to state how many cases existed in addition in which recovery took place, neither can I give the histories or post-mortem appearances met with in the bodies of all that died, inasmuch as many cases proved so rapidly fatal that it was found utterly impossible—as, indeed, it was for other reasons undesirable—to make post-mortem investigations or keep any notes of the symptoms. But out of the number of 86 cases which proved fatal, I can give certain details regarding 36, and it is the particulars concerning these cases which I now propose separately to arrange, and subsequently to bring into juxtaposition. I shall arrange the cases numerically, giving the date of the year (including the reference in our post-mortem books), the dates of the month on which the patients were admitted into the Hospital and died, and the length of time during which diarrhœa *previous to decided symptoms* had existed; then epitomise the modes of treatment adopted, noting the various remedies, for the most part, in the order in which they were given; pass on to the post-mortem appearances found on examining the various organs of the body; and, finally, make any special remarks that are suggested by the course which the disease followed or by any incidents which the life-history may have presented. I shall not seek to give the ordinary symptoms of the various cases, as that would be merely to recapitulate, under different combinations, what is only too well known as the usual phenomena of cholera—the thirst, the hollowness of the eyes, the shrunk skin, the lividity, cramps, vomiting, rice-water purging, cold breath and skin, whispering voice, and other symptoms of collapse, or what is known as the symptoms of imperfect reaction or consecutive fever.

Case I.—No. 133, 1849. Male, aged 45. Admitted July 5; died July 6. Period of diarrhœa previous to more decided symptoms, two or three days.

Treatment.—Ether and ammonia and brandy. Then calomel in gr. x. doses (rejected by stomach), repeated in gr. ij. doses every two hours. Chloroform, ♏v. doses. Subsequently saline drinks with bicarb. soda and chlorate potash. Vapour baths.

Post-mortem Examination.—Abdomen: Stomach rather vascular internally, and containing about four ounces of thick greyish-coloured fluid. All the small intestines very vascular internally, and having specks of extravasated blood beneath the mucous membrane; the solitary and Peyer's glands unusually large. The contents of the lower part of the small intestine were dark coloured and tenacious; those of the upper part lighter coloured and like gruel: when examined under the microscope nothing unusual was seen. Liver healthy. Gall-bladder loaded with bile and biliary ducts pervious. Kidneys rather congested. Urinary bladder empty. *Thorax:* Lungs emphysematous and congested. Right ventricle of heart containing large fibrinous coagulum. *Cranium:* Vessels of scalp and veins and sinuses within cranium very turgid. Lateral ventricles distended with fluid. *Blood:* Natural under microscope; generally thick and imperfectly coagulated.

Special Remarks.—Conscious until a short time before death. Without pain at the last.

Case II.—No. 137, 1849. Male, aged 34. Admitted July 8; died July 8. Period of diarrhœa previous to more decided symptoms, several days.

Treatment.—Tincture of opium before admission. Then

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liquor ammoniæ in ten drop doses every five minutes. Vapour bath.

Post-mortem Examination.—Abdomen: The mucous membrane of the stomach, which contained half-a-pint of light brown grumous fluid, was unusually vascular. The whole of the small intestines—whose contents at the upper part were thick and of a light yellow colour, and at the lower parts reddish-brown—were very vascular, and their glands, solitary and Peyer's, very unusually large. Duodenum not bile-stained. Liver healthy. Gall-bladder full of bile; bile ducts all pervious. Bladder containing six ounces of urine. Kidneys congested. *Thorax:* Lungs rather congested. Heart's walls thin and weak, and its cavities containing much dark soft coagulum; right ventricle containing soft fibrinous clot. *Cranium:* Veins of scalp congested. Intra-cranial sinuses gorged. Brain rather softened, its ventricles dilated with clear fluid.

Special Remarks.—Admitted in a state of unconsciousness, the pupils being contracted. No urine passed.

Case III.—No. 142, 1849. Female, aged 25. Admitted July 10; died July 11. Period of diarrhœa previous to more decided symptoms, three or four days.

Treatment.—Chloroform in ten drop doses, diluted, every hour; then calomel, gr. x., which was rejected and repeated; subsequently given in 2-gr. doses every half-hour. Vapour bath. Entire body enveloped in flannel saturated with turpentine. Electro-galvanism applied to many parts of the body.

Post-mortem Examination.—Abdomen: Stomach natural, containing six ounces of fluid like coffee grounds; whole of small intestines, containing fluid like that of the stomach, was unusually vascular, lower part of ileum especially. Both solitary and Peyer's glands very large. Large intestines, which contained a gelatinous fluid like dark sago water, only slightly vascular. Mesenteric glands enlarged. Liver natural. Bile ducts pervious, and gall bladder full of bile. Kidneys congested; their capsules adherent. Bladder empty, but not contracted. *Thorax:* Lungs congested, also bronchial tubes. Heart's walls flabby, and its cavities on both sides distended with dark blood-clot. Large fibrinous coagulum in the inferior vena cava. *Cranium:* Blood-vessels of dura mater congested. Intra-cranial sinuses full of blood. Brain natural. *Blood:* Very dark; of consistence of pitch, and semi-coagulated.

Special Remarks.—Raising of temperature from vapour bath. No urine passed. No cramps came on.

Case IV.—No. 146, 1849. Male, aged 35. Admitted July 13; died July 14. Period of diarrhœa previous to more decided symptoms, two days.

Treatment.—Mustard emetic. Hot baths containing mustard. Acetate of lead, with camphor and opium. Hot brandy-and-water. Hot flannels. Liquor ammonia every quarter of an hour. Chloric ether and sal volatile. Hot brandy-and-water injected into the stomach.

Post-mortem Examination.—Abdomen: The mucous membrane of stomach, which contained two ounces of darkish green muddy fluid, was very congested, containing spots of ecchymosis. Duodenum slightly congested, and lower part of small intestine very highly so. The solitary glands very large and prominent. Mesenteric glands rather enlarged. Liver healthy. Gall-bladder full of dark bile. Urinary bladder empty. Kidneys congested. The veins of abdomen full of blood, and arteries containing more than usual. *Thorax:* Lungs very dark; could scarcely be said to be congested. Heart's cavities large, and filled with large soft blood-clot; its structure soft and flabby. *Cranium:* Brain healthy, containing many puncta on section. Ventricles empty.

Special Remarks.—Return of warmth after the emetic. Gradually became semi-comatose. The pupils contracted, but sensible. Slight strabismus. No urine passed. Purging and vomiting ceased some hours before death.

Case V.—No. 149, 1849. Female, aged 63. Admitted July 16; died July 17. Period of diarrhœa previous to more decided symptoms, about one month.

Treatment.—Acetate of lead and opium. Brandy and hot bath. Hot bath with mustard in it. Brandy and hot water pumped into the stomach.

Post-mortem Examination.—Abdomen: Stomach natural. Mucous membrane of duodenum and jejunum unusually vascular. Lower part of ileum much inflamed, and solitary and Peyer's glands very large. Mucous membrane of the large intestines natural; its glands conspicuous. Kidneys congested; their cortex absorbed and granular. *Thorax:* Lungs and heart healthy. *Cranium:* Brain natural; slight fluid in ventricles. On the right side a layer of extravasated blood was found in the arachnoïd cavity. (a)

Special Remarks.—Had suffered from a blow on the head a month previously, and had had diarrhœa and vomiting, as it had been thought, in consequence of this. No apparent advantage from the mustard bath.

Case VI.—No. 151, 1849. Female, aged 19. Admitted July 19; died July 21. No diarrhœa.

Treatment.—Had had brandy at home before admission. After admission, two mustard emetics given, and hot bath. Effervescing ammonia salines and chlorate of potash in 5-gr. doses; brandy, camphor, and chloroform every half hour; beef tea, whey, and milk. Electro-galvanism applied to epigastrium. Oxygen inhaled. Limbs rubbed with hot salt. Then calomel in 4-gr. doses every hour; brandy and ammonia. Oxygen again inhaled.

Post-mortem Examination.—Abdomen: Stomach natural, containing 2 oz. of viscid green fluid. Intestines natural, excepting one patch of congestion at commencement of the ileum. They contained semi-solid yellow and green matters, free from fœculent smell. Peyer's glands very distinct. The solitary glands only here and there enlarged. Liver very large and pale. Gall-bladder full of bile. Bile ducts pervious. Kidneys healthy. Urinary bladder containing a slight amount of urine. *Cranium:* Superficial vessels of brain congested; its substance containing an unusual number of "puncta" on section. *Thorax:* Lungs slightly congested. Heart natural; all its cavities occupied by large clots. The left ventricle containing large, partially-decolourised clot.

Remarks.—Loss of appetite only before day of admission, but had then eaten salmon. Temporary good from emetics. Was so restless that she had to be held in bed by force. Great pain from galvanism after a time, though not so at first. No temporary good from the oxygen inhaling. Became delirious, and then comatose, and subsequently affected by convulsions.

Case VII.—No. 154, 1849. Male, aged 19. Admitted August 1; died August 1. Period of diarrhœa previous to more decided symptoms not known.

Treatment.—Sulphate of zinc as an emetic. As this was not vomited, the stomach-pump was used. Calomel in 5 gr. doses was twice given. Hot blankets and hot bottles applied to the surface. Was rubbed over with turpentine. Brandy and ammonia.

Post-mortem Examination.—Abdomen: The mucous membrane of the stomach, which contained much watery fluid, was more vascular than natural, and that of the jejunum and ileum congested in patches. Intestines with fluid like that of stomach. Peyer's glands large and prominent, and very vascular. Three lumbrici found in the ileum. Mesenteric glands enlarged. Liver natural, bile ducts pervious, and gall-bladder distended with bile. Kidneys congested. Urinary bladder empty and contracted. The inferior vena cava and tributary veins much distended with blood. *Thorax:* Lungs and heart healthy. *Blood* was generally perfectly fluid, of very dark colour, and peculiar sweetish smell.

Remarks.—Was from the first in a semi-comatose state. Vomiting not urgent. Cramps after admission scarcely complained of. Coma became complete.

Case VIII.—No. 166, 1849. Female, aged 25. Admitted August 15; died August 17. No diarrhœa previous to more decided symptoms.

Treatment.—The commencement of the diarrhœa was met by chalk and opium. Mustard emetic when collapse came on. Calomel, gr. x., rejected, and then repeated and retained. Effervescing draughts, with chloroform and camphor. Sinapisms to the epigastrium. Afterwards calomel in 2-gr. doses every ten minutes.

Post-mortem Examination.—Abdomen: Mucous membrane of stomach unusually vascular, also that of the entire intestines, which contained thick, dark fluid of the consistence of cream. Solitary glands, both of small and large intestines, very large. Two of Peyer's patches only enlarged. Liver natural, and gall-bladder full of bile. Kidneys natural. Urinary bladder empty. *Thorax:* Lungs healthy, excepting some old scrofulous deposits. Heart natural, and its cavities full of dark blood clot.

Remarks.—Was admitted owing to disease of the synovial membrane of the knee-joint; and on the day following sickness and vomiting and purging came on. Constriction across the throat and dyspnœa complained of.

(a) This case, owing to the intra-cranial extravasation, has been described by me in Beale's "Archives of Medicine."

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Case IX.—No. 180, 1849. Male, aged 44. Admitted September 5; died September 5. No diarrhœa.

Treatment.—Mustard emetic. Hot bath containing salt, followed by hot blankets and friction. Calomel, gr. x., followed by 2-gr. doses every five minutes. Ammonia, arrowroot, and brandy.

Post-mortem Examination.—Abdomen: Mucous membrane of stomach rather more vascular than usual, also that of the entire intestines. A few of the solitary glands of the bowels only enlarged. Peyer's glands natural. Liver natural. Gall-bladder full. Mesenteric glands enlarged. Kidneys slightly congested; their capsules adherent. Urinary bladder only containing a drachm of urine. *Thorax:* Lungs slightly congested. Heart natural. *Cranium:* Dura mater very vascular. Sinuses empty. Brain softer than usual. *Blood* generally very fluid, and of a dark reddish-brown colour.

Case X.—No. 187, 1849. Female, aged 7. Admitted August 15; died September 12. Period of diarrhœa previous to more decided symptoms, one day.

Treatment.—Hyd. c. creta and chalk powder, followed by a starch injection, were given when diarrhœa came on. Simple effervescing draughts. Sherry wine and water. Fragments of ice to suck. Beef tea and wine. Enemata of beef tea, eggs, and brandy.

Post-mortem Examination.—Abdomen: Stomach natural. The intestines generally showed many patches of vascularity in their mucous membrane, and slight ulceration existed at the lower part of the ileum. Intestinal glands natural. Mesenteric glands enlarged. Liver large and congested. Kidneys very congested. Urinary bladder only containing slight amount of urine. *Thorax:* Lungs and heart healthy, excepting old pericardial adhesions. *Cranium:* Cerebral membranes congested. Brain softened and watery; slight amount of fluid in the ventricles.

Remarks.—Admitted with diseased liver, ascites, and anasarca on September 9. Slight sickness and loss of appetite, followed by diarrhœa, came on, and passed into collapse of cholera on the following day. Strong sensations of heat during the cold stage. Cramps not suffered.

Case XI.—No. 199, 1849. Female, aged 30. Admitted September 25; died September 25. No diarrhœa previous to more decided symptoms.

Treatment.—Enveloped in the wet sheet, and covered with blankets. Small doses of calomel from time to time, and stimulants.

Post-mortem Examination.—Abdomen: Mucous membrane of stomach unusually vascular, and that of entire intestines, large and small, in the same state. Only a few solitary glands enlarged. Peyer's patches natural. Contents of intestines were a thick whitish or creamy fluid. Liver healthy. Gall-bladder containing slight amount of bile; bile-ducts pervious. Urinary bladder containing a very small quantity of urine. *Thorax:* Lungs healthy, excepting slight deposit of scrofulous deposit. Heart rather flabby, both ventricles containing dark semi-solid coagulum. *Blood:* Generally of dark brown colour, and consistence of tar.

Case XII.—No. 212, 1849. Female, aged 24. Admitted October 2; died October 9. No diarrhœa previous to more decided symptoms.

Treatment.—Mustard emetic. Had baths (100°) containing hot salt. Calomel, gr. xx., and repeated, followed by 3-gr. doses every five minutes for an hour, and then every ten minutes. Mustard poultices. Leeches to epigastrium. Injections of beef-tea and tincture of opium. Wine. Finally opium and sulphate of magnesia.

Post-mortem Examination.—Abdomen: Mucous membrane of the stomach, duodenum, and jejunum unusually vascular. In one part only were solitary glands unusually large. Peyer's patches natural. Liver natural; gall-bladder distended with bile. Kidneys healthy. Urinary bladder empty. *Thorax:* Lungs slightly congested. Heart natural. *Cranium:* Cerebral membranes congested. Sinuses very turgid. Brain natural. *Blood:* Very dark and quite fluid.

Special Remarks.—No urine voided. A catheter was passed (twenty-eight hours after admission), and only ʒii. drawn off, which was found to be albuminous, and to contain fibrinous casts of the uriniferous tubes. Bile passed in the vomit and stools; peculiar black sediment observed in the stools. Coma came on. On the day before death, the urine was albuminous, with sp. gr. of 1012. At one time the pulse and warmth were recovered, and for two days the patient was very comfortable.

Case XIII.—No. 205, 1853. Female, age not known. Admitted October 5; died October 5. Period of diarrhœa previous to more decided symptoms, three or four days.

Treatment.—First had chalk and aromatic confection, with apparent relief. Then calomel, gr. xx., and repeated in 2-gr. doses every half-hour; then acetate of lead, capsicum, and camphor. Brandy freely given. Blankets on the body. Wenham lake ice to suck.

Post-mortem Examination.—Cranium: Cerebral membranes rather congested. Brain throughout somewhat congested. *Thorax:* Lungs natural. Heart healthy; its cavities on both sides loaded with dark blood-clot, and on the right side containing pale fibrinous clot. All the large blood-vessels contained dark blood-clot. *Abdomen:* Stomach natural. The solitary and Peyer glands of the lower part of the ileum much enlarged. The contents of the upper part of the small intestine were of a whitish colour and creamy consistency; that of the lower, darker and of reddish-grey colour. Colon natural. Liver natural, and gall-bladder full of bile. Kidneys natural; bladder empty and contracted.

Special Remarks.—No sensation of heat during the attack.

Case XIV.—No. 191, 1854. Female, aged 19. Admitted July 22; died July 22. No diarrhœa previous to more decided symptoms.

Post-mortem Examination.—Abdomen: The mucous membrane of the cardiac end of the stomach was very vascular. The solitary and Peyer's glands of intestines unusually large and distinct. Liver and spleen congested. Kidneys healthy. *Thorax:* Lungs very congested. Heart's substance rather less firm than usual, and blood was found ecchymosed beneath the visceral pericardium in places.

Special Remarks.—Vomiting some days before admission, and pains in all the limbs, and constipation had existed and continued, no diarrhœa occurring. Nevertheless, all the symptoms of the collapse of cholera existed. Previous to death, a convulsive attack came on.

Case XV.—No. 206, 1854. Male, aged 37. Admitted August 9; died August 9. No diarrhœa previous to more decided symptoms.

Treatment.—Acetate of lead, with opium and capsicum. Sinapisms to the epigastrium. Beef-tea and brandy.

Post-mortem Examination.—Abdomen: Mucous membrane of the cardiac end of the stomach much congested. External surface of intestines very injected. Solitary glands of lower part of ileum very large. Stomach and small intestines contained much slate-coloured fluid, free from fœtor. The colon contained light pink-coloured fluid. The kidneys natural. Liver natural; gall-bladder containing a good quantity of bile. Urinary bladder empty. *Thorax:* Lungs congested. Heart natural, containing small dark blood-clots in all its cavities; its inner surface not blood-stained. *Cranium:* Slightly increased fluid in all its ventricles. *Blood:* Generally thick and very dark-coloured.

Special Remarks.—Great pain felt over the region of the heart.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASE OF HYDATID TUMOUR OF THE BREAST—OPERATION—RECOVERY.

(Under the care of Mr. THOMAS BRYANT.)

HYDATID tumours situated in the breast are of rare occurrence, and are difficult of diagnosis, owing to their possessing qualities in common with several species of mammary tumours. Mr. Birkett, in his essay on diseases of the breast in Holmes's "System of Surgery," says with regard to their diagnosis,(a) that we are unable to distinguish between those cysts containing entozoa and others containing serum or even pus;" and with regard to operative measures, "but the length of time the tumours have existed, their slow increase, and painless nature, together with the negative evidence to be

(a) Holmes' "System of Surgery," vol. iv., Pp. 685, art. Special Diseases of Breast.

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acquired by sight, touch, and the history of the case, should dispose the Surgeon to open the cyst freely before cutting off the whole breast."

For the notes of this case we are indebted to Mr. Rastrich, the patient's Dresser.

Mary A. H., aged 30, a widow, was admitted into Guy's Hospital, under the care of Mr. Bryant, on October 3, 1865. She was a healthy woman, the mother of three children, the youngest being eight years of age, all of which she had suckled. She had resided at Camberwell, and had lived well, rarely eating other than fresh and well-cooked meats. She had had a tumour on her left breast for five years, the growth having made its appearance as a small hard swelling the size of a nut above the nipple, and apparently deeply seated in the gland. Since that date the swelling has gradually increased in size, its increase having been more rapid during the last twelve months. It has never caused her any pain, and has troubled her chiefly on account of its size; it has also always been moveable, the tumour and breast being apparently one.

When admitted, the left breast presented a swelling the size of a cocoanut in its upper part; this appeared to be in the gland, it being quite impossible to separate the two. The swelling was smooth and globular in its outline, and in it fluctuation was distinctly met with on manipulation; the skin over it was healthy; the nipple normal; and the axillary glands were also sound. Free manipulation of the tumour also failed to produce pain.

The diagnosis in this case was not easy; the swelling was evidently cystic, for all the symptoms indicating the presence of a cyst were well marked. The history of the case, the almost total absence of pain, and of all such symptoms as generally indicate suppuration, went far to prove that the swelling was not due to the presence of a chronic abscess; the nature of the swelling, and the apparent perfect healthiness of the uninvolved portion of the mammary gland, contra-indicated the presence of the cystic disease of the breast; and yet there were no positive signs of the swelling being due to the existence of an hydatid. The origin of the swelling as a small tense tumour, and its gradual and painless enlargement, unaccompanied by any definite symptoms of disease of the mammary gland, were indications enough to excite a suspicion of its true nature; but the extreme rarity of such an affection of the breast forbade any positive opinion of its nature being formed.

On October 11, 1865, Mr. Bryant therefore punctured the cyst with a trocar and canula, drawing off a few drops only of a thin fluid containing flocculi of a delicate membrane, such as lines an hydatid cyst. He then made a free incision into the tumour, and drew out the large parent hydatid cyst and its contents, the whole measuring seventeen ounces. The parent cyst contained several smaller ones, and under the microscope the ecchinococci were clearly seen in its contents.

Since that date, the cavity left has been rapidly contracting, and on November 6 the woman was declared to be convalescent.

The case just reported is one of interest from its extreme rarity, but few such cases having been recorded. The Museum at Guy's contains but one specimen.

CASE OF ADENOID TUMOUR OF THE BREAST IN AN OLD WOMAN, AGED SEVENTY-ONE—OPERATION—RECOVERY.

(Under the care of Mr. THOMAS BRYANT.)

This case is of interest on account of its rarity, it being so unusual to meet with a rapidly-growing innocent or adenoid tumour in the breast of an old woman, in whom it may be fearlessly stated the breast had ceased to be a gland for at least twenty years. For the following notes we are indebted to Mr. Sangster, the patient's Dresser:—

Catherine K., aged 71, a healthy-looking woman, the mother of three children, was admitted into Guy's Hospital under the care of Mr. Bryant, on August 7, 1865. She had always enjoyed good health, and had been able to suckle her three children. At Christmas last, seven months before her admission, she accidentally discovered a lump, the size of an egg, in the outer side of her right breast; it was painless, and grew very slowly for three months, when it suddenly began to increase rapidly in size, and to cause pain. She applied to Mr. Bryant for relief, and remained under his care till she was admitted. On her admission the right breast presented a large tumour, the size of a cocoa-nut, closely connected with, if not in the breast. It was irregular in its outline, and evidently in part made up of cysts, for in its projecting portions distinct fluctuation was clearly felt. There was, however, much solid matter. The tumour was quite moveable, and the skin over it was only stretched. The axillary glands were also healthy, and the nipple natural.

Nothing but excision of the tumour promising to be of use, the operation was performed on August 30, and a rapid recovery took place, the patient leaving the Hospital in one month perfectly well.

On examining the tumour it was found to have been made up of a firm, solid material, which contained several large cysts. These cysts contained a blood-stained glairy fluid, and in parts the solid growth threatened to degenerate and break up. The tumour measured on removal nine inches by seven; it was very firm in its consistence, and to the eye appeared of a fibro-plastic nature; it was tough, and with difficulty broken down; in parts, however, it had more the aspect of the lower kind of adenoid tumours. By the microscope the opinion formed by the naked eye examination was well confirmed, for the structure generally appeared as an admirable specimen of the ordinary fibroid structures, something like tubes were here and there visible, but no such highly-developed structures as are often found in the adenoceles of young life; and remembering that the tumour had been developed in an old woman, its presence was hardly to be expected.

KING'S COLLEGE HOSPITAL.

STRICTURE AND URINARY FISTULA—SYME'S OPERATION—RECOVERY—REMARKS.

(Under the care of Mr. HENRY SMITH.)

The following case illustrates the occurrence, but rarely observable, of a fistulous opening forming just at the commencement of the bend of the urethra, as a result most probably of the retention of the silver catheter after the operation. A similar thing occurred just previously in one of Mr. Fergusson's cases, where the metallic instrument had been kept in, and hence it becomes a question whether after these operations a silver catheter should ever be retained; probably the retention of an elastic instrument would prevent the occurrence of this untoward mishap altogether. Those who think fit to practise Holt's operation of splitting the stricture might have adopted that method here, as a No. 4 catheter could be passed, and there was but little mischief in the perineum; but since the occurrence of the case where death rapidly followed the operation in the person of a remarkably healthy young man in this Hospital a few months since, Mr. Henry Smith has not repeated it, preferring the retention of the catheter or the external division of the structure in those instances where it is complicated by urinary fistulæ.

John J., aged 51, admitted August 19, 1865. He had an abscess *in perineo* in October, 1862; this was opened. The wound never healed, and a fistulous opening, connected with the urethra, remained, through which the urine dribbled away. There was not much induration of the perineum, and a No. 4 silver catheter could be passed through a stricture in the bulb.

Mr. Smith deferred operating for a fortnight, as the patient was in a low state of health. Wine and quinine ordered. On September 1, Mr. Smith performed Syme's operation of dividing the contracted canal of the urethra upon a grooved staff; a No. 8 silver catheter was passed into the bladder and tied in. There was very free bleeding during the operation, but it was readily arrested by plugging the wound against the catheter. Quinine and opium prescribed.

September 11.—Catheter changed, and a flexible No. 9 introduced.

19th.—There is an abscess under the urethra just anterior to the scrotum. This is supposed to have arisen from the retention of the silver catheter; a fistulous opening connected with the urethra remained after the abscess was opened, and therefore the catheter was retained, although the perineal wound was rapidly healing up.

He remained in the Hospital until the end of October, when he was discharged in greatly improved health. The openings, both in the perineum and in front of the scrotum, almost entirely closed.

November 3.—He presented himself at the Hospital to-day, and with the openings quite healed up.

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STONE IN THE BLADDER—LITHOTRITY—REMOVAL OF THE STONE BY ONE CRUSHING, AND SUBSEQUENT USE OF THE SMALL SCOOP LITHOTRITE—REMARKS.

(Under the care of Mr. HENRY SMITH.)

[From Notes by Mr. J. H. Bell.

Isaac S., aged 28, admitted September 20, 1865. He first noticed pain and stoppage in making water about two years ago. On examination a stone, about the size of a marble, was detected. Bladder and urethra healthy, and free from irritation.

September 23.—Mr. Smith performed lithotrity, breaking the stone across twice with the instrument, but did not attempt to pull away any of the fragments.

25th.—Several small pieces of stone have come away in micturition, attended with no pain.

27th.—As there was a large fragment of the stone stopping up the urethra, Mr. Smith pushed it back, and having caught it in the small scroop lithotrite, brought it out per urethram. Ordered, pulv. opii. gr. j., quinæ disulph. gr. ij., ft. pil., nocte maneque sumend.

October 4.—Extracted a piece of calculus as large as a marble. No more fragments could be felt, and none have since passed.

6th.—Discharged cured.

In some remarks which Mr. Henry Smith made on this case, he stated that it illustrated in a remarkable degree the value of lithotrity, and especially of that modification of it which consisted in removing the fragments through the urethra after the stone had been crushed. It was rare to witness a case in which such a speedy recovery had taken place, for the patient was discharged from the Hospital within a fortnight of the date on which the stone was crushed, with his bladder quite free of calculous particles. All the conditions favourable for operating by lithotrity were here present, viz., a stone not larger than a marble, a perfectly healthy bladder, and a capacious and comparatively insensible urethra. Although there had been some difficulty in striking the stone with the sound, it was readily caught by the lithotrite and as readily broken. He did not attempt to extract any portion of stone at the time of operation, but preferred waiting a few days, when the bladder had recovered somewhat from the effects of the process. He then used the scoop, and extracted a piece of stone of considerable size, and a few days afterwards he caught and extracted a still larger portion, thus emptying the bladder entirely of the foreign body, and saving the patient a great deal of suffering. There could not be any objection to such a mode of procedure, provided it were effected cautiously, and after the lapse of some days from the crushing process.

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Medical Times and Gazette.

SATURDAY, DECEMBER 2.

HOMŒOPATHY AND THE CATTLE PLAGUE.

The whole of the so-called "science" of homœopathy rests upon two or three assumed facts which are taken as the warrant for certain axioms or "laws." All the details are purely "logical" deductions from these. Nothing can be more "philosophical" than the way in which they were handled. Grant but the primary axioms, and the rest must be accepted.

In the first place, medicines are affirmed to act by some "innate and hidden faculty or virtue" (a)—an inherent power of modifying the organism—of producing disease in the healthy and health in the diseased. Their operation is said to be purely *dynamic*, not *material*. All notion of medicines acting chemically, or as antidotes, or as eliminatives, or palliatives—all ideas of combating causes, of expelling vitiated secretions, of unloading the bowels, or emptying the stomach, are ridiculed as absurd. The origin and essence of disease is declared to be dynamic, not material, (b) and medicines have virtues also that are immaterial, inscrutable, and absolute.

Secondly, medicines have powers which are superior to those of all "morbific principles and contagious miasms." Medicines will and must act (c) "at all times, and under every circumstance, upon every living individual." "Ordinary morbific principles have only a conditional and often very subordinate influence; while the medicinal powers exercise one that is absolute, direct, and greatly superior to that of the former." Bring an artificial disease induced by medicine into collision with a natural disease and the latter must give way. "No cure is to be obtained but by a morbific power capable of producing symptoms that are similar and at the same time a little stronger. The cause of this rests with the eternal and irrevocable law of Nature which was unknown till the present time."(d)

How, according to these axioms, the infallible cure of disease ought to follow the use of homœopathic remedies is clear. There are many important, but at the same time less fundamental, absurdities of the homœopathic system which we have not time to dwell on now; such as the nature of the experiments by which the properties of drugs were alleged to be ascertained; the necessity of infinitesimal doses; the alleged fact that medicinal virtues are conferred on inert substances by long trituration, as on chalk, blacklead, salt, etc. These we cannot dwell on. We now will concern ourselves only with the fundamental axioms of the inherent dynamic absolute power of medicines, and of their superiority to miasms and other morbific agents.

There is one disease produced by a "miasm"—namely, scarlet fever, which is imitated very closely by the symptoms of poisoning by belladonna. So much is this the fact, that we know of a case this year in which a child who had eaten some of the belladonna fruit was supposed by the Medical Practitioner who first saw her to have symptoms of scarlatina. Hence belladonna has been vaunted by the homœopaths as a preventive and cure of scarlet fever. And so it would be, if their primitive axioms were true. But belladonna has been found over and over again to be neither preventive nor cure.

The cattle plague afforded a fair opportunity for trying homœopathy on the sick brutes. If drugs possess absolute power over the animal economy, and if symptoms produced by drugs are incompatible with the existence of symptoms from "miasm," no beast under the influence of arsenic could take the plague. As the *Times* newspaper has been veering round to every possible breath of opinion, so, in its turn, it has given a lift to homœopathy; and last Saturday's number proposed it as a fair experiment. Less than a week, however, brings symptoms of the collapse of the experiment:—

"The homœopathists," says the *Times* of Wednesday, "are only just entering the field, and it would be premature to express any opinion of their system, but we yesterday reported two trials of it, and with the usual conflicting results. We are assured that on some Wold farms in Yorkshire about 50 per cent. of the cattle attacked have been cured by homœopathy, but in a case more specifically detailed the system was by no means so successful. Mr. J. G. Marshall, of Leeds, on finding the disease established in a cowkeeper's herd, took measures for placing the animals under homœopathic treat-

(a) Hahnemann, Orgnon, by Devrient. Art. xv. and xvi.
(b) *Ibid*, Introd. p. 18.
(c) *Ibid*, Art. xxvii.
(d) *Ibid*, Art. xliii.

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ment in the most promising manner. The cows, seventeen in number, were lodged in sheds specially provided with all appliances for regulating temperature. They were given in charge to three professed homœopathists, two of whom were Veterinary Surgeons, and the requisite doses of "arsenicum" and other specifics were administered *secundum artem*. As eleven, however, out of the seventeen patients are already dead, and the others are not expected to live, we fear this particular experiment must be pronounced a failure."

Now, if homœopathy, like Medicine, were a tentative art, feeling its way, not claiming the possession of any absolute system of doctrine which shall give it the mastery over nature, we might say, try again. But homœopathy if it do not succeed is nothing. If true, it *must* succeed. The inherent dynamical pathogenetic powers of drugs must vanquish those of any "morbific miasm." The whole system rests on this corner-stone. If an arseniated cow can take the plague, medicine does not possess a power superior to miasm. If the results of experiment are not what they ought to be, the primitive axioms must be false.

We verily believe that most of the "nobility, gentry, and clergy" who are the upholders of homœopathy are so because of the "philosophical method" and "close logical reasoning" which it exhibits. They forget that a madman can argue admirably; only unluckily his original starting-point is false. We have said before, and repeat it, that the surest way to disabuse the intelligent public of their faith in homœopathy would be to circulate a cheap edition of Hahnemann's "Organon." They who would read it would discover in it something like a Euclid based upon impossible axioms. As for the genteel snob who don't read and can't think, for him perhaps homœopathy is as innocent a form of quackery as any other.(e)

DOCTRINES OF MODERN CHEMISTRY.

No. VI.

We were considering in our last article the atomic weight of oxygen. We are not yet done with it, but we shall be before the end of this one is reached. When we have come to this point, however, we shall have very little more to say on the determination of atomic weights by chemical considerations. This is the reason. The only result of modern investigations concerning the old atomic weights is that those of many elements must be doubled, oxygen among the number: no other alteration is required to express in the best manner the various chemical relations of bodies to each other. So that the atomic weights of those bodies which must be doubled in order to serve their purpose properly are, even without this change, fully sufficient to express all known relations between these bodies themselves, and only not so to express those between them and the bodies whose atomic weights do not require to be doubled. For instance, such formulæ as the following are universally accepted as correct, because all chemists are agreed as to the chemical relations by weight of carbon to oxygen, oxygen to sulphur, or of any of these to lead, copper, or iron, and of chlorine or iodine to hydrogen, hydrogen to nitrogen, or of any of these to potassium or silver.

Sulphurous acid gas .	SO_2
Bisulphide of carbon .	CS_2
Black oxide of copper .	CuO
Sulphate of lead . .	$PbSO_4 (= PbO,SO_2)$
Sal ammoniac . . .	NH_4Cl
Iodide of potassium . .	KI
Chloride of silver . .	$AgCl$

It is only the correctness of such formulæ as the following which is disputed—formulæ referring to elements of which some require their old atomic weights to be doubled and some do not:—

Water	HO
Sulphide of silver . .	AgS
Chloride of calcium . .	$CaCl$
Iodide of lead . . .	PbI
Nitrate of silver . .	AgO,NO_5
Bicarbonate of potash .	$KO,HO,2CO_2$

Consequently, not only need we say nothing about those atomic weights which require no change, but also very little about those which require doubling when that we have treated of one of them so important as that of oxygen, since unity of opinion prevails as to the relations of this element to the others whose atomic weights require the same change. However necessary it is in a general point of view, it is not so for our purpose, that we should show the undisputed analogies between sulphur, carbon, etc., and oxygen, or those between chlorine, nitrogen, etc., and hydrogen.

The Atomic Weight of Oxygen is Sixteen Times that of Hydrogen, not Eight.—Having said this much in explanation of why we devote so much attention to the value of the atomic weight of oxygen, we return to its consideration. What we have already remarked on the subject amounts to this: that by giving the new atomic weight for oxygen, namely, 16, to the symbol O, and writing, therefore, caustic potash KHO, acetic acid $C_4H_4O_2$, acetate of potash $C_4H_3KO_2$, etc., we obtained formulæ which express better the admitted facts concerning the chemical properties of these bodies than do the respective formulæ for these bodies, KHO_2 $(= KO,HO)$; $C_4H_4O_4$ $(= C_4H_3O_3,HO)$; $C_4H_3KO_4$ $(= C_4H_3O_3,KO)$. For if we were asked why we express the relative quantities of hydrogen and oxygen in acetic acid as H_4 and O_2, we have our answer ready—because in the different modes of formation and decomposition of acetic acid, the hydrogen separates into, or accumulates by, *fourths* of the whole quantity, and the oxygen separates into, or accumulates by, *halves* only of the whole quantity. But if we were asked why we express the oxygen in acetic acid as O_4, we have no answer to give.

Further, that when ternary, or more complex, bodies are so related as that one is an oxide of the other, or may be viewed as such, it contains either sixteen, or some multiple of sixteen, parts of oxygen more than the other. Exceptions may be adduced, but they vanish when the whole new system is displayed. As it is, though apparently important, they are exceedingly few.

And, lastly, that the use of the new atomic weight for oxygen simplifies the formulæ of most bodies.

We now proceed to point out the fact that when water reacts upon ternary or more complex bodies so as to decompose with them, or when it is produced by a reaction, the quantity of it to be considered must be expressed by either $2HO$, or by some multiple of it. Secondly, that while its hydrogen divides into two portions, or is formed of two, there is no evidence to show that this is true of its oxygen.(a) Therefore the formula H_2O (where $O = 16$) is a more satisfactory expression than $2HO$ (where $O = 8$) for this quantity of water. The exceptions to this statement to be found among reactions represented according to the old system are very few, and all disappear when the whole of the

(e) Sham Homœopathy.—It is amusing to any one who knows the principles of homœopathy to notice the incoherent absurdities committed by persons whose credulity and ignorance are about on a par. For instance, a clergyman, signing himself Stephen Downe, of Marchwiel Rectory, Wrexham, writing to the *Times* of November 30, is not ashamed to confess that when diarrhœa and other symptoms persisted in spite of *arsenicum*, he gave laudanum, brandy, and chalk. What! a homœopath give palliatives! give allopathic or heteropathic remedies! The very hair of Hahnemann would stand on end at such a heresy! Of course, if homœopathy were true the symptoms ought to have been aggravated! We wonder whether clergymen ever think of the effects which their dabbling, in quackery has on their position. What can we think of the general good sense and fitness of men for their own calling when we see such ignorant meddlesomeness as this?

(a) In the cases of reactions between binary compounds and water, the data are insufficient to determine whether the quantity of water is HO or 2HO.

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facts concerning the bodies in reaction are taken into consideration.

We shall call attention to two other facts, and we have done. One is, that in those reactions in which we regard oxygen as displacing hydrogen, sixteen standard parts by weight of oxygen replace two parts of hydrogen at a time, and not eight of oxygen one of hydrogen. Now, since it is admitted on all hands that the two parts of hydrogen must be regarded as two distinct atomic quantities, this fact is unintelligible, unless we look upon the sixteen parts of oxygen as only one atomic quantity. Let us take the conversion of alcohol into acetic acid for an example, thus (letting O stand for eight of oxygen):—

$$\underbrace{C_4H_6O_2}_{\text{Alcohol.}} + O_4 = \underbrace{C_4H_4O_4}_{\text{Acetic acid.}} + 2HO.$$

The other fact we were to notice is this. In compounds of three or more elements, one of which is oxygen, when represented according to the old views, the number of oxygen atoms (each equal to eight parts by weight), is always divisible by two; while no such circumstance is observable regarding the hydrogen in hydrogen compounds. This is strongly suggestive that the symbol O ought to stand for sixteen instead of eight parts of oxygen, so that the number of atoms of oxygen would be represented as half their present number. Here are a few examples of this fact:—

Sulphuric acid . .	$HO,SO_3 = HSO_4$
Bicarbonate of soda .	$NaO,HO,2CO_2 = NaHC_2O_4$
Nitrate of potash .	$KO,NO_5 = KNO_6$
Alcohol . . .	$C_4H_6O_2$
Acetic acid . .	$C_4H_4O_4$
Tartaric acid . .	$C_8H_6O_{12}$

There are exceptions, apparently, but they all disappear by the entire application of the new system. Let us illustrate this point by reference to the formulæ of two important medicines, carbonate of soda and ether. It has been the custom to write the former NaO,CO_2 or $NaCO_3$; while neutral tartrate of soda has been written $2NaO,C_8H_4O_{10}$. In the new system carbonate of soda is written with a formula twice as great as its old one, thus: $2NaO,C_2O_4$ (using old atomic weights). Such chemical relations as require the formula of tartrate of soda to be written in the above shape require also that carbonate of soda should have its old formula doubled. Against this consistent reference to facts nothing can be said in favour of the old formula. Again, according to modern views, ether is written with its formula double of the old one—namely, $C_8H_{10}O_2$. This has been done because such a formula best expresses facts. For the same or similar reasons that all chemists write alcohol $C_4H_6O_2$ instead of C_2H_3O, or acetic acid $C_4H_4O_4$ instead of CHO, ether must be written $C_8H_{10}O_2$ instead of C_4H_5O. In this way, by appealing to facts, all apparent exceptions disappear.

We shall not further expand our illustrations of the argument for considering the atomic weight of oxygen to be sixteen rather than eight times that of hydrogen. We say *argument*, for there is really only one great argument advanced in different forms. It is simply this. By taking the atomic weight of oxygen as sixteen, we best express the chemical properties of all those bodies into which it enters, and by the use of its symbol O obtain, on the whole, formulæ vastly simpler than those obtained by using the symbol $O = 8$.

Modifying on similar evidence, and by analogy, the atomic weights of certain other bodies—that is, doubling many of the old atomic weights—we have in the symbols for these a means of formulating all bodies whose chemical properties have been ascertained, so as to express much more correctly, without exception, their chemical properties and relations than can be done by the old system of atomic weights. These new atomic weights form part of a beautiful system of philosophy, but we beg our readers not to suppose that *in any case* facts are disregarded as being opposed to it. On the contrary, it is based solely on facts, however much hypotheses may have helped in developing it; and no facts are known which are opposed to it. The question concerning the new atomic weights cannot be, whether do they better serve the functions proper to them than do the old? for we look in vain for any evidence to the contrary. It can only be, Will the old atomic weights which we know serve our purpose, or shall we reap any material advantage by adopting the new? To those who interest themselves in the chemical relations of the body and the material agents which influence it, the reply to this must be, The new atomic weights are much more valuable, because, in considering the chemical changes of substances, those only which appear at all likely to occur on the evidence of facts are indicated by them, while many are suggested by the old atomic weights without any evidence from facts, and many not suggested which ought to be.

THE MEDICAL RESPONSIBILITIES OF THE HORSE GUARDS AND THE ADMIRALTY.

The Commission of inquiry into the grievances of Army and Navy Medical officers has commenced its labours. Some of the Medical staff from Aldershot will be summoned before the Commission. The Army Medical Department having been considered, the compatibility of giving equal privileges, not retrospective, to the Navy Surgeons must be conceded, "*based on the principle of equality with the Army.*" "Justitia," for the interests of the large number of Irish Medical gentlemen in the public service, asks, in the Memorial appended to this article, that the evidence before the Commission may be as accessible as the daily periodicals are to the reading public. The Royal College of Surgeons of Ireland has hitherto been in the van of petition and remonstrance, and will doubtless on the present occasion watch over the interests of its Fellows and Licentiates, if not personally, by proxy, provided the weekly evidence before the Commission is at its disposal.

The Horse Guards, and especially the Admiralty, find themselves on such humiliating terms with the Medical Profession that they now consider the Medical officers have real grievances, which, if the interests of the soldier and sailor are to be valued, they will see the necessity of treating in a proper spirit. The most refractory power to deal with has been the Admiralty. It will need years of good works to efface the bad impression of gross misrule and *mala fides* from the days of Lord Nelson, in the Medical Department of the Navy. The position of the Admiralty is more than humiliating. To proclaim to officers that the constitutional right of petition no longer belonged to them, except under the penalty of a Naval Court-Martial, and then to seek evidence from the Medical officers whose rights by order in council and Royal warrant had not been respected! Anyhow, the disdainful and unfeeling spirit evinced towards Naval Surgeons, which has produced such a reaction against the Navy that the Admiralty cannot, in a time of peace, get Medical gentlemen to accept service under their Lordships' rule.

"Justitia" quotes with much force from Dr. Brown's pamphlet, that "*Rank and command are separate entities,*" which the authorities must freely admit by giving Naval Surgeons the full privileges of rank. Command is not asked; it is strictly forbidden, except control over the treatment of cases of sickness.

The Commission must see the expediency of one examination for the three war services of the country, as the examination by the Naval Medical Board has, "*it is rumoured,*" been interfered with, to the prejudice of the public service.

The good service pensions annually awarded to the executive officers of the Navy are, to seven flag officers, £2100; twenty-one captains, £3150; three Medical officers with the rank of flag officer, £100 each.

The recent Greenwich Hospital pensions, *from which the*

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Medical officers are excluded, will have a yearly total of £12,015, of which twenty flag officers will receive £3000; sixteen captains, £1280; twenty-four commanders, £1560; eighty-lieutenants, £4000; twenty-four masters, £1200; fifteen paymasters, £750; nine warrant officers, £225.

The foregoing summary of facts is most invidious and most discouraging to the Medical Profession, and the present discomfiture of the Admiralty is plainly its own systematic seeking.

If it desire to have a full and efficient Medical staff for the Navy, the Admiralty must be prepared to outbid all other services by offers of gold—a privileged retirement at twenty years' active service with the full pay of the *status* of staff Surgeon.

MEMORIAL.

TO THE PRESIDENTS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND.

GENTLEMEN,—The Commission sitting on the grievances of Naval and Army Surgeons must first learn what are the existing inducements to enter the public Services; what have been the rewards of active service; and what circumstances render the army and navy so unpopular with their Medical officers and at all the Medical Schools.

For Naval Surgeons the Profession expects some tangible guarantee for the future good faith of the Admiralty and the unconditional repeal of the orders forbidding the constitutional right of petition, *e.g.*:—

"All combinations of persons belonging to the fleet, for the purpose of bringing about alterations in the existing rules and regulations of the Royal Navy, whether affecting their interests individually or collectively, are prohibited.

"Every person belonging to the fleet is forbidden to write for any newspaper on subjects connected with the naval Service; or to publish or cause to be published, directly or indirectly, in a newspaper or other periodical any matter or thing relating to the Service."

Naval Medical officers expect the recognition of their rank on the same scale as the military branches; triennial increase of pay; a positive military rank, regulating the widow's pension, prize money, allowances on shore (whether at home or on foreign station); and a fair participation in honorary distinctions. Naval Medical officers are forbidden command. In the words of Dr. Frederick James Brown, "they require that rank and command shall be regarded as separate entities, and that social position and privileges shall be invariable attendants upon relative rank." Assumption of command by Medical officers is a chimera that haunts the imagination of the executive officers, but command is strictly forbidden by the Admiralty, and is wholly visionary. Rank and command are separate entities. Either this fact is not understood or it is wilfully ignored.

It is expected that the present Commission will endorse the proposition of the Royal Commission of 1858 "that one and the same Board should conduct the examination for the Medical service of the East India Company, the Navy, and the Army."

Since it is rumoured that Assistant-Surgeons have been admitted recently without being tested by the ordinary Naval Board of three examiners, apprehension is felt that the Admiralty do contemplate reducing the stringency of the present pass examination, mild as it now is compared with the competitive examination of the Army. Thus is class feeling operating against the best interests of the seamen of her Majesty's fleet.

"The disdainful neglect of whole classes of officers by the Admiralty is evidenced by recent measures such as the Greenwich Hospital Act . . . . in which Medical officers are omitted from beneficial interest. In a recent circular giving officers that qualify themselves for the office of interpreter additional pay of eighteenpence per diem, there is the omission of Medical officers.

Hear the words of the Duke of Somerset: "This establishment is conducted in a manner which is worthy of a great national institution."

Great praise coming from so high a source! Yet the Medical officers of Greenwich Hospital are excluded from any participation in the proposed distribution of out-pensions from the funds of the Hospital that they serve so well.

The attention of the National Medical Colleges of Ireland is directed to the Medical Department of the Army and Navy, as possibly distance precludes their interests being personally represented at the sitting Commission; therefore, let the Medical gentlemen of Ireland request that the evidence before the Commission be as public as the daily newspapers.

JUSTITIA.

THE WEEK.

THE CHARGE AGAINST "DR." HUNTER.

ALL lovers of common justice and of common sense must rejoice that the trial of the so-called "Dr." Hunter for rape has ended in a verdict of not guilty. "Dr." Hunter is outside the pale of the British Medical Profession, and his mode of obtaining notoriety by advertising forbids our entertaining any sympathy for him as a Practitioner of Medicine. But the same charge might have been brought against the most respectable member of the Profession, and there might have existed no more possibility of disproving it than in the case of this individual. The facts of the case as they came out in cross-examination—the letter written within an hour or two of the alleged outrage by the prosecutrix, Mrs. Merrick, beginning "Dear Sir," and ending "Yours obediently;" the immediate return of Mrs. Merrick for the bottle of embrocation to the house where she said she had been so egregiously insulted; and the fact that she made no outcry for help at the time—together with the absence from the witness-box of Mrs. Sharland, the person on whom the prosecutrix first called after she left Hunter, told strongly against her statement. As we have said, the character of Hunter's practice has nothing to do with the merits of the case. A nervous, hysterical, or designing woman might make such a charge against any man with whom she was closeted in consultation. The Profession are never exempt from such risks, and we rejoice that even in the case of an unqualified Practitioner a jury has shown that the tribunals of the country may be confidently relied on to defend Medical men in the practice of their calling, and carefully to sift charges which must from their nature be as difficult to disprove as easy to invent.

SPREAD OF THE CATTLE DISEASE.

IT will be seen from the following returns that the rinderpest is extending in this country with extraordinary rapidity and severity. Its increase during the last month has fully justified the recommendations urged by the majority of the Commissioners in the Report issued at the end of October. The disease commenced about June 21, and between that time and October 21 only 14,083 animals had been attacked, of which 6711 had died and 5119 had been killed. But during the present month these numbers have been doubled; 27,432 have been attacked, 12,680 have died, and 8998 have been slaughtered. The Government have imposed some restrictions on the removal of cattle in infected districts, and on the exposure for sale of animals not intended for immediate slaughter in the Metropolitan Cattle Market. But we fear that these measures are too late and too feeble to be of much service. Had the advice of Professors Gamgee and Simmonds been taken in the first instance, and the disease "stamped out" whilst its area was limited and the victims few, the public might have been spared a calamity the effects of which on the public health and prosperity cannot be calculated. The writers in the daily press who, through ignorance or interest, opposed the advice of the Veterinary Surgeons, have now, when it is too late, been silenced by the progress of the disease. But the mischief has been done, and we may look forward to the Cattle Plague being domiciled amongst us for years unless the Government adopt some stringent means of arresting it, such as that proposed by the majority of the Commissioners:—

"*Cattle Plague Returns.*

"Veterinary Department of the Privy Council Office,

"2, Victoria-street, S.W., November 23.

"These returns do not profess to give the total number of

cases which have occurred in Great Britain, but only those which have been ascertained from the official information received at this office from inspectors, whether appointed by the Clerk of the Council or by the local authorities. Column 1 only records the cases reported as having commenced during the weeks indicated by the headings, 'back' cases being added to column 2:—

Census Divisions.	1. Attacked. Week ending November 18.	Week ending November 11.	Week ending November 4.	2. Result of reported Cases from the Commencement of the disease. Attacked.	Killed.	Died.	Recovered.	Remaining.
1. Metropolitan Police District	216	77	49	6031	2837	2436	181	577
2. South Eastern Co.	92	137	74	3609	1318	1796	279	216
3. South Midland Co.	211	345	74	1563	574	718	102	169
4. Eastern Counties	212	214	124	3675	1359	1685	251	380
5. South Western Co.	89	26	2	191	69	95	5	22
6. West Midland Co.	34	85	81	481	168	237	29	47
7. North Midland Co.	63	57	21	276	125	86	26	39
8. North Western Co.	143	129	43	600	177	242	49	132
9. Yorkshire	453	234	108	1419	236	789	75	319
10. Northern Counties	70	43	79	731	307	321	53	50
11. Monmouthshire and Wales	96	27	52	364	56	229	19	60
12. Scotland	1040	1206	1058	8492	1772	4046	708	1966
	2669	2580	1765	27432	8998	12680	1777	3977

THE "TIMES'" NATURALIST ON RECONSTRUCTION.

One of the political writers on the staff of the *Times* has evidently been studying natural history, and has dipped, but we fear not very deeply, into the subject of analogy. This political "naturalist" has discovered that certain species among the lower orders of animal life possess much in common with a heap of stones by the wayside. If you take a stone from a heap its neighbours are quite unconcerned about its loss. If you cut into many pieces one of the simple beings above referred to, every piece grows on unconcerned into a new and perfect creature. The remarks of the *Times'* naturalist would, however, seem to imply that he has discovered that each stone separated from the heap selects from its environment certain substances which it appropriates to itself, and thus the single stone grows into a new heap, just as a piece of a polyp or an amœba grows into a new and perfect animal. We beg to direct the attention of the paving boards of the metropolis to this remarkable discovery of the political naturalist on the staff of the *Times*. The Profession can scarcely feel disturbed at the articles which have recently appeared in that journal in favour of certain silly and fashionable methods of playing with disease, if it reflects that upon its staff is a writer who possesses so low an opinion of the common sense and common intelligence of the readers of its political leading articles as to pen such a paragraph as the following, which we copy exactly, as it deserves the attention of all readers:—

"The reconstruction of a machine is always difficult in exact proportion to the delicacy of its organisation. Naturalists tell us of species among the lower orders of animal life which can be cut into pieces with so little damage that each part lives on unconcerned about the fate of its fellow members, just as if it had been a stone taken from a heap of stones by the wayside."

To notice the remarks of a journal on questions of Medical treatment which can permit such utter nonsense as the above to occupy the first and highest place is as unnecessary as it would be useless.

THE NEW MEAT-PRESERVING PROCESS.

If the wholesale destruction of cattle by plague and poleaxe continues, we must look out for a supply of meat. This is in a great measure found in the importation of cattle and carcases, and with the high prices now obtained a pretty liberal supply may be anticipated from these sources. But to this there is a limit. Live oxen or sheep can only be brought such distances as that the market price obtained for them, will more than cover their prime cost plus expenses of transport; while the trade in carcase meat will have to contend against the liability to putrescence increased by length of transit, conditions of atmosphere, close packing, etc. Whatever may be the true cause of the present high prices of butcher's meat, it is a question of great moment, in a sanitary point of view; for if the masses be ill-fed, they will fall victims easily to the first epidemic. We have been led into these reflections in consequence of having visited the factory of the Import and Export Fresh Provision Company, near Rainham, in Essex. The object of the Company is the preservation of fresh raw meat by a most ingenious and effective process, founded on principles in true accordance with Nature's laws, and obeying those laws in many of its details. The directors had invited a few scientific gentlemen to inspect the building, outhouses, etc., and view the means for carrying on all the minutiæ of the special process. Among those invited we notice W. Hawes, Esq., the Chairman, and P. Le Neve Foster, Esq., the Secretary of the Society of Arts; Drs. Ed. Smith, Markham, and Seaton; Hy. Lee, etc. The first aim of the Company is to obtain the best meat; this is procured, not as is usually done—by purchasing at a meat market the carcases of oxen, sheep, etc.—but they go to the live market, and there make their purchases. It will be evident, therefore, that any symptom of disease, rinderpest or other, will be more easily detected than when the mere carcase is bought. The cattle are then conveyed by rail—a siding being close adjoining—to the factory, which is situated on a farm of sixteen acres pasturage, the property of the Company, where they remain for a time until they have recovered from the effects of driving, carriage, etc., and are then in the fittest condition for food. They are subsequently slaughtered in a capacious and well-appointed abattoir adjoining the main building. At a convenient time the carcase is cut up into the customary joints and conveyed into the factory, where each piece is weighed and put into tins before being submitted to the raw meat process. It may be premised that only the best joints—such as legs, loins, shoulders, ribs of mutton, etc., sirloins, ribs, rumps of beef—are thus treated, the coarser or second-rate pieces are subjected to the cooking process now so well known, and which is also carried on in the same building. It will be seen that the whole of the animal is thus either preserved or utilised—the skin, offal, and blood after slaughtering, the bones after the cooking process and subsequent digesting to obtain from them the large amount of nutriment they contain, with the superfluous fat, are all collected, and become a source of profit by sale to different manufacturers. To resume, the raw meat in joints having been placed in tins prepared to receive them, and the lids securely soldered down, are conveyed to the upper story of the building, where is situated a large iron chest with a strong lid; the tins of meat, which have each a short metal tube at the bottom and another at the top, are placed in the chest, the bottom tube of each tin being fastened to an elastic tube, which by its other extremity is attached to a pipe running along the floor of the chest; the upper tube is similarly attached to elastic tubes in relation with a pipe extending along the upper portion of the chest. By supplies from a tank overhead, the chest and tins of meat are filled with water; the lid is then lowered and screwed down so as to be air-tight. At this stage the chest and tins are both completely filled with water, which is seen flowing from taps corresponding to the upper parts of each. The air they before contained has given place to the fluid, so that one object is gained—viz., the abstraction of oxygen; if not wholly, still in a very great measure. All the taps are now closed, and the first stage of the process is complete. The iron chest has extending from its floor two perpendicular pipes, passing to a well in the basement, a distance of upwards of thirty-five feet. These are connected, one with the cavity

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of the chest, the other, by means of the pipe which ran along its floor, with the cavity of the tins. By means of taps, communication is opened between the descending tube and the chest on the one hand, and the other descending tube and the tins on the other, each series forming a water barometer. When it is ascertained that the tins have become emptied of their fluid contents, and a vacuum established in them, as ascertained by vacuum gauges, the taps are closed. Deutoxide of nitrogen is then supplied carefully and simultaneously to the tins and chest. This will have the effect of neutralising any remaining oxygen in the meat or tins. Both cases and tins are again refilled with water, the deutoxide is driven off into a spare gasholder, a vacuum is again created in the tins, and they are then supplied with a mixture of nitrogen gas, with a small proportion of deutoxide. This may be said to complete the second stage. The lid is now lifted; each tin is carefully raised, in order that its lower tube may be secured by first pinching it close and then soldering. This being done, a quantity of sulphurous acid gas, proportionate to the weight of meat, is forcibly injected, and the remaining tube is closed and soldered. Each tin is subsequently tested, at a temperature of about 90° for several days. They are then ready to be japanned, and are fit for use. The means used for preserving poultry and game is substantially the same. It will be seen that this process, as we have said, depends on certain chemical and physical laws, which are applied to a most useful and beneficial end, for by this means it is proposed to import from cheap meat countries, Australia and South America for example, supplies of meat for the English market. Such a plan is in progress, an agency or local board having been established in Queensland, and it is hoped that soon we may be able to regale ourselves with beef and mutton grown and fattened under the Southern Cross. A hot luncheon was provided for the visitors, consisting of legs and shoulders of mutton, sirloin, fowls, and ham. It was amusing to hear the doubtful and wavering opinions of the guests as they discussed each dish, as to which was preserved and which fresh meat. It certainly was a difficult matter for even a daintily-fed Englishman to distinguish, but when it was declared that everything placed on the table had been put up two or three months ago, all expressed their surprise. Mr. Foster, however, capped all that could be said by narrating how he had kept a tin of meat under his own care for quite eight months, through the late hot summer. It was opened the other day; he had the joint cooked at home, his family and visitors were helped to it more than once, and when told the length of time he had had it in his possession they could scarcely credit the statement. It turned out that the same joint had been put up about three months before it was sent to Mr. Foster. We wish the Company every success in their undertaking. Tins of meat have been sent to the Admiralty, and we shall soon have some account of them. Several testimonials were laid before the guests, which one and all spoke highly of the results, the meat having been eaten in almost all latitudes. For her Majesty's and mercantile marine the compact way in which the meat is preserved must be of great moment, if only the matter of space is considered, when compared with the room occupied by living cattle and fodder, and water required for their sustenance, but of much greater account if considered as replacing by fresh provisions the salt food necessary for crew and passengers. It would thus seem that the Company will reap advantages both on an import and export trade. We shall wait for and be glad to hear of further results.

FROM ABROAD.—EXPERIMENTS ON CONGELATION—SUPERNUMERARY FINGERS.

At the last meeting of the Académie des Sciences, M. Pouchet, of Rouen, gave an account of a long series of experiments he had been making on the congelation of animals. The following are his conclusions:—1. One of the first phenomena produced by the action of cold is the constriction of the capillary vessels, immediately made visible by the microscope. So great is the contraction that no globule of blood can gain admission, so that these vessels remain entirely empty, whence the pallor of frozen parts. 2. The next phenomenon is the changed condition of the globules. The alterations observed are of three kinds. (1) The nucleus quits its envelope and swims freely in the plasma, the free nuclei having a granular appearance and being more opaque than in the normal condition. The envelopes of the nuclei become flaccid and torn, or they are dissolved and disappear. (2) The nucleus still remaining within its envelope has become opaque, and is more or less excentrically situated. (3) The globules may be simply more or less indented at their edges and of a deeper colour. It is especially in the blood of reptiles that the nuclei are found expelled, the globules of mammalia presenting indentations. The number of globules which undergo these alterations and re-enter the circulation is proportionate to the extent of the congelation. When this affects only the limbs, $\frac{1}{10}$th or $\frac{1}{20}$th only undergo alteration; but when the animal is totally frozen almost all the globules become disorganised. 3. Any animal that has been totally frozen, all its blood having become solidified and all the globules disorganised, must be regarded as absolutely dead and beyond any restorative power. 4. When the congelation is partial, any organ absolutely frozen becomes gangrenous and is destroyed. 5. If partial congelation has not extended very far, so that but few altered globules have entered the blood, life is not compromised. 6. But when the congelation proceeds over a great extent, the mass of the changed globules which the thawing throws into the circulation rapidly kills the animal. 7. A half-frozen animal may live for a long time if we maintain it in that condition, the frozen blood not entering into circulation; but it dies rapidly if we thaw the frozen parts, the altered globules which re-enter the blood rendering it unfit for the maintenance of life. 8. In all cases of congelation death is due to this change in the blood, and not to the impression made on the nervous system. 9. It results from these facts, that the less rapidly frozen parts are thawed, the less rapid is the invasion of the economy by this altered blood and the greater are the chances of success in the efforts at restoring life.

A curious little discussion has taken place at the Surgical Society upon the subject of supernumerary fingers, which was remarkable in the discrepancy of opinion as to the frequency of the occurrence. While M. Dolbeau stated that he had observed numerous examples during a two years' residence at the Foundling Hospital, and M. Cloquet said that he could not regard the deformity as a rare one, M. Blot observed that among about 10,000 new-born infants he had inspected at the Maternity and Clinic, he had met with it only once. M. Trélat, again, declared that this deformity is a very common occurrence, for he had himself seen some fifteen cases; and Mr. Giraldès stated that he had seen not only a great number of instances of supernumerary fingers, but even supernumerary hands. M. Danjau, during his twenty-five years' practice at the Maternity, did not meet with more than ten of these cases; and M. Lefort, in a statistical account drawn from the London and Vienna lying-in Hospitals, comprising at least 14,000 children, did not meet with a single instance. M. Blot stated that the twenty-five years' practice of his master, M. Danjau, at the Maternity, joined to his own observations at the Clinic and Maternity, furnished the formidable amount of from 90,000 to 100,000 infants, among which only twelve or thirteen cases were observed. M. Velpeau joined other speakers in noting the curious coincidences which chance often threw in the way of Practitioners, and which led to their meeting with series of otherwise rare cases. For example, he met with three instances of fracture of the neck of the thigh bone in private practice on the same day.

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THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF LEAMINGTON.

THERE is no town in England that strikes the visitor more favourably than Leamington. There is an air about it that is quite peculiar to itself—an openness, an order, a cleanliness, strictly its own. The most casual observer would say it was a new town; for it exhibits no trace of those features which ancient cities and towns present, and on which citizens and townsmen, with pride as ancient as the walls by which they are surrounded, are so fond to dwell. There is no technical High-street in Leamington, cut by cross streets; no long, narrow lanes; no ruins of castellated walls; no battle bridges; no mounds of earth, with mythical bones of fighting men still in armour, with lances by their sides and with fragments of old coins. There is not so much as one spot on which Cromwell stood, and not a ruin that can be laid at the door of that omnipresent potentate. And yet round about the fair town the ground is consecrate, and any member of the British Medical Association who had a sharp taste for antiquities could this year appease his appetite, from Leamington as his base, more readily than from any other portion of England. For, first of all, the said member while in Leamington, did, night by night, lay down his head to sleep in the actual geographical centre of the island of England. That is something. The centre of England! Let us dream of it; dream of the marvellous revolutions that have occurred around that centre since the time when old Herodotus enumerated the island as one of the Cassiterides, and the first navigator whom Pliny has immortalised—

"Plumbum ex Cassitoride insulâ primus apportavit Midacritus,"

first carried away his heavy prize and opened the commerce of England with the world. Dream of the time when the Celts migrated towards that central spot; of their increase around it, and their divisions, political and social. Dream of the Druid priests ruling and never ruled; practising a rude Medical art, exercising a rude, stern, and cruel religious—shall we call it so?—religious faith, and indulging in a mystical, and yet not altogether false, philosophy. Dream of the Cæsar piercing towards that centre and winning his way, plotting out the lands, throwing up fortresses, and establishing his legions, who in turn become attached to the people they govern, and by their descendants so affiliate themselves that they weep when they leave, and actually tear themselves away from the still half-savage home, though luxurious Rome herself invite them. Dream of wise Agricola ruling so sagely and so well, building his forts by the Clyde side and cutting off the incursive Caledonians, and then turning to arts of peace and teaching his subjects those lessons of beauty and science—aye, and of religion too—on which the civilisation of the island was afterwards to rest. Dream of Christian refugees flying from Rome towards this wonderful centre during the reigns of Nero and Diocletian, and sowing around the centre the germs of the new national faith. Dream of the great Constantine, and the freedom of the faith, and the formation of the British hierarchy. Dream of Rome declining, and the Emperor Honorius writing to the Britons that now they must fight their own battles and be their own masters. Dream of Saxon invasion and the brave defence of mystic, martyred Arthur, of Saxon victories and Saxon divisions, with the accession of glorious Alfred as the grand result, and endless blessings. Dream of Danish invasion, and victory and defeat. Dream of Norman conquest, and confiscation, and feudal tyranny, and wars of kings and of houses, and of roses, and of liberty springing up meanwhile out of all. Dream of the gorgeous temples that rose as if by invisible hands, and of proud prelates and abbots, who were more powerful than the Druid priests and more magnificent than kings and emperors. Dream of the destruction of the royal priests, and their system with them, around that centre. Dream of an iron town so near by that the ringing of its hammers may be heard in a day's march. Dream of a great poet breathing his first breaths also within a day's march, and, after singing immortal songs and making a language, going back to breathe his last breaths near the magic point. Dream of a revolution, and a royal execution, and a strong man reforming a sinking nation and lifting it up to be the life of the world. Dream of science making its progress round the sacred spot and producing in Newtonian humanity light almost divine. Dream of motion evolved from rude matter, gifted with more than wings to fly, submitting to human guidance, and threading meadow and vale, with cloud of smoke and of fire and rage of sound. Dream of yet swifter motion, generated also from rude matter, yet so subtle that nerve itself uses it as an extension illimitable of its own power, and mind speaks through it over land and main whithersoever mind lists. Dream! On that centre of England of what may we not dream? and say as we wake from the reverie that these wonders that have moved round it are visions too—visions broken and gone, making room for the only thing that is not a dream, the only reality, the present, and for that which rides before it, the invisible future.

Strange, is it not, that on this spot of earth, through the which if you could only push a spindle England might turn as a dial, we should have spring up the most modern idea of a residence for the civilised *genus homo* of English breed? And yet the truth is so; and there is the town with one old church in it, and the rest like a new pin, white, clean, open-airish even, and all but beautiful.

For Leamington, let it be told, is not a town for an artist or an architect to survey critically; and if Mr. Ruskin were to live in it a month one could hardly expect to see him again the same mental Ruskin as the present critical owner of that name. There is nothing Byzantine in Leamington, at all events, but as many straight lines and right angles and as much sameness of detail as can by human ingenuity be put on the space of ground occupied. But if art has not entered largely into Leamington, there are such immediate surroundings as make up for all central defects. The country in which it is placed teems with interest, and a sick Londoner, who has read something and travelled nothing, has treats in store for him at this watering place which are quite as likely to prove restorative as the famous waters of the Spa there. Guy of Warwick's soup-kettle—I beg his pardon, I mean his punch-bowl—the dear old lady who shows you the same, tells you, with an accuracy and gravity worthy of a President of the Statistical Society, the number of gallons of brandy punch that found their way into it when my Lord of Warwick came of age, and who concludes her narrative by ringing a deafening peal on the bowl with an antediluvian pitchfork—there is enough for one day's cure alone. Then the Castle itself, with its Colt's revolver three hundred years old; its Queen Anne's bedstead, "precisely as Her Majesty slept in it," bolsters included, or one informant at least has told something rather extravagant; and pictures—such pictures, with easy chairs to view them from, that beg you to rest; and carved oak that well nigh talks to you; and damsels that outvie the pictures (my Lord's taste in this respect is beyond all praise) to chaperon you; surely that is cure enough for a week or more. Or away from Warwick to Kenilworth, and a hunt there for Trevelyan's room, and the bridge, and the banqueting-hall, and a snug corner just out of the sun with Kenilworth to look on in its ruined glory and Kenilworth to read in its living beauty; here is another week of cure. And should not this suffice, within still easy reach is Stratford, and a small cottage in the street there English William father's butcher's shop, and William's own birth-place; the bedroom as it was when he first cried; and, almost as surely as ever you go there, a pilgrim from Yankeeland looking about him like a man dazed, and ten chances to one crying too, because, as he tells you, "he can't help it, stranger;" and down below William's school desk and scraps of relics of his; and in the town New Place; and away from the town, across the fields, Anne Hathaway's cottage, with the most excellent of women to show it, who will go so far as to let you smoke a pipe, if you do smoke, in the open chimney-corner, allow you to look up the chimney itself for the stars that are always visible through a chimney or a well,—who will tell you, meanwhile, her own pedigree in direct descent from fair Anne—who will show you a bedstead and a counterpane of ripest age, will have no nay

but that you do write your name in a book freely and at length, and will hold in reserve to the last, but will ultimately not fail to invite you to sit down in, the veritable high-back carved seat on which Mr. and Mrs. Shakespear conducted their courtship when the weather was agreeable and the old folks were asleep or prudently out of the way. Here, surely, is a cure for a fortnight, and I might, in truth, find many similar cures did time permit.

But now about this new town in the centre of England. It owes its fame to a spring of mineral water, which was not unknown altogether in the middle ages as of some medicinal value, real or supposed, but which made little noise other than its own trickling until about seventy years lang syne. In the year 1801 Leamington, then known as Leamington Priors, had a resident population of 315, and in 1803 the money raised by its parish rates was £336 8s. 10d., at 4s. 4d. in the pound.

For many long years in the olden time the land on which Leamington is built, and which lies by the side of the river Leam—hence the name—belonged to the Priory of Kenilworth. After the Conquest, however, William gave away a portion of the land on the Leam to Roger de Montgomery—a Norman lord, afterwards made Earl of Shrewsbury. The gift was not much—it was valued only at £4 per annum, and consisted of two hides of land and two mills.

Roger, Earl of Shrewsbury, died, leaving two sons, Hugh and Robert; of these Hugh died childless, and to Robert, therefore, the Leam estate, such as it was, descended, with the other estates of his father, and the title. But he did not long hold possession, for anon, in the third Norman period of Kingship, a dispute arose whether Robert, Duke of Normandy, or Henry, his brother, should ascend the throne of England.

On the death of Rufus, Henry, as we all know, seized the crown while his elder brother, the Duke of Normandy, was disporting in Syria, absorbed in the admiration of his bride, the beautiful Sybilla, daughter of the Count of Conversana. After a time, but not until Henry had established himself firmly on the throne, the Duke returned to Normandy, laid claim to the English crown, landed at Portsmouth in 1101, and sought the aid of some of the Norman lords to establish his right. Amongst his firmest adherents was the Earl of Shrewsbury, and soon an army rose which met that of Henry, but did not fight; for, after some hesitation, that worthy prelate, and dexterous royal stage manager, Archbishop Anselm, entered on a policy of mediation and succeeded in getting Robert to give up his regal claim here, on condition that all his adherents should be reinstated in the possessions they had forfeited, with certain other conditions I need not name. The treaty was completed and ratified, and Henry once more rejoiced in undisputed power; but he broke his word without much ado, and first and foremost took upon himself to punish Robert of Shrewsbury. Shrewsbury, for a time, made a show of resistance, and as he was much honoured amongst his peers they interceded for him with the king; but the intercession was of no avail, the Earl was sent adrift, fled to Normandy, lost most that he had possessed in England, and with the rest his estate on the Leam. The said estate itself now became Crown land, and was either begged by, or presented to, the Bishop of Chester, from whom, after a time, it passed into the hands of Geoffrey de Clinton, the founder of the famous priory of Kenilworth.

It would seem that Geoffrey de Clinton was twice the owner of the estate, for he parted with it after a short tenure to one Gilbert Nutricus, of Warwick, for two marks, a silver cup, and a bazantine of gold for his lady, Agnes. By some after arrangement, however, he reclaimed the property, retained it until his death, and left it to his son, who presented it with a church built upon it, and a mill, to the Priors of Kenilworth.

The land on the Leam was held by the priors from the days of the second Geoffrey de Clinton until the reign of Henry the Eighth; and it is worthy of remark that during this period there was already a famous spring, the water of which was held to possess medicinal virtues. This was the mineral spring which, within the last hundred years, after the estate became more widely known to the health seekers, was enclosed by Lord Aylesford.

The priors of Kenilworth melted, with all their gold and silver service, under the fiery force of the eighth Henry, better named King Blunderbuss. Thomas Cromwell went down there, as he went everywhere, and cleared the coast, and the hides of land on the Leam, and the church, and the mill, and the curative spring, too, fell into the fat pud of said Blunderbuss, as might be expected; and Blunderbuss kept the land on the Leam, and left it to small Edward; and Edward left it to Mary, and Mary left it to that sister of hers whom, in childhood, she tended so gently, and to clothe whom she cut up her own royal garments; and the sister, vulgarly designated Bess, took the land, but did not keep it, as we shall see anon.

I stop here to say a word or so in correction of an error, and a very common error, too, relative to the name of Cromwell. It is scarcely possible to visit any cathedral or abbey, or, indeed, any ancient religious house, without being gravely informed that certain marks of ruins or destruction which are to be shown were due to Cromwell, by which name is meant the great Lord Protector of England, His Highness Oliver Cromwell. Much, indeed, of the prejudice that in past times was felt and expressed against the Protector has been based on these attacks upon his fame. Let us, then, in justice to the first man of all the men who have sat at the head of this nation, remove the aspersion by stating the simple fact that every so-called desecration of so-called holy places is due to Thomas Cromwell, the church spoilator of the Tudor King Blunderbuss. The Cromwell of England, Oliver, had a shrewd and sound notion that the national liberties could never be safe so long as petty lords held giant castles, with men in armour within the walls; and, therefore, with a zeal for which all his successors ought to be daily thankful to him, he turned the great castles into what the printers would call "pie," without demur or dismay. The castles were the fortifications and secure hiding-places of despots, and he (Oliver) unearthed the whole despotic litter; but as regards holy places, Puritan as he was, he had for them a childish—even superstitious—reverence. Toward all sects he was tolerant and respectful, and in his time the Catholic priest, though he might read with dislike Milton's letter threatening the voice of English cannon at the gates of Rome, knew well that he could light his candles in open day, and chant mass as freely here as in Rome itself. During the whole civil war in England, the churches did not intentionally suffer; they were used by Royalists and Parliamentarians alike as Hospitals for the wounded, and as barracks, perchance, for troops; but they were not pillaged. All the pillaging had already been done by Thomas Cromwell, and little was left of value had the soldiery been inclined for sacrilege to the extreme bent of their power. The learned traveller will, I hope, henceforth remember the two Cromwells: *Thomas*, the church spoilator, and Oliver, the castle destroyer,—both strong men in their respective ways, but not to be confounded carelessly;—Thomas, the base flunkey of a base king; Oliver, a king of a king,—a king who, master of himself as well as the people, ruled both inimitably.

In one of my excursions I visited a large holy place, where the official guide pointed out to me and others that a certain row of stone virgins on a wall had all been roughly decapitated in the civil wars, owing to a body of Cromwell's soldiers having used the said heads, or necks rather, of the virgins for posts, to which they had tied their horses. As the heads and necks were some fourteen feet from the ground, I suggested the mild difficulty of a body of soldiers reining up their steeds at such an elevation, and inquired whether the legend gave any account of the length of halter or bridle of an Ironside, or whether there was any word as to the necessity of every soldier being either fourteen feet high or of his carrying a ladder to raise himself to that altitude. The dignity guide was hereupon good enough to say satirically that "the account was always as he had told it in his time," and he shook his black robe like a counsellor at a cross-grained cross-examination. I assented to the assertion, but insisted on seeing the book in which it was written; and as the whole of the listening party around had a similar wish, Mr. Dignity, the tails of his robe flying in the air, marched off for his authorities. The blackness of darkness on that unhappy man's face as he returned was appalling, and told its own tale; but he fought the matter out like a true Englishman. "It was Cromwell, Sir," said he; "I knew it was. Here is his very name." "Yes; but Thomas Cromwell?" "No, sir; Oliver." "Will you give the book to see?" "Oh, yes; you may look; there it is written specially in." And it was true; for some pundit, seeing the spoliator described merely as Cromwell, and taking no heed of the context, had written above, *with a pen*, the words, "Oliver the beast."

Back to Elizabeth the virgin, and Leamington Priors, with its church, mill, and spring. Elizabeth first gave it all to Ambrose Dudley, Earl of Warwick. Ambrose died without children, and so the place, like a bad shilling, came back to the Queen, who gave it away once again; this time to my Lord Rich, I suppose, because he did'nt want it. Upon it

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Lord Rich's descendants set little value, and it passed into the possession of several private persons, and became a small village of little landowners, labourers, and tradesmen, in which condition it remained until the springs made it a watering place.

I have said that during the period when the friars of Kenilworth held possession of the place there was a spring here, having waters of a medicinal character. The traditional value of these waters was maintained afterwards, and Guidot specially refers to them as waters possessing nitrous properties. I have more than once in these pages referred to Thomas Guidot. We have seen him in our history of Bath as a Practitioner there, and his whole life seems to have been devoted to the study of the medicinal qualities of the waters of different places. He was a man of industry, and I suppose in his day, of erudition; but I do not think he would stand much chance now in the grand scuffle. He wrote seven or eight treatises on waters, and essayed the art of satirical poetry. The other day I found a poem written by him descriptive of the life of an erratic chemist who lived in Bath in the 17th century, and was the very plague of the Esculapians. Guidot also wrote the lives of all the Medical men in Bath up to his time. He graduated at Oxford in 1666. From the remarks he makes of the spring at Leamington Priors, I have no doubt he had been there and had observed the quality of the water.

In last century there were two springs at Leamington, one called the "Dog," the other the "Bowling-green." These names, I presume, were adopted from their proximity in one case to an inn called "The Dog," and the other to a bowling-green. About the year 1739—40, one Dr. Short studied the qualities of the Leamington waters, and reported them to be calcareous in their character. He was followed by Dr. Ratty, who said the waters were charged with calcareous nitre. Afterwards—namely, in 1766, Dr. Russell drew attention to the waters and expressed in relation to them the same views as had previously been expressed by Dr. Ratty.

It remained for Dr. Kerr, of Southampton, to bring the Spa of Leamington fully before the world. Kerr was one of the shrewdest Practitioners of the last century. He was not profoundly scientific, but a gentleman of position and influence, and one who possessed a profound knowledge of the world, its weaknesses and its wants—a knowledge nowhere wanted more than amongst Practitioners of the Medical art. He was accustomed to send his patients from Northampton to the Spa, and under the force of his recommendation, the "Dog" and the "Bowling-green" had become widely known in the year 1784.

Contemporary with Kerr was Dr. Lambe, of Warwick, who also assisted in bringing the springs into prominent notice. My friend Dr. Jeaffreson says of Lambe, that although somewhat eccentric in his practical views, he was not the less a scientific man, an intelligent observer of Nature, and an accomplished Physician. He was, moreover, one of the most elegant Medical writers of his day. The springs of the neighbouring villages, continues Dr. Jeaffreson, did not escape Lambe's observation, and having carefully studied and analysed the waters, he published an account of them in 1797, in the fifth volume of the *Transactions* of the Philosophical Society of Manchester—a Society embracing the respected names of Priestley, Dalton, and Watt, and not, perhaps, inferior to any contemporary Association in Europe.

One other well-known Physician took part in the same labour; I mean Dr. Johnstone, of Birmingham. Recognised as he and many members of his family have always been for soundness of Professional judgment, common-sense, and directness of purpose, Dr. Johnstone's influence was second to none, and as he commanded an extensive practice in the most rising district of the midland counties, he contributed largely to results which he did not foresee. In the year 1790 a third well was opened, and Leamington was an acknowledged watering-place.

Up to this time I have referred only to the Medical men who took part in the foundation of Leamington as it is, but there were others who should be named. A gentleman by the name of Abbotts erected the first baths, in 1786, and by his public enterprise and zeal, added not a little to the improvement of the then village. Mr. Abbotts at this time has a worthy living representative, who belongs to our own Profession—I refer to Dr. Abbotts Smith, who is directly descended from him.

There was also a small tradesman in the first days of Leamington who, by native wit, drollery, and energy, added his mite to the effort. This man's name was Benjamin Satchell. Satchell claimed to be a poet, and he certainly was a jingler. He had a charitable mania, moreover, and is called the founder of the Spa charity. Whenever a great personage came to Leamington, Poet Satchell at once set upon him. His plan was to begin by writing a poem on the said personage, which poem set forth every virtue, as preliminary; then it slid on to the question of duties; and finally craved for the spa charity. One can rather imagine that Poet Satchell was occasionally a sad bore, but he was clearly an amiable man, zealous and unselfish, so that he became a local celebrity, lived respected, died lamented, and got, I believe, a tombstone to his memory.

Such is a brief outline of the rise of Leamington—a town of spas, at present one of the most fashionable of this country; a town which has its large grammar school, its club-house, its pump-room, its baths, and magnificent gardens; a town which every Medical man who can afford the time ought to visit, and respecting which every man ought to know something; a town which a century ago would hardly be known by name twenty miles from itself, and in which there was not one Medical Practitioner, but which is now supplied with the best Medical talent in abundance, and which this year received for four days, in princely style, the largest Medical Association in the world.

Leamington as a Health Resort.

The town of Leamington as a resort for invalids possesses many and special advantages. It is so easy of access from all parts of England that the most wearied patient who can travel at all can reach it with ease and convenience. It also has the advantage of being a place in which persons of divers means may live in comfort. For the wealthy there is every kind of accommodation; houses that are in fact mansions, and portions of houses, presenting all that can be desired. For patients of small means there is, as I found on making personal inquiry, ample accommodation at terms comparatively moderate by the side of what is asked in other places less accessible, and certainly not more respectable, hardly to say fashionable. In this respect of accommodation, Leamington contrasts most favourably with certain of our sea-side resorts, such, for example, as Brighton. The houses are roomy, and fairly ventilated; the windows as a rule are made to open by the upper as well as the lower sash; the sitting-rooms are large and well lighted; the bedrooms are nearly all provided with fire-places; and the drainage of each tenement is as effective as could be wished. Further, although Leamington is a town to which people of quality and, of course, pride are wont to repair, there is less distinction of classes than generally prevails in health resorts; a better feeling, at all events, subsists between classes than in most other towns where the sick go for mental and for bodily health.

The mention of this last advantage may appear to some unnecessary or even frivolous; not so to the practical physician. The physician who understands a little of human nature, beyond the mere casual insights and guesses of the world, soon detects that there is in nearly every case of chronic disease an aspect of treatment, yes, and of cure too, that is in its nature purely psychological. If I remember correctly Sir Henry Holland has somewhere said that he has known the mere changing of the furniture of the sick room exert a salutary influence on the body of the sick man, by virtue of the physical influence conveyed to the corporeal organism, and to the organic functions of the organism, through the impressions effected on the organ of the mind. There is undoubtedly a great truth embodied in this simple observation, and the Physician who ignores the truth in this regard, and trusts to medicinal aids and foods—apart from mental aids—has forgotten precisely one third of the most successful part of his art. With respect to towns to which invalids are to be sent for health, the Medical man is bound, therefore, to consider in every case the possible influence of the town on the mental tendencies of his patient. It has fallen to my experience, more than once, to see symptoms of disease greatly exaggerated by unintentional slights, on persons of limited means and simple manners, in health resorts where no one is considered worthy of note or notice who fails either to bring money into the market, or good introductions to "important people." On the other side, I have seen the process of recovery largely benefited by the fortunate entrance of the sick man into a society new to him, but agreeable to him, and considerate of his peculiarities. These remarks refer with peculiar meaning to cases of disease in which there is much cerebral or nervous disturbance, as in diabetes, intermittent

action of the heart, malignant disease, confirmed dyspepsia, hypochondriasis, melancholia, and in short every malady in which the tendency of the affection is to bend the mind to depression, with recurring attacks of irritability and morbid sensitiveness.

There are towns in which class prejudices so entirely rule the day, that none but privileged classes can enter them with so much as a prospect of advantage. Leamington, however, is not one of these; a modern town, it has risen to its position on more advanced and liberal views. Like every place that has had its origin since the famous 1789, the *sans culotte* principle has imperceptibly mellowed the tone of the *ton*, and men and women who may not actually mix, can at least meet and pass without offence, and with charity and goodwill.

Quite irrespective of the points of attraction around Leamington to which I have drawn attention in the opening paragraphs, there are, in fact, many inducements for outdoor exercise within the town itself. The streets are open, extremely level, well paved, and clean; and, as the greater portion of the town is built on gravelly soil, it is soon dry under foot, even after profuse rain. There are, moreover, beautiful gardens, of some twenty acres extent, called the Jephson Gardens, so named after Dr. Jephson, at present a retired Physician in the town, and one who for many years has held a leading position there. These gardens, laid out with great taste, are specially appropriate for invalids; and I wonder that in many other watering-places similar recreation grounds are not provided for visitors.

Leamington, like Bath, is wanting in one important provision—I mean a winter garden. I have pointed out more than once in these papers this desideratum. There is no town in England that possesses a winter garden for the sick; that is to say, if we except Sydenham and its Crystal Palace, one part of which does, unintentionally, yield the advantage of a winter garden. Of course, there is no place like Bath for carrying out the project of a winter garden effectively, because there the hot water necessary for sustaining temperature comes from the bowels of the earth, heated ready and requiring only to be applied. In Leamington artificial means would have to be brought into use; certainly for heating, and perhaps for the conveyance of water. But Leamington is a convenient site, the Leamingtonians are an enterprising people, and a winter garden would pay. Why, therefore, may we not expect Leamington to supply an unquestionable demand? Our Medical brethren in this centre of England might certainly do a worse thing than call the attention of their townsmen to this friendly suggestion.

The climate of the town presents little variability, and is not generally complained of by sufferers from any kind of disorder. It has not the bracing character of Scarborough, nor the mild, almost relaxing character of towns on the southern coast, hence it is borne moderately well, under varying conditions of disease. This point has been strongly insisted upon by Dr. Jeaffreson, who in his Presidential address at the last meeting of the British Medical Association, makes the following remarks:—"Its climate, by many asserted to be relaxing, is really a very medium one, and consequently well suited to the majority. In a town frequented by visitors from such various quarters, it is curious to observe how each one criticises its climate in relation to the parts they have previously inhabited. Thus, in a single morning's round, I have been told by different persons that they find the place 'relaxing,' 'bracing,' 'hot,' 'cold,' 'damp,' 'dry,' etc. Its rainfall is considerably under the average, and its streets, whether from the nature of the soil, good drainage, or other causes, have the property of drying up with the greatest rapidity, a consideration by no means unimportant to the invalid. There is a certain softness in the air; and I have found it admirably adapted to many cases of phthisis, chronic bronchitis, and asthma, especially during the winter months. Due probably to its soil, rather than its atmosphere, it will be frequently found, in the early spring and winter, that whilst in Leamington and its immediate environs, the ground remains soft, it is frozen at no great distance from the town."

The conclusions here arrived at are, I believe, in strict accordance with the general experience, and afford a good guide to Practitioners generally as to the climatic advantages or disadvantages of Leamington for the sick under their care.

(To be continued.)

REVIEWS.

Outlines of Elementary Botany for the Use of Students. By Alexander Silver, M.A., C.M., M.D., etc. London: Renshaw. Pp. 381.

In noticing the death of Professor Lindley, we lately took occasion to remark on the decay of botanical study amongst the present generation of Medical students. That such decay exists will be acknowledged by all who know much of the present state of Medical education. We think it may be accounted for by several considerations, amongst which the principal is the laxity of most of the examining Boards. At some no special botanical knowledge is required from the student beyond the slight smattering necessary to refer a few of the principal vegetable drugs to the natural orders whence they are derived—a mere list of names got up for the examination, and forgotten as soon as it is passed. At others it is true that botany keeps its place as a separate subject of examination, but there is a tacit understanding between the students and the examiners that the former will not be "plucked" on it provided a fair knowledge of other subjects be exhibited. The result, as might be expected, is that the most charming of the natural sciences, which for centuries was the special handmaid of Medicine, and advanced with it *pari passu*, is practically divorced from its time-honoured position in Medical education. Another reason for the distaste for botany now manifested may probably be found in the mass of Greek and Latin terms with which the science has been very unnecessarily overlaid, and which must prevent it ever becoming thoroughly popular. Like many of the terms of anatomy, they only burthen the memory, whilst they fail to convey the meaning originally intended.

If anything in the shape of a book could tempt Medical students to give a short time to this most pleasurable pursuit, it would, we think, be Dr. Silver's. Portable, compact, well printed in good type, and profusely illustrated, it has a most inviting look, and is just the book we should take as a companion in a Saturday afternoon's ramble, were we students again. It is divided into five sections. The first is on Morphology, or the Forms of Plants; the second, on the Physiological Anatomy and Physiology of Plants; the third, on the Nosology or Pathology of the Vegetable Kingdom; the fourth, on Systematic Botany; the fifth is on Geographical and Palæontological Botany. All these subjects are treated of, and well treated, in the compass of a volume that will go in the breast pocket of an overcoat.

The book appears to have been compiled with an eye specially to the requirements, both as to learning and leisure, of Medical students. In the section on Morphology the descriptions of the different parts of plants, as the root, the leaf, the flower, the stem, are each concluded with a list of the officinal roots, leaves, woods, barks, petals, etc. The description of the natural orders in the systematic part of the work contains notices of all the officinal plants, the part used in medicine, and the medicinal properties. A glance at the schedules or diagrams, employed to represent the number of sepals, petals, stamens, and pistils, conveys a knowledge of the type of the family as regards the floral organs, whilst the other characteristics are concisely but accurately summed up in three or four lines; and certainly Dr. Silver's book is less loaded with quasi-classical terms than most of the botanical handbooks we have seen.

The short section in which the author gives a sketch of what is known of Vegetable Pathology is not the least interesting part of the book. He arranges vegetable diseases under three heads. 1. Diseases dependent on abnormalities of the ordinary conditions of vegetable life—such, for instance, as stunted growth and weakness from bad soil—Diseases from too much heat, cold, evaporation, the absence of light, etc. 2. Diseases from superadded conditions—such as noxious gases in the air or mineral irritants, and even some of the vegetable poisons, in the soil. 3. But by far the greatest number of vegetable diseases depend on parasites, especially on vegetable fungi. The various diseases of grain, such as "bunt" in wheat, smut in oats, rust, mildew, the ergot in rye, all depend on different fungi. The dry rot in timber and the potato disease are both caused or accompanied by these low vegetable growths. Amongst the animal parasites the aphides or plant lice are perhaps the most destructive and universal, and they would do much more damage than they do in our gardens were it not that they are devoured in large quantities by the pretty little beetle the "lady-bird."

We cordially recommend Dr. Silver's capital little compilation, and we hope that it may be a means of reviving that interest for botany which has of late years sadly flagged, at least in Metropolitan Medical Schools.

Letts' Medical Diary for the Year 1866 *; especially providing for all matters connected with Daily Visits, Accouchements, Vaccinations, &c.* London: Letts, Son, and Co.

We believe that Messrs. Letts' Medical Diary is so well known in the Profession, and so thoroughly appreciated, that anything we can say in its praise would have little effect in increasing its circulation. In the size and garb of an ordinary pocket-book it unites the day-book, the private memorandum-book and almanack, with a fund of miscellaneous information —*e.g.*, directions how to make a will, how to obtain a passport, tables for calculating wages, tenure of life, comparison of weights, and all sorts of waifs and strays of information which one never knows when he may want or where to look for. The system which the proper use of the book imposes cannot but foster and improve habits of method and accuracy in the management of a practice, and must tend materially to lighten the labours of the busy Practitioner. It is neat, handy, and well got up. We have used it now for several years, and we believe it to be as good, as useful, and as cheap a Medical day-book and pocket-book as ever was published.

Notes in Practical Surgery. By Geo. H. Porter, M.D., T.C.D., F.R.C.S.I. Dublin: John Falconer. 1855. p. 16.

The name of Porter is so distinguished in the records of Dublin Surgery, that the pamphlet before us would at any time obtain due notice. Dr. Porter commences by an expression of regret that "the valuable Dublin Hospital reports have not been continued in the same able manner in which they were written and published by distinguished members of the Profession who are now at rest." To show a good example, he therefore publishes a few from his own note-book, and considers four successful cases of lithotomy as the most important. The first is that of a man, aged 38, who two years previous to his application, felt a severe pain in his loins, and immediately afterwards passed bloody urine. Subsequently his sufferings were intense, and on September 21 he was sounded by Dr. Porter. A calculus was discovered, and an attempt made to measure the stone by Mr. L. Estrange's lithometre, which failed, as the stone could not be grasped.

On October 1, Dr. Porter operated; his method seems somewhat novel to us in some of its steps. He begins by kneeling on his right knee, and at p. 10 says, "In order to accomplish this—*i.e.*, what he terms 'striking the staff'—it is necessary to lower the wrist, and therefore considers the kneeling position." We should ourselves greatly prefer a chair suited to our own height and that of the table, both for security and freedom of action, and facility of escape from those sudden fæcal discharges so common even in the best prepared cases, especially as the finger is withdrawn from the rectum but before the cutting begins. He advises the first incision to be long, and the knife then directed from the *lowest* part of the wound. Now, after a small quantity of water escaped from the wound, he "rapidly withdrew the instrument making it cut its way out, laid it (Fergusson's *knife*) aside, and passed Crampton's *lithotome* along the staff and "thus cut the prostate to a sufficient extent." Having felt the stone, he "introduced a *blunt gorget*, and, guided by the gorget, the forceps," and extracted the stone. He introduces a tube after the operation, a *canule à chemise.*

The other cases were much the same, and are followed by some interesting remarks. He prefers a moderate quantity of fluid in the bladder, and thinks that infiltration of urine is more probably caused by a want of correspondence in the different incisions as the knife "travels to the bladder."

Dr. Porter gives a minute account of a case of popliteal aneurism cured by digital pressure, which he prefers to that effected by instruments, in which he seems to have been kindly and intelligently assisted by his pupils. The treatment was began April 19. On April 20, at 12, the tumour was solidified, and at 7 p.m. of that day the pressure was finally discontinued. He was kept in bed for a fortnight from this date with the leg "rolled in flannel, and the tumour gently rubbed every night with a liniment of lin. saponis, ʒij.; potass. iodid., gr. xv." He was then allowed to get up and move about the ward on crutches. We envy Dr. Porter for having been the conductor of this splendidly successful case. The author adds some suggestions that the relative coagulability of blood in different cases, as suggested by Mr. L'Estrange, should be ascertained by "taking a small quantity of blood from each of the patients who have been cured by pressure." This is certainly ingenious; but we doubt whether patients, especially Irishmen, would care about bleeding in such a cause, unless the blood-letting was effected with shillelahs,—perhaps, indeed, they may be Fenians, in which case they are no doubt ready and willing to shed their blood. In any case, it's a very cool proposal.

The last case is one in which acupressure was used, which he says is "*more tedious* than the ligature;" but nothing can be more so than on some occasions tying the spermatic vessels. Dr. Porter seems well satisfied with the needles in this case.

All Dr. Porter's cases are well and clearly stated, and are of great Professional importance. There is a little redundance of style. His knife "travels" and "*strikes*," and he exclaims, "Ah! how fearful it would be to cut into a bladder for a stone that wasn't in it!" Fearful indeed! We recommend this pamphlet to our readers.

GENERAL CORRESPONDENCE.

THE ILLNESS OF THE CHEMICAL ASSISTANTS IN THE LABORATORY OF ST. BARTHOLOMEW'S.

Letter from Professor E. Frankland.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your impression of Saturday last I find a copy of a letter addressed to the Editor of *Cosmos*, in which the writer, Dr. T. L. Phipson, accuses me of having caused the death of one of my assistants and the hopeless illness of a second, by compelling them to prepare for me mercuric methide in the laboratory of St. Bartholomew's Hospital.

Will you permit me to say that the whole story, so far as I am concerned, is a pure invention of Dr. Phipson's? The two gentlemen, with whose fate I deeply sympathise, were never my assistants; they never made a preparation of any kind for me, nor have I been in any way connected during the last two years with the laboratory of St. Bartholomew's Hospital. I also happen to know that the very serious charges which Dr. Phipson has thought proper to found upon this most lamentable accident are equally false when applied to my eminent successor at St. Bartholomew's Hospital.

I am, &c. E. Frankland.

Royal Institution of Great Britain, November 27.

"ICE BAGS IN CHOLERA."

Letter from Dr. Chapman.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am not ashamed to confess that the therapeutical innovation with which my name is associated, and to which you adverted last week under the above title, is the result of a method of procedure which has long been eschewed as mischievous theorising—a method which, in respect to Medicine, may be described as the deductive application of the discoveries of physiology to explain the nature of diseases, and to establish a principle, or principles, of Medical treatment. I believe, however, that in the eyes of the representatives of Medical science, this method is now finding increasing favour, and I am happy to say that, in the opinion of the most authoritative logician, Mr. J. S. Mill, it is the only one likely to lead to any real progress in dealing with the very complex phenomena of living organisms. (a)

I have adopted this method both from inclination and from conviction of its soundness, and almost all that I have done—whatever that may be—I have done by its guidance. It enabled me to predict that ice along the spine would increase the general circulation, would, *inter alia*, stop the cramps of voluntary and involuntary muscles, would prove an effective remedy in epilepsy and other convulsive affections, would cure sea-sickness, would restrain the sickness of pregnancy and symptomatic vomiting generally, would arrest diarrhœa, would recover patients from the cold stage of cholera, sub-

(a) "Deduction is the great scientific work of the present and of future ages. The portion henceforth reserved for specific experience in the achievements of science is mainly that of suggesting hints to be followed up by the deductive inquirer, and of confirming or checking his conclusions."—*Mill's* "*Logic*," Second Edition, vol. i., p. 560.

duing, meanwhile, every symptom of the disease, and finally, would promote menstruation. On the other hand, I predicted that heat along the spine would lessen the general circulation, would, among other things, overcome congestion in all parts of the body, would lessen fever, would restrain hæmorrhage, and notably would lessen or arrest the menstrual flow. These predictions, as I affirm, have been fulfilled over and over again. You will not be surprised, therefore, if I remain faithful to a method which has led me to do these things, and still hold fast the conviction that the application of cold and heat along the spine "is based on sound physiological principles." But I can scarcely hope that what I have done will diminish your reprobation of the method itself. For, obviously, in proportion as it is justified by success, empiricism, even when as enlightened as that which you advocate, is discredited; and I cannot wonder at your suspicious inquisition into both the method and the results of the method which, by its achievement, puts its rival in the shade.

But while resisting the tempting invitation which your somewhat *brusque* criticism holds out to me to defend my doctrines, as I affirm myself able to do, I cannot close these preliminary remarks without adverting to the fact that you characterise my discussion of the pathology of sea-sickness as consisting of a chain of "slap-dash deductions," and express much doubt of the safety of many of the links. Of course, literary and philosophical, as well as Medical, Doctors differ. I beg, therefore, to avail myself of a second opinion—that, namely, of the *Saturday Review*, which, in respect to methods of inquiry, is entitled to speak with authority equal to that of a Medical journal, and which says—"Whatever doubts may be entertained as to the soundness of some of Dr. Chapman's inferences, there can be none as to the thoroughly philosophical spirit in which the investition has been pursued."

I have two thick folio volumes, the one full and the other half full, of carefully-recorded facts observed by myself, facts constituting collectively a body of evidence, which it will be impossible to gainsay, that the remedial power which may be exerted by modifying the temperature of the spinal region is of the nature and magnitude I have alleged. But as they would perhaps be classed among "the mere imaginings of enthusiasts," I shall adduce none of them here, unless it may be such as have been attested by at least one other Professional observer. I prefer to prove the efficacy of the remedial method in question by the testimony of witnesses who cannot be suspected of being biassed either by theory or enthusiasm in its favour.

First as to the power of ice along the spine to influence the spinal cord:—The late Dr. Todd, who entirely misconceived the nature of the influence on the general circulation which is exerted by ice applied along the spine, and who stated it to be exactly the reverse of what it is, testified that "cold has a powerful effect in depolarising the spinal cord. I have tried it," he says, "with great advantage in tetanus, in laryngismus, and in the convulsions of children. . . In the cases in which I have tried it," he adds, "I have found it manifestly beneficial in diminishing the intensity of the spasms." [Unfortunately, Dr. Todd's false doctrine that ice along the spine "has a very powerful influence in diminishing both the force and frequency of the heart's action," precluded him from freely availing himself of this remedy.]

In the *Medical Times and Gazette* for March 12, 1864, there is a report of a case of "Emprosthotonos(?)," treated by Dr. James Edmunds by means of ice. The following is a summary of that report:—January 21.—A married woman, 28 years old, healthy, intelligent, and free from flightiness or hysteria, went to bed quite well; on rising next morning at 7.30 her fingers were slightly benumbed; between 9 and 10 they suddenly turned in; the flexion became rapidly more intense; a cramp-like pain in the arms ensued; and soon the lower limbs from the knees downwards became affected in a similar way, but less severely. The symptoms continued to increase throughout the day, and at 10 p.m., when Dr. Edmunds first saw the patient, there was extreme and rigid flexion of her hands and arms; her head was so drawn forwards that the backs of the wrists were fixed close to her mouth; her spine was bent forwards, and her knees were bent and drawn upwards. Her forearms were hard and rigid, and the wrists were so fully flexed that her hands were forced open, and her legs were similarly affected, but in a much less degree. Her neck became turgid, her respiration somewhat constrained, there was an expression of great anxiety and pain upon the face, and the lips were sufficiently retracted to show the teeth. Her mind and manner continued clear and rational; but the tearing cramp-like pain forced from her a continual moaning scream. During the evening she suffered so much that her screams could be heard across the road. She was becoming rapidly exhausted, and "it was manifest that unless speedily relieved she would die either from exhaustion or from spasms of the respiratory muscles." Between 11 and 12 a.m. she was first seen by Dr. S. C. Griffith, who ordered her aperient medicine. After taking one dose she was slightly sick. At 1 p.m. Dr. Webber saw her in consultation, "noted her pulse as slow and weak, about 60," ordered sulphuric ether and anti-spasmodics at once, and a dose of morphia in a few hours if the pain should not abate. The morphia was given, and afterwards "all her symptoms were aggravated." Dr. Edmunds ordered ice to the spine. Her husband applied it continuously to the whole length of the spine for seven hours. The screaming and moans were at once mitigated by the ice, and within about half-an-hour from its first application had ceased entirely. In two hours her feet became flexible. About 8 a.m. on the 23rd the spasms had so far subsided that she could open her hands, but the numbness remained. Her pulse had increased in volume, and had risen to 76. On the morning of the 24th the numbness entirely disappeared; she had no return of cramps or spasms, but a little subacute bronchitis and hoarseness hung about her for ten or twelve days. She then regained her usual health.

At the close of his report, Dr. Edmunds observes: "I had seen Dr. Chapman's *brochure* on the subject of his discovery, and also his paper in the *Medical Times and Gazette*, but thought the idea too pretty to be anything more than a plausible theory, until my own child being in great danger from an obstinate laryngismus connected with dentition, I tried the ice-bag, to the cervico-dorsal portion of the spine, at the suggestion of Dr. Ramskill, and it has certainly done more to keep off the strangling attacks than anything else.

"Dr. Ramskill has not only adopted this treatment largely, but speaks of it to me with the greatest confidence in the treatment even of epilepsy, and in his practice it seems to be the means of doing great good, and, in many cases, of keeping the fits almost entirely in abeyance."

In the *Medical Times and Gazette* for May 28, 1864, there is an account of a case of paralysis relieved by ice, by F. Broughton, F.R.C.S., Surgeon-Major, Bombay Army. The following is a summary of his report:—In October, 1863, he visited a poor girl, J. D., aged 21, who had been confined to her bed for upwards of a year. There was entire loss of sensation and motion from a little above the knees downwards, in both inferior extremities. She could not turn herself in any way, but was treated by her mother and sister in every respect as an infant. There was neither wasting nor rigidity of the muscles of the legs; but the feet were both stiff and attenuated. Pricking and cutting the skin of both legs produced neither pain nor twitching. No curvature of the spine could be detected; but there was extreme tenderness on pressure in the lower cervical and in the dorsal region. Her general health was good; menstruation natural; had never shown symptoms of hysteria; but had been long troubled by weakness and pain in the back, which had caused her to limp on one leg. The pain in the back increased, and, as up to the period when Mr. Broughton first saw her much and varied treatment had been resorted to in vain, she and her parents had given up all hope of recovery. Having had his attention directed to the agency of ice in such cases, by reading my paper on the subject, he ordered ice to be applied to the spine daily during two hours, each application being followed by prolonged friction down the spine to the extremities. At the end of ten days a little sensation was experienced in her feet. This was soon followed by slight motion, and by the middle of November she could turn herself in bed. The treatment was continued, and by December 1st she was able to stand and move about the room. She improved so rapidly that "on Christmas-day," he says, "I had the satisfaction of meeting her walking in the streets of the village in which she resides." He adds: "I saw her on February 29th, as I was then leaving the neighbourhood, and found her quite able to conduct the ordinary duties of a cottage household." No medicines were employed in the treatment of this case.

Dr. J. G. Wilkinson (a homœopathist)(b) has reported to

(b) As vaso-motor therapeutics involve the treatment of the cold stage of a fever by cold, and of the hot stage by heat, to the spine, the method proves very attractive to homœopathists, and puts them in possession of a potent remedial agent, which the truly faithful followers of Hahnemann must, I imagine, be sometimes very glad of.

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me that a child at Blackheath, which suffered from frequent convulsions, and which during six months had been treated by various methods unsuccessfully, was cured completely by ice, which he ordered to be applied to the spine.

Dr. Wilson, an eminent Physician of Philadelphia, has written to inform me that he has had remarkable success in treating the convulsions as well as the cholera of infants by means of ice along the spine.

I shall hereafter furnish abundant and indisputable testimony from competent Medical witnesses that ice along the spine abolishes the cramps of cholera. It will, I presume, be admitted that, whatever may be the predisposing cause, the exciting cause of these cramps consists in an abnormal state of the spinal cord. Now, if ice so applied does abolish them, it is difficult to escape the conclusion that it does so by modifying the condition of the cord. As a proof how rapidly it may do so, I will mention a fact stated in my lecture to the Hampshire Medico-Chirurgical Society, at Southampton, attested at the close of the lecture by Dr. Cheesman, who witnessed it, and recorded in my report, entitled "Cholera at Southampton," published in the *Medical Times and Gazette*, October 14 last. Mrs. B., suffering from cholera, was first seen by me October 3, at 9 p.m., in presence of Dr. Cheesman. "At that time the vomiting, purging, and cramps, which had also invaded the chest and abdomen, persisted undiminished. The muscles of the extremities were hard, somewhat board-like, showing them to be in a state of tonic spasm. . . . . At 9.50 p.m. I applied ice along the whole spine. At 9.55 the hard muscles had become soft and flaccid. At 10 p.m. she fell asleep, and, excepting an interval of ten or fifteen minutes, slept an hour and a-half.

I will conclude this letter by adverting to your statements of alleged facts concerning the state of the intestines of persons who have died in the algide stage of cholera. You may have observed in cases of cholera "red-currant jelly stools; florid blood poured out from the mucous membrane, and mixed with the rice-water;" but such an occurrence is rare, and forms no part of the symptoms of a typical case of cholera. Dr. Wood ("Practice of Medicine") says "a little blood is occasionally discharged;" and in another American work ("Theory and Practice of Medicine," by Bell and Stokes) there is a similar statement; but no mention is made of this symptom by Dr. Parkes, in his careful monograph; by Dr. Watson, in his "Lectures;" by Dr. Aitken, in his "Science and Practice of Medicine;" by Dr. Copland in his Dictionary; or by Drs. Baly and Gull in their admirable Report drawn up for the College of Physicians. Dr. Copland mentions that blood is sometimes mixed with the stools during the reactionary fever; but this is in perfect accordance with the theory I have announced. Moreover, it is generally admitted that when blood is passed from the bowels, it is most commonly exuded as a consequence of venous congestion, and this is the condition which, as I maintain, exists during the algide stage of cholera. I have nowhere said that the "alimentary canal is deprived of vascularity;" but I do say that its arteries are intensely contracted; that its veins are loaded with all but stagnant blood; that the post-mortem phenomena confirm these statements; and that the numerous pathologists cited by Dr. Gull in his Report on the "Morbid Anatomy," etc., of cholera concur in proving that the hyperæmia of the small intestines of persons dying in the algide stage is in no degree arterial, and that the rose-tint, when observable, of the mucous membrane, is due to "a fulness of the smaller veins."

Next week, with your permission, I will furnish evidence from "impartial witnesses" that by modifying the temperature of the spinal region the circulation of the blood may be increased or lessened. I am, &c.

JOHN CHAPMAN.

25, Somerset-street, W., November 28.

THE CHOLERA IN PARIS.—The cholera still hangs about Paris in a disquieting manner, from 31 to 43 deaths having taken place daily between the 14th and 21st November. The total number of deaths from the commencement of the epidemic is 5768—viz., 1787 in the Hospitals and 3981 *à domicile*.—*Gazette Médicale*, November 25.

HIPPOPHAGY IN PARIS.—The Administration has authorised the opening of shops for the sale of horseflesh, under the same regulations which govern the ordinary butchers' shops, a special abattoir providing the "meat." Similar shops exist already in Vienna, Berlin, Stockholm, and Copenhagen.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 14.

Dr. ALDERSON, F.R.S., President.

DR. GARROD communicated a paper by Mr. Charles E. Squarey,

ON THE INFLUENCE OF THE INGESTION OF COFFEE ON THE UREA AND CHLORIDES IN THE URINE.

Observations were made on three cases whilst Mr. Squarey was residing at University College Hospital as Physician's Assistant. The coffee was taken three times daily, at first in quarter-ounce doses, and gradually increased, till in the third case from four to six ounces were taken each day. The temperature in two of the cases was taken night and morning, and was never found to be above or below the limits of health. The urine was collected every morning at eight a.m., and examined the same day for urea and chlorides. Both analyses were made by Liebig's volumetric method. *Urea.*—In the first case the observations were carried on for six weeks. The patient's health was good the whole time, and he never complained of any uneasy sensation after taking the coffee. It was taken three times daily in quarter-ounce doses every alternate week. On comparing corresponding weeks of coffee and non-coffee taking no appreciable difference is to be found. The greatest is in the first and second weeks. The daily average in the second week, when quarter-ounce doses of coffee were taken three times each day, was 2·198 grammes more than in the first week, when no coffee was taken; in the third and fourth weeks the daily average was less by ·424 of a gramme in the fourth week when coffee was taken; in the fifth and sixth weeks the daily average was less by ·515 of a gramme in the sixth week when no coffee was taken. In the second case the observations, owing to an attack of tonsillitis supervening, and the patient leaving the Hospital immediately on recovery, were only continued for one week, so that the influence of the coffee can only be judged of by comparing the amount of urea passed per kilogramme of body weight with the normal amount in health. The patient's age was seventeen years; his weight was 115 lbs., or 52 kilogrammes; and he passed on the average ·428 of a gramme of urea per kilogramme of body weight. He was taking half-ounce doses of coffee three times daily. In the third case the observations were carried on for ten weeks. On comparing the first and second weeks, it is found that the daily average was greater in the second, when three cups of a strong infusion of coffee were taken three times each day, by ·381 of a gramme. On comparing the third and fourth weeks, a great diminution is found in the daily average of the latter, when quarter-ounce doses of coffee were taken three times daily; it was less by 5·099 grammes. Yet in the fifth week, when the same amount of coffee was taken, and in the seventh week, when half an ounce was taken twice a day, and in the eighth week, when half an ounce was taken three times a day, the daily average was greater than in the sixth, when no coffee was taken; so that, although the daily average was lessened one week when quarter-ounce doses of coffee were taken, yet it did not rise when the coffee was left off, or become again diminished when the same and even larger doses were taken. The daily average in the ninth week, when from one and a-half to six ounces of coffee were taken each day, was less by 4·795 grammes than in the tenth week, when no coffee was taken; but in the tenth week, the patient not feeling well, the diet, which up to this time had been very strict, was varied, his health and appetite improved, and with it there was naturally a daily increase in the excretion of urea. From these results, Mr. Squarey argues that coffee in the above doses certainly does not increase the excretion of urea, or diminish it to any appreciable extent; for he says that the slight difference that occurred in the daily average of the six consecutive weeks in the first case was by no means beyond the limits of health. That in the second case the amount of urea excreted per kilogramme of body weight was quite normal. That although in the third case there was the large diminution of five grammes in the daily average of the fourth week, when coffee was taken, yet this diminution did not recur when the same and even larger doses were taken; nor did the daily average rise when the coffee was left off, which

it should have done had the decrease been entirely due to the influence of the coffee. That, according to Dr. Parkes, the decrease of five grammes in the daily average is not beyond the limits of health; for Dr. Parkes, in his book on the Urine, page 8, says that "the maximum and minimum amounts of urea passed on any one day by an individual are usually about one-fifth above and below his mean amount;" so that in the third case, the patient passing on the average between thirty and thirty-five grammes, an increase or diminution of six grammes would be within the normal limits. *Chlorides.*—In the first case the daily average of the two weeks, when coffee was taken in quarter-ounce doses, was as nearly as possible the same as in the two corresponding weeks when no coffee was taken; the amount excreted per kilogramme of body weight being quite normal. In the second case, half-ounce doses of coffee being taken three times daily, the amount of chlorides excreted per kilogramme of body weight was ·162 of a gramme—a rather large, but certainly not abnormal proportion for a boy aged 17, and weighing 52 kilogrammes. In the third case the rate of excretion of the chlorides was high throughout the whole course of the observations, both during the coffee taking and the non-coffee taking weeks. The amount excreted per kilogramme of body weight was highest in the seventh week, ·272 gramme, when half-ounce doses of coffee were taken twice daily; and lowest in the eighth week, ·168 of a gramme, when half-ounce doses were taken three times each day. In conclusion, Mr. Squarey states that neither of the patients suffered in any way from ill-effects from taking the coffee. There was never any giddiness, delirium, or unsteadiness of the hands. The patients invariably slept well. The pulse, noted several times, was generally found to be increased for half an hour or so after taking the coffee.

The PRESIDENT spoke in terms of commendation of the large and patient observation in the author's paper. There were, however, several points in it on which further information was required. In the first place, it was necessary to know more exactly what kind of coffee was used—whether it was Plantation or Mocha, and whether, if it had been bought ground, it had not been adulterated. Again, the amount of exercise taken during the experiments would affect their results considerably. The effect of muscular activity in increasing the amount of urea was shown by its increase in chorea. Coffee would sometimes constipate, and at others would act as an aperient.

Dr. WEBSTER said that what was often sold as coffee might scarcely be coffee, but chicory. His object, however, in rising was to remark, with great submission, that he could scarcely understand the paper. This was not due to any fault in the Secretary's reading, but to using French names for weights, which required mental calculation. He had protested before against this, and still thought that English words ought to be used before an English society. He thought, also, the subject should be studied on a more extensive scale, and suggested to the author to inquire more widely into the effects of coffee drinking. To do this, he had only to go across the Channel to France, and then to Spain, where no coffee was drunk, but only chocolate.

Mr. ROBERT DUNN communicated a paper by Mr. R. William Dunn, entitled,—

OBSERVATIONS ON THE TREATMENT OF HEREDITARY SYPHILIS; WITH CASES TREATED WITHOUT MERCURY.

The author first narrated the particulars of some cases of hereditary syphilis which had come under his observation at the Farringdon Dispensary, and which he had successfully treated with chlorate of potash, without using mercury in any form whatever. Out of fifty cases which he had thus treated, he had met with only one case of relapse, which readily yielded to a repetition of the same treatment; and three deaths, one child dying of convulsions, and the other two being in a dying state when first seen by him, The author then entered upon the general treatment of syphilis, briefly alluding to, and giving the names of, those who have advocated the non-mercurial treatment. On the authority of the *British and Foreign Medico-Chirurgical Review*, he stated that from 1800 to 1835 about 80,000 cases of syphilis had been treated without mercury. He rejoiced in the belief that non-mercurial treatment was gaining ground amongst the Profession; and owing to having been so often disappointed himself in the results of specific treatment, he had now abandoned completely the use of mercury in any form in the general treatment of syphilis. In the treatment of hereditary syphilis, he considered that we must be guided by the same general rules which we observe in treating other diseases. All remedies of a depressing or lowering character ought to be avoided; and, on the other hand, tonics, cod-liver oil, strict diet, and extreme cleanliness, were essential to successful treatment. He bore evidence to the marvellous effects upon children of chlorate of potash in combination with hydrochloric acid in this disease. Where the skin was very irritable, he recommended a bran bath, the bowels to be carefully regulated, and the child to be out in the pure air as much as possible. Sixty-three days was the longest period any child had been under his treatment, and eighteen days the shortest, the average time being about thirty days.

Mr. HENRY LEE said that if the experience of other Practitioners confirmed the results mentioned by Mr. Dunn, it would leave nothing to be desired with regard to the treatment of syphilis. Unfortunately, however, such was not the case. Out of the number of instances that Mr. Dunn had referred to, a relapse was recorded in one case only; and the death-rate of infantile syphilis was as low as 6 per cent. These results proved too much. They were altogether at variance with the experience of those who treated this disease either with or without mercury. Thus, for instance, we are informed in Professor Boeck's published work that out of forty-two children treated by him without mercury, twenty-two died; and these cases were independent of those who died without undergoing the process of treatment recommended by Dr. Boeck. Some rational explanation must therefore be sought for the great difference observed in Mr. Dunn's cases, and where the history of the patients could be traced for a longer period; and this he (Mr. Lee) believed would be found in the fact that in Dispensary practice, when mothers found their children not progressing satisfactorily, they took them elsewhere, and in cases of relapse after treatment they would naturally feel inclined to try some other remedy. If the cases thus abstracted from observation were recorded as cures, it would be the means of affording very favourable statistical returns under any mode of treatment. With regard to the treatment of syphilis generally, it constantly happened to him (Mr. Lee) to have patients who presented themselves after four or five years' of non-mercurial treatment still uncured, and regretting that they had lost so much time in fruitless attempts to obtain relief; and he also not unfrequently saw some very severe secondary symptoms after the non-mercurial plan of treatment. Indeed, some of the worst cases of secondary sloughing of the throat and of disease of the bones which he had seen occurred amongst those in which no mercury had been used. He therefore thought that, although mercury might be injudiciously given and might then produce injurious affects, the ill-consequences attributed to it in reality very often indeed depended upon other causes. We had now the means of administering this remedy without making any serious demand upon the constitutional powers; and when thus administered, with proper care, it was a most valuable remedy, and certainly not followed by the symptoms which had been attributed to it. The author of the paper had alluded to the effect of the mother's milk upon a child. Now he (Mr. Lee) did not believe that any poisonous influence could be conveyed in this way. The health of the mother might be impaired by syphilis, and the milk would become poor in consequence and the child might be ill-nourished; but this was quite a different thing from the transmission of the syphilitic poison by the milk. It was a law with regard to syphilis, that a person having that disease could with great difficulty, under any circumstances, be again infected. The child of a syphilitic mother would in all probability be itself syphilitic, and it would then be very difficult to conceive that any fresh poison could be conveyed to it. But we had proof that even a healthy child would not be affected in this way. The following case had come under his (Mr. Lee's) observation in St. George's Hospital. The patient was admitted during the summer of last year. She had had two healthy children, the youngest eight months old. She and her husband had been healthy. After her last confinement she took another child to nurse. This child proved to be syphilitic, and died three weeks before the patient's admission into the Hospital. Shortly after taking this child to nurse she noticed a sore on the right nipple, which became very hard all round. Six weeks before her admission, this patient had an eruption, presenting all the characters of syphilis, over the body, and her throat became ulcerated. During these six weeks she continued to suckle her own child as she had previously done. She, however, always kept her own child to the left breast, and the other child to the right one. Her child remained perfectly well during the time she continued in the

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Hospital, and was known to have been so in the November following. This patient had recently been confined again, and was attended from St. George's Hospital; and he (Mr. Lee) had reason to believe that the child which she suckled in the summer of 1864 remained healthy at the present time.

Dr. Drysdale said he was sorry to think that the respected Professor Boeck was absent, as he had believed that Dr. Waters' paper was to have been read, for he would doubtless have been able to have answered Mr. Lee's question. In his absence, he (Dr. Drysdale) would endeavour to give an answer. It must be remembered that the cases mentioned by the Professor in his work included many infants of but a day or two old. Now, in his own experience, such cases were almost uniformly fatal; children who were much affected by this complaint at birth were often too feeble to breathe. The cases brought forward by Mr. Dunn were not in this category. Infants were not brought to the Hospital by their mothers until they were three or four weeks old, and all of the cases cited by Mr. Dunn were of that age. It was a great and, he thought, a rather prevalent error to imagine that all syphilitic children were emaciated and cachectic; many of them were plump and well-nourished, and the "old man" look was rather the exception than the rule. There was, then, nothing surprising in Mr. Dunn's success, with the care he had taken with the cases, many of which he (Dr. Drysdale) had seen. The wonder was, that these cases should so long have been considered to require a dangerous drug like mercury. He himself, he believed, had been the first to publish a case of infantile syphilis treated without mercury. These facts completed the chain of evidence against mercury in syphilis, since it had been shown by experience of the most extensive kind that the disease in adults was always injured by the drug, instead of being alleviated. Bone disease, if it occurred without mercury, was very rare, since Syme, Weedon Cooke, and Spencer Wells had not seen cases. In fact, the empirical school of treatment of disease was losing its hold on many of the Profession, and a six months' course of mercury to cure disease depending on a blood poison would soon be considered an absurdity. Parents much mercurialised were liable to have syphilitic children far more than others.

Mr. George Cooper had seen a large number of cases of infantile syphilis at the Bloomsbury Dispensary, and had nearly always treated them with mercury. In some cases he had tried iodide of potassium, but had always been obliged to fall back on hydrargyrum c cretâ. With the latter treatment he had found the symptoms would generally yield, and that the child would improve. He thought the author's remark as to the effect of the mother's milk quite right. He thought the milk did communicate the disease, and that it continued to do so. Hence he had recommended that the child should be weaned, and be fed on cow's milk and, if necessary, on beef-tea.

Mr. Savory said: In the course of his remarks, Dr. Drysdale has repeated a statement which he made on a former occasion, to the effect that Surgeons treated syphilis empirically with mercury because they had never tried to cure it by any other means. It could not be admitted that this statement was correct; on the contrary, a very large number of cases of syphilis have been, and still are, treated by many Surgeons without any mercury whatever. I appeal to the Fellows present whether this be not so. The treatment of syphilis without mercury is surely no novelty. For myself, I may say that, during the earlier years of my Professional studies, I watched the practice of more than one Surgeon who treated almost every case of syphilis without mercury, not employing the drug once in a hundred instances; and the result of these observations, compared with subsequent ones, was to lead me to the conclusion that no medicine is comparable with mercury for controlling the progress of syphilis. In such discussions as this, the fact seems to be altogether overlooked that there is such a thing as the natural history of disease. Syphilis does not, more than any other disease, stand still and wait for the Doctor. Syphilis is the result of a poison, and, like other poisons, its operation, sooner or later, comes to an end. All poisons acting upon the animal body tend, so far as we know, either to destroy life, or finally to be eliminated from the system; and there is no reason to believe that syphilis is an exception. Syphilis, as a rule, does not tend to kill, but gradually to die out of—to lose its influence on—the system; very gradually, it is true, inasmuch as we possess but too abundant evidence to show that it may be carried on under the second, or even third, generation. But then it must not be forgotten that time is most important in modifying or subduing its potency; for, as a rule, it may, perhaps, be said that in proportion to the duration of syphilis so is the activity of the poison reduced; and thus when we treat hereditary, or, as it should rather be called, inherited syphilis, we have a very different condition to cope with from syphilis as it appears soon after inoculation. Thus, in looking over the literature of syphilis, one can observe that various drugs are reputed to possess a more remarkable influence over syphilis in proportion to the length of time it has existed in the body. Iodide of potassium, for instance, is put forth by Gross and others as an efficient remedy for the removal of the later symptoms of constitutional syphilis. In illustration that this fact is too often overlooked, I would refer to what has just fallen from Mr. Lee, who, in reply to Mr. Dunn's statement that hereditary syphilis in infants may be cured by chlorate of potash, quoted the fact that mercury alone had the power of completely curing recently-contracted syphilis in the adult. But the conditions are different. Syphilis may, at length, finally disappear under, or appear to succumb to, the employment of means which are powerless to control it in the earlier stages of its progress. The influence of syphilis, mischievous and enduring as it is, cannot run on for ever. It naturally tends to pass away in the course of time.

Mr. Spencer Wells asked the author if he thought the administration of the small doses of chlorate of potash had any sort of effect. Recently Dr. Gull and Dr. Sutton had published cases of rheumatic fever treated by mint water. This would do good only by amusing the patient, and perhaps the chlorate of potash might be useful by amusing the mother of the syphilitic infant. It would be very interesting to observe the comparative effects of chlorate of potash and some completely neutral drug.

Mr. Dunn, in his reply, stated that he had faith in the curative effect of chlorate of potash in the treatment of hereditary syphilis. As regards the question of relapse, he had only met with one case in his own practice, and one in the practice of Mr. Allingham; in the latter case the child had twice returned to the Dispensary with syphilitic ulcer at the anus. His (Mr. Dunn's) patients, when they left off attending at the Dispensary, were certainly cured; but he could not say whether they had a relapse or not, for they might have gone to some other institution to be treated. He certainly considered it a most important point in the treatment of the disease that the child should not be suckled by the milk of a syphilitic mother. If the milk does not convey the poison to the child, it must be in an impoverished condition. He mentioned the following case, in which he thought the child must have been poisoned by the syphilitic milk of the nurse:—A child, born of healthy parents, was put out to nurse; the nurse, being syphilitic, had no ulcerations of the breast, but syphilitic alopecia and sore throat. The child soon showed signs of the disease, and was treated by mercury, and died. The mother has been confined since of a healthy child, which she nursed herself. This child is quite well and healthy, and has not shown any signs of the disease. He also stated that Mr. Whitehead, in his work on "Hereditary Disease," mentions cases proving the same fact.

THE PATHOLOGICAL SOCIETY.

Tuesday, November 21.

Dr. Peacock, President.

Mr. Spencer Wells exhibited an

ENLARGED SPLEEN REMOVED BY EXCISION

the day before the meeting. The patient was going on tolerably well when Mr. Wells saw her (thirty hours after operation) on his way to the meeting.(a) When removed it weighed six lbs. five ounces, but as nine ounces of blood had drained from its vessels, it now weighed five lbs. twelve ounces. It was eleven inches long, eight broad, and three to four thick. It appeared to be simply hypertrophied, though some spots on the surface appeared like commencing amyloid or lardaceous change. It was not cut into, however, as, being the first case in which the operation had been done in this country, it was to be sent to the Museum of the College of Surgeons. Mr. Wells added, that when Mr. Nunn showed a large spleen in

(a) We have since heard that she lived a week, and died of pyæmia, with effusion into both pleural cavities and pericardium, but no hæmorrhage nor peritonitis.

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that room two or three years ago, and he (Mr. Wells) had suggested that the patient's life might possibly have been saved if the spleen had been removed, Dr. Wilks had approved of the suggestion, and he (Mr. Wells) determined to try what could be done if he met with a suitable case. Soon afterwards he attended a lady, with Dr. Jenner, who had a very large spleen; but there was such extreme leukhæmia coexisting that operation was never seriously thought of. The lady died near Bristol, and Mr. Clarke, of Clifton, who examined the body, was specially requested to do so with reference to the removal of the spleen. He informed Mr. Wells that it was done quite easily, and that, in his opinion, all the blood-vessels might have been easily secured. Mr. Wells afterwards saw cases of enlarged spleen with Dr. Budd, Dr. Boulton, of Horncastle, and Dr. Gill, of Bow; but in these cases they were the result of intermittent fever, and not in a state of health to render a hazardous operation necessary or justifiable. At length the patient whose spleen was before the Society consulted him six weeks ago. She was married, 34 years of age, and the mother of two children. She had only been ill about a year, and the tumour had only been discovered six months. Its growth had been slow at first, but very rapid lately. Mr. Wells prescribed bromide of potassium and quinine. This proving useless, iron was given; and this being equally useless, excision was proposed, and Dr. Jenner consulted, who said she was dying, that medicine could do no good, while an operation did offer the "*shadow of a chance*" of success. Upon this the patient and her husband desired that the trial should be made. Mr. Wells found the operation quite easy. An incision, seven inches long, was carried along the outer border of the left rectus abdominis, and the spleen was turned out very easily. The vessels were secured by silk ligatures, which were cut off short and returned. There was very little bleeding. The patient had recovered from the shock, there were as yet no signs of peritonitis; and, if she should recover from the operation, all that we know of removal of the healthy spleen in dogs, and in man accidentally by wounds, led to the hope that the absence of the spleen might be tolerated and a good state of health regained.

Dr. Crisp said the the case was a very interesting one, but he did not think it was parallel with cases of removal of spleen from dogs. He had, he said, never seen a healthy liver with such a spleen. He thought the liver had more to do with blood formation than the spleen had.

Dr. Gibb had once removed a spleen weighing many pounds from a dog. The enlargement had followed an injury. The dog died in a few days of peritonitis, having been exposed to cold.

Dr. Greenhow asked Mr. Spencer Wells what was the nature of the hypertrophy of the spleen. This was, he thought, an important question as regards the probability of recovery from such an operation.

Mr. Spencer Wells said he should present the specimen to the College of Surgeons, and he had no doubt that Mr. Flower would make a full report.

Dr. Crisp referred again to the specimen, and said there was a kind of enlarged spleen which had not yet been described—viz., that caused by violence. He had no doubt but that in Dr. Gibb's dog the spleen had enlarged from this cause. Dr. Crisp then referred to a specimen in St. Thomas's Hospital in which the enlargement seemed to have been caused by injury, and also to another case in which it came on after a confinement.

Mr. Spencer Wells said there was no history of any hurt in his patient's case. It did date from the birth of a child, although it was several months after that the abdomen had been observed to be enlarged.

Dr. Gibb said that a kick had been the cause of the enlargement in the dog's spleen, and blood was found under the capsule on removal.

Mr. Nunneley, of Leeds, showed a specimen of

BLACK CATARACT.

The patient, 75 years of age, had had double cataract. Nothing unusual had been observed in the case. The right lens, which had been the longer affected, was extracted January 19, 1865. It was then quite black at the centre, and nearly so at the margin, but it had become of a lighter colour by keeping. The other lens was extracted in February, and was of a lighter colour, and also was of a lower specific gravity.

Mr. Nunneley also showed

FOUR OVARIAN TUMOURS WHICH HAD BEEN REMOVED BY OVARIOTOMY.

The following is his report of them:—

No. 1 tumour was taken from a married woman, aged 36, whose case had been mistaken for, and treated as, ascites, until she was very weak and exhausted. She had been delivered of a child a few months previously. On the nature of the case being explained to her, and the danger of the operation, she was very wishful to have it performed. There was literally universal adhesion of the sac in every direction. When it was punctured with the trochar, the contents were as solid as thick jelly, and would not pass through the tube. A long incision was made into the tumour, other contents removed with the hand, but it was impossible to detach the sac; the abdominal wound was therefore closed. The woman died twenty-two hours afterwards. Even after death the sac could not be detached, except by tearing through the whole peritoneal surface, which is now seen adhering to the thick walls of the sac. No. 2 was removed from an unmarried woman (one of the largest women I ever saw), aged 26, but who had had one child at the full term, and a miscarriage at the fifth month, when doubtless the ovarian disease had been developed. She had suffered much from the distension, and had a good deal of abdominal pain, which induced suspicion of the existence of adhesions. These were found to exist to a considerable degree to the peritoneum, to the omentum, and in a less degree to the intestines. There was very little peritoneal fluid. The tumour sprang from the right ovary, and had a moderately long pedicle. It was tied with China twist, and secured with one of the uniting pins. The wound healed without any trouble, though for three days there was much distressing sickness; when this abated, the woman rapidly recovered. Six months after the operation she married, and at once became pregnant, and was delivered of a very large child. She has since remained well. No. 3 tumour, which is solid, was removed from a single woman aged 43. It had existed three years. She had been tapped once. There were twenty pints of thick peritoneal fluid. The tumour sprang from the right ovary. There were no adhesions. The pedicle, a moderately long one, was tied with China twist, and included with one of the harelip pins which closed the wound. Four of these pins were employed and passed through the peritoneum with small cutaneous wire sutures between. The wound united by first intention; the ligature came away on the eighteenth day. The woman never had a bad symptom; she was up in twelve days, and was walking in the street in less than three weeks. She continues well. No. 4 was removed from a married woman 45 years of age. She had had two children upwards of twenty years before. The disease had existed several years. In her there were seventeen pints of thick peritoneal fluid. The tumour consisted of the right ovary converted into a mass of small cells, which are so closely bound together as to constitute a solid globular mass weighing six pounds. The pedicle, which was very short, consisted of the broad ligament, spread out to seven inches in breadth, and so short that there was no room to place a ligature securely on it. The hot iron was used with great advantage. A ligature of China twist was also left on it close to the uterus; this was left *in situ* in the pelvis. The wound was secured by three large pins and twisted sutures (the peritoneum being well included) and intervening cutaneous stitches. The wound united by first intention; she was up on the twelfth day, and on the fourteenth was removed to a distance in a cab, as her nurse was seized with idiopathic erysipelas. The ligature came away on the twentieth day. She was well from the first. To these two women Dutch liquid (the chloride of olefiant gas) was administered as an anæsthetic.

Mr. Nunneley then showed

TWO OVARIAN TUMOURS REMOVED FROM ONE PATIENT.

The two smaller tumours are, he believed, instances of malignant disease of the ovaries. They were taken from a woman, who had been married several years, but had not been pregnant; her health had not been good for long past. There was no suspicion of the existence of malignant disease. She was a very large size, owing to the quantity of peritoneal fluid—indeed, so great that as it flowed out and the parietes collapsed, some who witnessed the operation were disposed to suspect a mistake in the diagnosis had been made. However, both ovaries were found to be involved, and were removed.

When taken out of the body, the tumours had the appearance of masses of half-boiled sago. The pedicles were so short as to be with very great difficulty secured. The woman never rallied from the operation; intense and constant sickness continued; she died on the third day. On post-mortem, a small quantity of blood (perhaps one-third of an ounce) was found in the pelvis, which must have escaped from one of the pedicles, though the ligature on both appeared to be tightly fixed, it was probably caused by the constant strain of vomiting. There was some diffuse inflammation of the peritoneum.

Mr. Nunneley also exhibited

AN ENTIRE TONGUE SUCCESSFULLY REMOVED DURING LIFE.

The entire tongue had been removed, on the 2nd of this month, from a man, aged 35, by a submental opening. He never had a bad symptom, and is now quite well. The disease, which had existed sixteen or eighteen months, became worse two months before the operation, and from the pain and difficulty of speaking, the impossibility of mastication, and difficulty of deglutition, was fast wearing the patient out. He has already recovered strength and flesh; indeed, he says that he is as well as he ever was. Talks with great distinctness and swallows with facility.

Mr. SPENCER WELLS thought that one of the specimens was not one of an ovarian tumour, but a fibrous outgrowth of the uterus.

The specimen was, therefore, referred to a Committee.

Mr. NUNNELEY said, in reply to Mr. BARWELL, that the patient whose case he had related in a paper read before the Medical and Chirurgical Society remained well for twelve months and then died of consumption. It was remarkable that both of these patients could talk well, in spite of the removal of their tongues.

Several specimens were exhibited by Dr. Crisp, Dr. Tilbury Fox, Mr. Barwell, etc., a report of which will appear next week.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.

SECOND M.B. EXAMINATION, 1865.

Pass Examination.

First Division.—Bryan Holme Allen, University College; Thomas Bond, King's College; Alexander Bruce, University College; Peter Maury Deas, University of Edinburgh; George Wallington Grabham, St. Thomas's Hospital; Charles Augustus Greaves, St. Thomas's Hospital; Thomas Henry Green, University College; William George Vawdrey Lush, St. Bartholomew's Hospital; Arthur George Mickley, Guy's Hospital; George Oliver, University College; Richard Douglas Powell, University College; Revett Coleridge Powles, King's College; Frederick William Richards, St. Bartholomew's Hospital; George Henry Savage, Guy's Hospital; Charles Smith, Guy's Hospital; William Vicary Snow, University College; Francis Thomas Tayler, B.A., Guy's Hospital; Henry Trimen, King's College; Ebenezer Fulham Turner, Guy's Hospital.

Second Division.—Thomas Robinson Glynn, St. Bartholomew's Hospital; Walter Anstice Harvey, St. Bartholomew's Hospital; Frederick Fawson Lee, St. George's Hospital; Duncan Maclachlan Maclure (st. bef. '39), Westminster Hospital.

EXAMINATION FOR HONOURS.

Medicine.

First Class.—Revett Coleridge Powles (scholarship and gold medal), King's College; George Oliver* (gold medal), University College; Bryan Holme Allen,* University College; Peter Maury Deas,* University of Edinburgh; Charles Augustus Greaves,* St. Thomas's Hospital, and George Henry Savage,* Guy's Hospital (equal); Alexander Bruce, University College; William Vicary Snow, University College; Richard Douglas Powell, University College, Francis Thomas Tayler, B.A., Guy's Hospital, and Henry Trimen, King's College (equal); Thomas Henry Green, University College; Charles Smith, Guy's Hospital; William George Vawdrey Lush, St. Bartholomew's Hospital.

Second Class.—Ebenezer Fulham Turner, Guy's Hospital.

Midwifery.

First Class.—Revett Coleridge Powles (scholarship and gold medal), King's College; Arthur George Mickley* (gold medal), Guy's Hospital; Peter Maury Deas,* University of Edinburgh; George Oliver,* University College, and Francis Thomas Tayler,* B.A., Guy's Hospital (equal); Thomas Bond, King's College; George Henry Savage, Guy's Hospital; Charles Smith, Guy's Hospital; Charles Augustus Greaves, St. Thomas's Hospital, and William George Vawdrey Lush, St. Bartholomew's Hospital (equal); Alexander Bruce, University College.

Second Class.—Henry Trimen, King's College; William Vicary Snow, University College; Bryan Holme Allen, University College.

Forensic Medicine.

First Class.—Peter Maury Deas (gold medal), University of Edinburgh; William George Vawdrey Lush, St. Bartholomew's Hospital; Revett Coleridge Powles, King's College; Alexander Bruce, University College.

Second Class.—Bryan Holme Allen, University College; Charles Augustus Greaves, St. Thomas's Hospital.

Third Class.—Thomas Bond, King's College.

* Obtained sufficient number of marks to qualify for the scholarship.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, November 23, 1865:—

Edward Chaffers, late Confederate States Army; William John Land, St. Mary's Hospital; Theodore Thos. Taylor, Cricklade, North Wilts; John Whitehead, 10, Park-place, Liverpool-road.

The following gentlemen, also on the same day, passed their First Examination:—

Herbert William Fagge, Guy's Hospital; Joseph Loane, London Hospital, Francis Ewbank, St. Bartholomew's Hospital; Thomas Henry Willan, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to and new Appointments that take place.

ADAMS, J. E., M.R.C.S. Eng., has been appointed House-Surgeon and Dispenser to the West Ham, Stratford, and South Essex Dispensary.

BANKS, W. M., M.D., has been appointed Demonstrator of Anatomy in the University of Glasgow.

BIDIE, Assistant-Surgeon G., has been appointed Professor of Botany and Materia Medica in the Medical College, Madras.

CORBETT, Mr. F. C., has been elected Apothecary and Registrar to the County Monaghan Infirmary.

DYKE, THOMAS J., M.R.C.S. Eng., has been appointed Officer of Health for Merthyr Tydvil.

EDYE, STONARD, M.R.C.S. Eng., has been appointed Surgeon to the Exeter Lying-in Charity.

FREEMAN, GEORGE D., M.R.C.S. Eng., has been appointed one of the Honorary Medical Officers of the Eastern Dispensary, Bath.

HUTCHINGS, HENRY E., M.R.C.S. Eng., has been elected Surgeon to the Kent and Canterbury Hospital.

JAMES, Mr. EDWIN M, of Shrewsbury, and late Student at St. Bartholomew's Hospital, has been appointed one of the Surgeons to the Melbourne Hospital.

MITCHELL, THOMAS R., M.D. St. And., has been appointed Coroner for the Town of Thetford.

NUTT, Mr. J., has been elected Dispenser to the Royal South Hants Infirmary, Southampton.

PARSON, EDWARD, M.D. Lond., has been appointed Lecturer on Midwifery and the Diseases of Women and Children at Charing-cross Hospital.

RAVEN, F. R., M.R.C.S. Eng, L.R.C.P., has been elected House Surgeon to the Kent and Canterbury Hospital.

WOLSTON, W. P. P., M.B., has been appointed Resident Physician to the University Clinical Wards of the Royal Infirmary, Edinburgh.

DEATHS.

BAYFIELD, SAMUEL J., M.R.C.S. Eng., Staff-Surgeon, on his voyage to Madras, on board the P. and O. steamship *Moultan*, on October 22, aged 35.

BURROWS, EDWARD, Surgeon, at Ruddington, Notts., on November 22, aged 75.

COOPER, CHARLES R., L.A.H. Dub., at Listowel, Co. Kerry, on November 12, aged 46.

DAVIES, WILLIAM T., M.R.C.S. Eng., at Agincourt House, York Town, Surrey, on November 22, aged 26.

EDENBOROUGH, WILLIAM, Surgeon, at Upper Holloway, on November 15, aged 85, formerly of Coleman-street.

GOULD, HENRY M., M.R.C.S. Eng., at Wateringbury, Kent, on November 21, aged 61.

HEELEY, JOSEPH, M.R.C.S. Eng., at Stone, Staffordshire, on November 18, aged 73.

HUTTON, EDWARD, M.D. Dub., at Merrion-square South, Dublin, on November 24, aged 68.

IRVINE, GERARD, M.D. Glasg., at Bungalow, Irvinestown, Co. Fermanagh, on November 17, aged 49.

LAYTON, THOMAS J., M.D. Edin., Surgeon R.N., at Kinross, N.B., on November 10.

MCDONNELL, GERALD, M.R.C.S. Eng., at Sandfield, Shanagolden, Co. Limerick, on November 16, aged 50.

NICHOLSON, THOMAS, M.D. Edin., at 24, Albany-villas, Cliftonville, Brighton, on November 25, aged 69, formerly of Davies-street, W.

TELFER, A., Surgeon R.N., at Lauriston Park, Edinburgh, on November 17.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

VACANCIES.

Battle Union.—The Seventh District is vacant; area, 4320; population, 311; salary, £25 per annum.

Blandford Union.—The Holworth District is vacant; population, 50; salary, £5 per annum.

Ross Union.—The First District is vacant; area, 13,690; population, 3996; salary, £63 per annum.

APPOINTMENTS.

Bedford Union.—George P. Goldsmith, M.R.C.S.E., L.S.A., to the Bedford and Cardington District.

Chesterfield Union.—John Thomas Jones, M.R.C.S.E., L.S.A., to the Eckington District.

Clerkenwell Parish.—Eugene Goddard, M.R.C.S.E., L.S.A., to the Northern District; William T. Hudson, M.R.C.S.E., L.S.A., to the Southern District.

Salford Union.—Thomas M. Johnson, M.D. St. And., M.R.C.S.E., L.S.A., to the South Salford District.

Wandsworth and Clapham Union.—Arthur Shears, M.D. Ed., M.R.C.S.E., to the Streatham District.

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DR. JAMES BRIGHT, LATE OF CAMBRIDGE-SQUARE.—We are happy to hear that this gentleman, whose state of health compelled him two years and a-half since to relinquish the active duties of a London practice, has, by travel, so far recruited his health as to resume his Profession at Cheltenham.

THE PARIS FACULTY OF MEDICINE.—The Professorship of Surgical Pathology, rendered vacant by the promotion of M. Denonvilliers to the chair of Operative Surgery, vacated by the late Professor Malgaigne, has just been filled up by the nomination of M. Richet. He was unanimously placed at the head of the list to be presented to the Emperor by the twenty-six Professors of the Faculty who were present.

METROPOLITAN AND PROVINCIAL HOSPITALS.—The friends of the following Medical charities will be glad to learn that the late Mr. Robert Lewis, of Surbiton-park, Surrey, has bequeathed the sum of £400 to each of the following Metropolitan Hospitals, viz. :—St. George's, the Middlesex, the Royal Free, the Charing Cross, and the Hospital for Consumption, Brompton.—Mr. James Henning has left £500 to the Dorset County Hospital, and Mr. John Lowe, of Birmingham, has bequeathed £100 to the following charities of his town :— The General Hospital, the Queen's Hospital, and the Dispensary.

MEDICAL STUDENTS.—The returns of the number of gentlemen now pursuing their Professional studies at the metropolitan and provincial Hospitals recognised by the Council of the Royal College of Surgeons of England have now been made to the Government Inspectors of Anatomy, Mr. Charles Hawkins and Dr. Cursham. From these documents, in comparison with those of last year, it appears that, notwithstanding the recent stringent regulations requiring a higher standard of preliminary education and examination, there is an increase, instead of the great decrease which had been anticipated from the above cause in the number of students at the different Medical Schools in the United Kingdom. In this metropolis there are at the present time 1022 registered Medical students at the eleven recognised Hospitals, being an increase of 41 over the number of last Session, and no less than 316 are new entries, or first year's men, being also an increase of 7 over the number of last year. At the nine recognised provincial Hospitals there are 249 gentlemen pursuing their studies, being an increase of only 2 over the number of last year. The above numbers do not represent the whole of the students pursuing their studies, as many have omitted, or are ineligible to register, not having passed a preliminary examination in Arts, etc., in pursuance of the regulations of H.M. Medical Council of Education and Registration. It is also stated that there is a great increase in the number of gentlemen pursuing their studies exclusively for the Dental diploma of the Royal College of Surgeons.

THE question of hygiene, with regard to animals, divides itself naturally into two great heads—to wit, the hygiene of animals in health, and the hygiene of animals which labour under disease. To a certain extent, both are alike, and to a certain extent both differ. Both embrace the strictest ventilation, adequate warmth and food, and perfect cleanliness. Crowding, whether during health or disease, proves alike destructive to man and brute. Even a very large number of beasts in one enclosure, not otherwise crowded, is less desirable than a greater number of room spaces comparatively small. It would be very desirable if the stalls and stables of animals could be made in duplicate, so as to facilitate the cleansing process, and the getting rid of accumulating animal foulness. Chlorine washes, the cheaper salts of zinc and iron, carbolic and phenic acids, coal tar, and powdered gypsum all yield precious resources for the annihilation of stench and the decomposition of the poison of disease. In Sweden and Norway cattle stalls and stables are placed on a certain elevation with a covered chamber below into which conduits and trapdoors conduct the animal excreta with great comfort and ease. Moveable jets, whereby heated steam could be conveyed in succession to surfaces fouled by animal matter, would, I am persuaded, be of admirable efficacy. Nothing could well prove more cleansing. The warm bath and hot air bath, to a certain extent, are highly desirable both in health and during disease. If cow and horsekeepers, generally, were only made aware that the cow and horse, severally, excreted in the act of breathing, every twenty-four hours, from seventy to eighty ounces of carbon, provided always that they did not re-breathe their own breath, it would prove a powerful incentive to the observance of strict ventilation, and to the means of realising immunity from diseases only less destructive to brutes than to man.—*Extract of a letter from Dr. H. MacCormac, of Belfast, to the Cattle Plague Commissioners.*

THE CATTLE DISEASE.—THE EXPERIMENTS WITH SHEEP.—It may be remembered that about five weeks ago, two of the sheep which had been kept about three weeks in the Edinburgh sanitorium in immediate contact with diseased cattle, but without taking the infection, were handed over to Dr. Smart for further experiment. The sheep were placed in a stall in which two cows had just died from the most virulent type of the disease, and they were also allowed to go about the cowhouse, in which several diseased animals were under treatment. Both the sheep remained perfectly well until about a fortnight ago, when one of them became sickly. The animal, from showing loss of appetite, went through all the usual stages of rinderpest, though in a modified form. On the eighth day it showed the first signs of recovery, and has since made continuous advance in convalescence. The other sheep has continued quite well during the whole period. The result of the experiment would seem to show that while the sheep do not enjoy an absolute immunity from the disease, they are liable to its attacks in a much less dangerous form. In the present case, the attack was a mild one, even after being subjected to contagion for a protracted period. In Dr. Smart's opinion, the disease is not likely to assume an epizootic character among sheep, although, during its prevalence among the cattle, a few isolated cases may occur among the sheep. We understand that Dr. Smart continues his experiments in the treatment of cattle suffering from rinderpest, and with encouraging results. He estimates the proportion of recoveries among the animals treated at about 70 per cent.—*Edinburgh Courant.*

THE LATE DR. EASTON.—RE-OPENING OF THE CLASS OF MATERIA MEDICA IN THE UNIVERSITY OF GLASGOW.—TEMPORARY APPOINTMENT OF DR. GEORGE RAINY.—At the re-opening of the class of Materia Medica, Dr. Buchanan, the senior Medical Professor, introduced to the students Dr. George Rainy, son of the Professor of Medical Jurisprudence, who has been appointed by the unanimous voice of the Senate of the University to carry on the business of the Materia Medica Class during the present session. Dr. Buchanan said :— You know, gentlemen, by what a sudden stroke your late teacher, Dr. Easton, was removed from us. On Friday week he addressed you in this place in the full possession of all the powers of his vigorous mind; he arose well on Sunday morning, and on Sunday before mid-day he had ceased to live. You have since shown the regard you had for him, and your respect for his memory, by following his mortal remains to their last resting place. You can easily conceive, then, how overwhelming this sad event must have been to those who knew Dr. Easton more intimately than you did, and stood towards him in nearer relationship. Most of his colleagues lost in him a friend of many, many years' standing, and all of them an associate whom they had a pleasure in meeting with in the intercourse of official duty. All of them appreciated those high qualities that rendered him so worthy a member of the academic body—his intimate acquaintance with the action of Medicines on the human frame—his long experience as a Physician in applying them to practical use—his scholarship that adorned, and his ready and natural eloquence that rendered so easy and pleasing the lessons that he taught. The loss of such a man must at any time have been a severe one to the University, but it has been rendered doubly so by its occurring at the commencement of a session which he himself had just inaugurated with so fair a prospect of carrying it to a successful termination. These considerations forced themselves upon the members of the Medical Faculty as soon as they had recovered from the first shock occasioned by Dr. Easton's sudden death. It became their duty to provide in the best way they could for the emergency which had just arisen. In endeavouring to do so, they naturally turned to Dr. Easton's own pupils, who had gathered their knowledge from his own lips, and were familiar with his peculiar doctrines and system of instruction. Among these, Dr. Rainy seemed to them the most likely to do the work in a satisfactory way. He was recommended to them for two reasons. One was from his having, for some time past, acted as Dr. Easton's assistant, and being in consequence familiar with all local arrangements, and with the chemical and pharmaceutical manipulations required for illustration. But Dr. Rainy was recommended on the still higher ground of his own qualifications. He was, in his college days, one of our best students; and, since entering upon the practice of his Profession he has

continued to be a student still, which I hold to be high praise, and has justified the early opinion of his teachers by some valuable contributions to scientific Medicine. I am glad to learn that Dr. Easton's manuscripts are in a legible form, which will greatly facilitate Dr. Rainy's labours. Still, in so vast a subject as the Materia Medica lacunæ must occur to be filled up, and new remedies are continually forcing themselves into notice. These will call for the exercise of an independent mind, and will, I feel most confident, be safely committed to Dr. Rainy. I should now have done, but I crave your indulgence for one word further. There is something more solemn than most of you are aware of in the position in which I now stand before you. It is just ten years since I last stood in this place to address the Medical students of the University, and it was on the occasion of introducing to them their then new Professor of Materia Medica, Dr. Easton. I little thought then that it was to be my sad duty to stand here again to make arrangements for filling his vacant place. Such events occurring, as we have seen them do in our own academic circle, among the old and the young alike, while they sadden our hearts and keep them humble, are intended to answer a higher purpose—to teach us important lessons—among which I may mention, as a prominent one, to do at once, energetically and well, whatever work we have to perform. This is a trite maxim, but it is one we habitually forget, although enforced upon us not only by words but by the more impressive teaching of the events of God's providence. It has been the theme of the moralist in every age :—

"Omnem crede diem tibi diluxisse supremum."

"If we had only one day to live we should live it well." "Whatever thy hand findeth to do, do it with thy might." I conclude with one more quotation from Dr. Easton's favourite poet, whom he has so often quoted within these walls :—

"Hoc opus, hoc studium parvi properemus et ampli,
Si patriæ volumus, si nobis vivere cari."

THE LATE DR. BOWLER.—The officers of the Portsea Convict Prison, of which the above lamented gentleman was for several years the Surgeon-Superintendent, anxious to testify their high respect for his many excellences of character, raised a fund among their body for the purpose of erecting a suitable memorial to him. This has taken the form of a handsome mediæval marble cross, which has, within the last few days, been placed in Haslar Cemetery, where the remains of Dr. Bowler are interred. The cross is 3 ft. 6 in. high, and stands on a bold base or plinth, also of marble, 12 in. high, this being placed on two solid Portland stone steps, making a total height of 6 ft. 1 in. The shaft and arms of the cross are chamfered and stopped, and the lathe united to stem and head by a circle of marble widely splayed and serrated on the edges, producing what may be termed a rayed nimbus, which gives great richness to the design. The arms and head of the cross terminate in plain foliations. On the broad splays of the marble base or plinth inscriptions are cut in characteristic letters, the capitals being rubricated. On the east side is the inscription:—In memoriam. John William Bowler, Surgeon, R.N., obiit November 16, 1864, ætat 61 years. On the west side is the following :—This Cross is erected by the officers who served with him in the Portsea Convict Establishment, as a tribute of esteem and affection. On the north side are the words, "Thy will be done;" and on the south, "God be merciful to me." The memorial forms the entire width of the west end of the grave, except a few inches on each side, and the north, south, and east sides are enclosed by a massive Portland double chamfered curb, on which is placed an appropriate iron rail, supported on ornamental standards.

NEW INVENTIONS.

MR. BUCKLE'S FRUIT LOZENGES.

MR. BUCKLE is so great an artist in his way that he deserves to be made known to all Medical Practitioners whose patients like something of the luxury of the sick room. He received our commendations last year for some lozenges which he sent us of pure apple pulp and isinglass; now he has extended his manufacture, and sends us specimens of lozenges or jujubes of currant, raspberry, damson, orange, and apple, and some of damson lozenges *piquées* with cayenne. We can only repeat, as a speciality of these preparations, that they have all the fragrance of fresh real fruit, and that they do not taste in the least sickly.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Candidate.—The list cannot appear until after it has been submitted to the Council next week.

G. P. R., M.D.—It is understood that the contemplated alterations in the examinations for the Fellowship of the College of Surgeons mentioned by you will apply only to junior candidates.

A Fellow, Southampton.—We have received many similar inquiries respecting the last examination for the Fellowship of the College of Surgeons. A Fellow will not be surprised to learn that all the candidates came up to the standard now required. In the Surgical examination, attention has been drawn to the fact that four out of the six questions were on the urinary organs.

"A Few Plain Directions for Midwives, by a Country Surgeon," is the title of a tract of two pages, which seems to have been circulated widely in the western counties. It is scarcely deserving of serious criticism, and as the author suppresses his name, he cannot be accused of any desire to puff himself. The following sample will show how very poor must be the qualifications of midwives who do not know more and better already. The use of the word "bowels" throughout the paper is absurd:—"11. *When flooding comes on* after labour, press the hand firmly on the bowels, so as to keep the womb down in the lower part. Keep the woman covered only with a sheet, put out the fire, and open the door. Apply a napkin wrung out of cold water to the bowels, and *lose no time in sending for a Medical Practitioner.*"

Army Medical Department.—On referring to Her Majesty's warrant of 1858, we find, in our great anxiety to make Surgeons-Major of Assistant-Surgeons, we were not correct. The Warrant distinctly states "staff or regimental *Surgeon*" as the grade from which Surgeons-Major are to be obtained. Well, let us view the case as it now stands. Candidates are required to produce evidence of being 21 years of age, and may go up to 28 years. By the late Parliamentary return, they are not likely to be promoted to the rank of Surgeon under 40 years; but let us be generous and say 34 years, thus making them the respectable age of 55. Now, according to the 11th section of the above Warrant, "all Surgeons-Major, Surgeons, and Assistant-Surgeons *shall* be placed on the *retired* list when they shall have attained the age of 55." What becomes, then, of the Surgeons? and there being no Surgeons, there cannot be Surgeons-Major, Deputy Inspectors-General, or Inspectors-General of Hospitals. The whole service, after a time, will consist of Assistant-Surgeons only, on 13s. a-day pay. Here is economy delightful for Mr. Gladstone to behold! Surely the income-tax is doomed to vanish with the Surgeons. All agree that the Commission now sitting should be open, and the evidence public; nothing short of this will satisfy, and prevent the necessity of bringing the subject before Parliament in spring.

PRIVILEGES OF REGISTERED SURGEONS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can an M.R.C.S. Eng. legitimately dispense his own medicines, though I believe not able either to charge for or to recover for the same?

November 27, 1865. I am, &c. E. J. W.

*** It would appear from clause XXXI. of the Medical Act that a registered Surgeon can supply and recover for medicines *in Surgical cases*. It seems clear that he can dispense medicines if he please; but he cannot recover for them *in Medical cases* unless he has registered a diploma or licence to practise Medicine.

POOR-LAW MEDICAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I shall feel obliged for space to lay before the Poor-law Medical officers a list of the subscriptions I have received since the last Report was published, in July. I need scarcely say that, with a debt of nearly £9 still existing, I am powerless for any active exertion, which I much regret, as the annexed letter, received within the last few days, clearly proves that there is great need of an improvement in the position of the Poor-law Medical officers. I am, &c.

12, Royal-terrace, Weymouth, Nov. 24. RICHARD GRIFFIN.

Subscriptions received since July 3, 1865 :—West Somerset Branch of the British Medical Association, £2; Dowling, J., Cerne, 5s.; Loveless, W. R., Stockbridge, 5s.; Jardine, J. L., Dorking, 5s.; Prowse, W., Amersham, 5s.; Faithorne, G., Amersham, 5s.; Smethman, G. T., Amersham, 5s.; Brickwell, B. A., Amersham, 5s.; Clarke and Elliott, Barnstaple, 10s.; Rees, H., Amersham, 5s.; Willis, R, Tavistock, 5s.; Jeston, W., and Jeston, R. P., Henley, 20s.; Jackson, J., Gateshead, 10s.

"My dear Sir,—I forward P.O.O. towards expenses of your praiseworthy endeavour to promote and increase the payment and better standing of Poor-law Medical officers. In most Unions, remuneration for services cannot be worse. The relieving officer appears to have entire control over the Medical officer; whoever makes application, he gives an order, and frequently when none is wanted. Two cases occurred with me lately, both about nine miles from my residence (of course, within my district). When I visited case No. 1, I found my 'patient' working at a mangle; on asking why they requested my services, the mother coolly said the relieving officer asked her how they were: her reply was, that the daughter was not very well; he forthwith gave an order. Case No. 2.—The woman had gone from home two days previous to my visit (her daughter informed me) to help her sister to kill and salt a pig, and would not return until the end of the week. Thus, you will observe, by the double journey, I travelled a distance of thirty-six miles for no purpose. If, by your perseverance, you can do anything for us in the forthcoming Session of Parlia-

ment, the Profession will have great reason to rejoice. If need be, I shall not object to a further donation. I may mention my salary is £30 per annum for a very large district. "I am, &c. "——."

The Title of Doctor.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I shall feel greatly obliged if you will be good enough to answer me the following queries in your correspondence corner:—1. I am L.R.C.P. of London; have I a right to be called "Doctor," or am I only "Doctor" by courtesy? 2. Should I be doing wrong by taking the title and calling myself "Doctor?" 3. Does the College allow its Licentiates to take the title, or does it only wink at its being done, for the practice is universal, or nearly so?

If you will kindly answer the above by the number I shall feel much obliged. I am, &c.

Wath, near Rotherham, November 27, 1865. WM. M. BURMAN.

1. You have certainly no *right* to the title.
2. We cannot think the College approves of its Licentiates assuming a title which, although granted by courtesy to its Fellows and Members, belongs by right only to persons possessing a University degree.

The late Inquest in Jamaica.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the *Medical Times and Gazette* of July 29, I observe a letter signed by L. Q. Bowerbank, one of the Ordinary Medical Officers of the Public Hospital of this city.

The best refutation I can furnish to the aspersions which Dr. Bowerbank alleges have emanated from Dr. Fiddes is, to transmit to you a letter written by Dr. Fiddes to the public papers written here, containing a forcible and unqualified denial to Dr. Bowerbank's assertions regarding me. It speaks for itself. It has appeared in almost every newspaper in Kingston, and stands uncontradicted.

In addition to this, you will remark that the papers sent contain certified copies of letters to me through the Inspector and Director of the Hospital from the Governor of the colony and from the then Inspector and Director himself! In the former, His Excellency expresses his appreciation of my services and of the "zealous manner" in which such services were performed during my term of office as Senior Resident Medical Officer of the Hospital; and in one of these His Excellency withdraws certain strictures he had made in consequence of Dr. Bowerbank's representations relative to the keeping of the register of the Institution. In the latter, the Inspector and Director endorses the commendatory remarks the Governor was pleased to convey to me on my retirement from office according to law. I enclose also a letter from Dr. Andrew Dunn, one of the late Ordinary Medical Officers of the Hospital, refuting the statements of Dr. Bowerbank. Dr. Dunn, I may state, has been for over thirty years one of the most respected Practitioners in Jamaica.

I submit that the Governor of the island, together with that of the Inspector and Director of the Hospital to which I was attached for four years, the published letter of Dr. Fiddes, and the communication from Dr. Dunn, both these gentlemen having been my senior officers in the Institution—I submit, I say, sir, that these ought to be sufficient to convince you of the unfounded nature of the charges brought against me by Dr. Bowerbank on the authority, as he states, of the several personages named.

At the conclusion of Dr. Bowerbank's letter, you state that "having now allowed both the opposed parties to make a statement in our columns, we shall publish nothing further respecting the controversy." In accordance with this intimation, I have avoided any observations of a controversial character; but as in your influential columns charges have been made against me in my Professional character, you cannot but regard the publication of this letter, together with an acknowledgment of the nature of the testimony which accompanies it, as an act of even-handed justice to a young Professional man.

I refrain from all comment on Dr. Bowerbank's conduct, seeing that I regard as a very questionable procedure the attacking a man in the prints of a distant country, which attack stands against him weeks before he can be aware of its existence. I am, &c.

Kingston, Jamaica, August 24, 1865. M. STERN, M.R.C.S. Eng.

*** We have received the documents which Mr. Stern mentions in his letter, and the contents of which he accurately describes. We can only hope that the recent political occurrences in Jamaica have had one good effect—viz., that of silencing the angry strife which has for many months disgraced the Profession there. Our sense of justice has obliged us to publish Mr. Stern's defence; but we now take a final leave of Jamaica Medical polemics.

The Premonitory Stage of Cholera.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your number of this day a case "of a choleraic character" is reported at page 478 as having died at St. George's Hospital. The Medical report states "that, as this person's stomach was torpid, she had taken two pills the overnight and a dose of castor oil the next morning."

It is well known that when cholera first attracted attention it was said that it was a disease *sui generis*, attacking persons in perfect health suddenly, with vomiting, severe purging, spasms, etc., and destroying life in a few hours.

Dr. Guérin read on September 25 last a report on cholera before the Academy of Sciences of Paris. In this report he justly claims to have been the first in any country to call the attention of the Medical Profession to the epidemic diarrhœa which prevailed in 1832 in France, at the same time as the epidemic cholera. In this report he gives me the credit for being the first in any country to demonstrate that cholera is invariably preceded by a diarrhœa. But what Dr. Guérin has not insisted on is, that this diarrhœa invariably precedes an attack of developed cholera—that is, vomiting, severe purging, spasms, etc., for a few hours, or a few days, or a few weeks, and that from the first liquid evacuation to the first act of vomiting the disease is curable. And further he overlooked that where diarrhœa and cholera are epidemic, there it is dangerous to administer half, or a third, or a fourth of the usual purgative medicine, lest diarrhœa be induced, followed too often by hopeless cholera.

At page 272 of your journal for September 2, 1854, four cases are reported by me as having occurred in St. George's Hospital in one day in consequence of having overlooked this pathological fact. The Medical attendant prescribed the usual purgative medicine to these four persons, as they required to have their bowels relieved. The consequence was that these four persons were in a few hours after attacked with diarrhœa, followed by cholera. And the fatal case of cholera reported at page 478 of this day's journal comes in proof of the danger of administering purgative medicines in the usual dose at this moment, and further points out the error of administering purgative medicine as a cure for cholera.

If you should feel the above facts useful to the public, I hope they will find a place in the *Medical Times and Gazette*. I am, &c.

DAVID MACLOUGHLIN, M.D., Member of the Legion of Honour.

36, Bruton-street, Berkeley-square, W., October 28.

COMMUNICATIONS have been received from—

MEDICUS; Mr. T. B. NUNNELEY; Dr. ALLBUTT; Mr. R. GRIFFIN; APOTHECARIES' SOCIETY; Dr. E. CRISP; EPIDEMIOLOGICAL SOCIETY; UNIVERSITY OF LONDON; Mr. A. ARTHUR NAPPER; MICROSCOPICAL SOCIETY; OBSTETRICUS; Mr. E. W. VALENTINE; HARVEIAN SOCIETY; Mr. COOPER; NEMO; Dr. W. M. BURMAN; Dr. E. FRANKLAND; E. J. W.; Dr. A. GARRINGTON; Dr. MACCORMAC; MEDICAL SOCIETY OF LONDON.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 25, 1865.

BIRTHS.

Births of Boys, 957; Girls, 969; Total, 1926.
Average of 10 corresponding weeks, 1855-64, 1780·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	738	733	1471
Average of the ten years 1855-64	714·4	707·4	1421·8
Average corrected to increased population..	..	..	1564
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	1	12	3	2	5	5	3
North ..	618,210	6	12	17	2	7	26	7
Central ..	378,058	1	2	8	1	1	11	4
East ..	571,158	2	..	16	2	17	16	6
South ..	773,175	3	13	11	2	13	23	8
Total ..	2,803,989	13	39	55	9	43	81	28

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·257 in.
Mean temperature	50·6
Highest point of thermometer	56·4
Lowest point of thermometer	42·4
Mean dew-point temperature	46·8
General direction of wind	SW. & SSW.
Whole amount of rain in the week	0·98 in.

APPOINTMENTS FOR THE WEEK.

December 2. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

4. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Dr. Hermann Weber, "On Pettenkofer's Theory of the Mode of the Propagation of Cholera." Deputy-Inspector-General Dr. Lawson, "On the Epidemiology of Cape Colony and Natal in 1864." Dr. Alex. H. Howe, "On the Laws of Epidemics."

MEDICAL SOCIETY OF LONDON, 8 p.m. Dr. Broadbent, "Cases illustrative of the Effect of Hæmorrhage into Different Parts of the Cranial Nervous Centres, with an Attempt to Explain the Exemption of the Abdominal, Facial, and other Muscles from Paralysis in the common Form of Hemiplegia."

ODONTOLOGICAL SOCIETY, 8 p.m. Meeting.

5. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ANTHROPOLOGICAL SOCIETY OF LONDON, 8 p.m. Meeting.

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

6. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

OBSTETRICAL SOCIETY OF LONDON (Council, 7 p.m.), 8 p.m. Dr. U. West, "On a Variety of Placenta." Dr. Greenhalgh, "On Merits of Cæsarean Section." And other Papers by Drs. Eastlake, Meadows, etc.

7. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

HARVEIAN SOCIETY OF LONDON, 8 p.m. Dr. Sanderson, "On the Relations between the Cattle Plague and similar Diseases in Man."

KING'S COLLEGE MEDICAL SOCIETY, 8 p.m. Clinical Meeting.

8. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LUMLEIAN LECTURES

ON SOME POINTS IN THE PATHOLOGY OF NERVOUS DISEASES.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital and Lecturer on Medicine.

Lecture II.

(Continued from page 568.)

From the consideration of inhibitory paresis of the arteries, we naturally pass to take some more special notice of a similar state of the heart. Arrest of cardiac action is well known to be produced by drinking cold water when heated, by a blow on the epigastrium, sudden perforation of the stomach or intestines, the intense pain produced by a gall-stone, and other like agencies. It is evident that we cannot consider a flickering pulse, cold skin, and final cessation of the heart's action as sufficient proof that death has occurred from loss of the contractile power of the central organ of the circulation; for the same symptoms might be produced by a tetanic condition in which the cavities did not duly relax so as to admit an adequate supply of blood. The question manifestly is not one of mere curiosity, but has an important bearing upon treatment; for if the heart's muscular tissue be simply paralysed, we have no other course than to stimulate it in every way possible. If, on the other hand, it be tetanised, relaxants, the warm bath, sedatives, and the like suggest themselves. That the point is not yet fully made out appears to me from some evidence I have to adduce. On the one hand, we have some facts which go to show that the heart in such cases may be found contracted. Dr. Williams states that this condition has been found in sudden death from drinking very cold water or raw spirits. In the case of a female, aged 27, who died at the end of eight days from acute pus-generating peritonitis, I examined the heart with special reference to the condition of its cavities. The left ventricle was firmly contracted; its cavity quite closed almost up to the mitral orifice; the walls felt very firm. The right ventricle contained a largish fibrinous clot, the fibrine extending up into the pulmonary artery; it did not seem to have been formed before death. During life the circulation in the hands was very languid; they were of a dull red; a pale spot made by pressure was very slowly obliterated; the skin was cold; pulse weak, 132. Death occurred gradually in the way of asthenia. She was treated with opium and ʒij. of brandy every hour for the last two days of life. In this instance it looks as if the peritoneal irritation had irritated the heart into a tetanic state, ending in unrelaxing spasm. In my recently-published work I have quoted the case of a negro attacked with syncopal "tertian" who, when first seen, was more like a corpse than a living man, speech lost, and almost pulseless. A warm bath operated like a charm, the breathing became freer, the pulse rose, and speech returned. He soon recovered. Here it is impossible to suppose that the heart was simply paralysed; the warm bath would certainly not have availed much if this had been the case.

On the other hand, we have the evidence afforded by Dr. Brown-Séquard's special examination of the effects produced by removal of the so-called "vital knot." He says:—"The sudden arrest of the movements of this organ (the heart) when these parts (the medulla oblongata or vagi nerves) are galvanised presents the same characters as the cessation of these movements does when the 'vital knot' has been destroyed or extirpated—that is to say, that in these different cases, if the heart ceases completely to move, it is not because it is rigidly contracted, as happens sometimes when it is directly galvanised, but because all contraction ceases. In a word, the heart remains passive, and even dilates a little from the arrival of blood in its cavities. Division of the vagi nerves does away with the arresting effect of extirpating the 'vital knot.' He believes that in such instances of sudden death as those above alluded to the heart's action is brought to a stand-still in the same way. When the cause of the arrest appears to be a vehement emotion, the morbific impression is propagated to the medulla oblongata from the cerebral centres. In two experiments which I performed on cats, injecting thirty grains of citric acid dissolved in water into the peritoneum caused death very speedily, and the heart was found uncontracted, with its ventricular cavities on both sides full of dark blood. Brown-Séquard says that in such cases the excitation goes up to the spinal cord chiefly along the great splanchnic nerves, and thence ascends the cord to the origin of the vagi, through which nerves it is conducted to the heart. Section of either the cord, the splanchnic nerves, or the vagi prevents the inhibitory action from taking place. As a contrast to the observation above recorded of the state of the heart in a young female dying of peritonitis, I will place the following:—E. S., aged 64, had suffered during many months with symptoms of intestinal affection, terminating in complete obstruction, which had existed thirteen days when I saw her. She was treated for some days with opium and belladonna, and subsequently with small doses of aloes and nux vomica, with which the bowels acted copiously, but collapse set in, and she sank. At the post-mortem, the visceral and parietal peritoneum was found everywhere much reddened, and there was also purulent exudation in the left flank and in the pelvic cavity. The large intestine was greatly distended. The right cavities of the heart were greatly distended with soft, black coagulated blood; the left were in a very similar state, but not so much distended. The walls of the ventricles were flaccid; the valves appeared healthy. The kidneys were tolerably healthy. Rigor mortis slightly marked. The examination was made in cold winter weather. The advanced age of this patient, and the long continuance of enfeebling disease previous to the supervention of the fatal acute affection, amply explain, I think, why the heart was found in so different a condition from that existing in the patient dying of an acute disease in early life.

On careful consideration of this subject, it seems to me most probable that the condition of the heart during life in all such cases is one of semi-paralysis, and that death occurs from deficiency, and not from excess, of contractile power. This conclusion is very much borne out by the relaxation of the intestinal coats which was produced in Lister's experiments by an inhibiting electric current. The state, however, in which the heart is found after death is determined chiefly by the amount of inherent contractility which the organ possessed, and the degree of this which survives the cessation of the inhibiting nervous influence. It is, therefore, chiefly in young persons and those who have been cut off in the midst of vigorous health, that we are likely to find a state of rigid contraction of the cardiac muscle.

As regards treatment, however, in all cases where we have reason to believe that the impairment of the heart's action can be referred to the existence of a remote irritation, our first aim should of course be its removal or diminution; or if this be impossible, as in the case of burns, intestinal perforations, etc., we must endeavour to replace the morbid impressions by others of a more healthful kind, or to blunt the excitability of the cardiac nervous centres in the cord and sympathetic ganglia so that the morbid impressions may take less effect. The approved practice of administering opium in such conditions is quite consonant to the above views, though it seems to me also a question whether belladonna might not prove a more effective nullifier of morbid impressions in some instances, especially where the irritation proceeds from the cutaneous surface. Mr. Hutchinson speaks favourably of its administration in burns. Trousseau regards it as the best remedy in *external* pains, while opium is preferable in *internal*.(a) As regards external remedies in burns, it is surely significant that moderately stimulating applications have been decidedly beneficial. The impressions produced by these on the nerves replace the morbid impressions resulting from the injury. The same may be said of the warm bath, which Mr. Windsor and Hebra find to be an excellent means in burns and in similar states. The former expressly says that there is no treatment for the collapse attendant on severe burns so efficacious as the warm bath. The pain disappears, the pulse improves, and the countenance loses its anxious and sunken cast. These effects surely indicate a kindly and beneficial action on the nervous system.

There are two other interesting instances of inhibitory cardiac paresis which I will allude to before quitting this subject. One is the syncope which is so readily produced in some individuals by the introduction of the catheter, and which may be avoided or lessened by the previous administration of quinine, opium, and stimulants.(b) Milton mentions that an acrobat in the highest state of health and strength fainted immediately on the attempt being made to introduce a syringe into the urethra. In some of these cases the disorder closely re-

(a) Trousseau, vol. ii., p. 56, "Mat. Med."
(b) Marx, "Y.B." 1864, p. 304.

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sembles a paroxysm of intermittent fever, with cold, hot, and sweating stages; the cold stage may be very prolonged, and followed by other alarming nervous symptoms, as stupor, or delirium, difficult breathing, tympanitis, constipation, or vomiting. H. Smith records the case of a man, aged 24, in remarkably good health, who had a tight stricture split by Holt's dilator, and died two days after. The patient felt no inconvenience from the operation, and no bleeding occurred at the time. Seventeen hours after the operation he had a most severe rigor, followed by vomiting, and for the next four or five hours passed a considerable quantity of urine highly charged with blood. Three hours later he became very collapsed, blue in the face, and slightly delirious. The next day he was in much the same state. At 1 a.m. a catheter was passed, but only a little blood was drawn off. He died at 4.30 p.m. The urethra and bladder alone were examined, but nothing of any peculiar significance *quoad* the stormy symptoms was detected. Mr. Smith concludes that this man was killed solely and entirely by the shock of the operation. (*Lancet*, March 18, 1865.) The inhibitory morbid influence in this case seems to have especially affected the cardiac and arterial nervous centres; but it is very difficult to understand why the symptoms did not appear till seventeen hours after the operation. It seems as if the change set up in the nervous tissue by the shock was gradually developed, till it reached a degree at which the tissue became incompetent for its function. This is probably the explanation of all instances of incubation. The symptoms do not appear until the resisting power gives way, and we know if the latter is sufficient they may never appear at all. The following instance is worth mentioning in reference to this subject:—A boy in fair health, aged 8 years, born in India, after his return to England, has every now and then, after some unusual exertion, syncopic attacks, which leave him for a time poorly and languid. His mother notices that the attacks always occur, not on the day of the over-exertion, but the following. The hæmorrhage may be taken as a clear exponent of the existence of a paresis of the renal arteries, and concomitant alteration of the texture of their capillaries. Both these changes, as we have seen, may result from nervous prostration.

The other instance is the production of similar syncope by irritation of the gastric nerves. Mr. Higginbottom has recorded cases of what he terms *syncope senilis*, where the symptoms evidently depended on the presence of undigested food in a weak stomach, and were speedily removed by an ipecacuan emetic. Bernard says that a starved pigeon dies immediately if one of his claws is pinched, the pain producing syncope in the weakened animal. A gentleman who has been sometimes under my care, has habitually a weak stomach, but his health is otherwise good. While suffering from gastralgia his pulse is a mere flutter.(c)

There is another interesting instance of inhibitory paresis which I cannot omit. I allude to the influence exerted by the encephalic centres upon each other when one is affected by organic disease, as has been so well set forth by Brown-Séquard in his lectures, delivered at this College and elsewhere, on the mode of origin of symptoms of disease of the brain. The arguments which he urges show, I think, convingly that many of these phenomena, as hemiplegia, anæsthesia, facial paralysis, delirium, etc., do not result from direct loss of function of the part diseased, but from an irritation conveyed from thence to the lower parts of the encephalon, the corpora striata, optic thalami, and crura cerebri. He thinks that the irritation acts in a reflex way, and that it is probably transmitted through some nerve fibres to some cells at the base of the brain, and from these cells is reflected upon the neighbouring blood-vessels by means of other nerve fibres. The mode, however, in which the irritation makes itself felt he holds to be a secondary matter, and only insists on the importance of the view that the paralysis is produced in many cases by a special influence exerted from one part of the brain upon a distant part of this nervous centre. I believe these views to afford further exemplification of inhibitory action, and it seems to me very interesting to find that the pathogeny of disease is so similar, whether its starting point is within or without the cranium. In fact, regarding the encephalon as a great aggregation of nervous centres bound together by commissural connections, it is only what might have been expected that the condition of one should affect that of another. Nor is it surprising that when the natural and regular influences of a healthily nourished centre are replaced by the abnormal and irregular of a diseased centre the result should not be action, but paralysis.(d)

Here we may glance at the influence of anger, fear, and over-anxiety in impairing the intellectual and voluntary power. It seems as if the emotional centres becoming morbidly excited acted in such a manner on the hemispherical or basal ganglia as to interfere considerably with their normal working. A case is recorded in the *Journal of Psychological Medicine*, No. 2, in which a man, aged 59, of delicate constitution and choleric temperament, suddenly lost the power of articulation while engaged in a dispute. This was found to proceed from inability to move the tongue freely; no cerebral or other important symptom existed. The faculty of speech returned after five days under the use of electricity. Sir Charles Bell says:—"The most common instance of this is an impediment in speech when the consent of the muscles is imperfect; but this sometimes extends to all the voluntary muscles of the body. I find that some are capable of lifting a heavy weight, or walking fifteen or twenty miles, and yet they have not the proper command of their limbs; there is an insecurity and want of confidence in the motions of the body, which overtakes them upon any excitement; a paralysis of the knees which prevents them putting one leg before the other, and which endangers their falling. Thus a gentleman capable of great bodily exertion, on going to hand a lady to the dining-room, will stagger like a drunken man, and in the streets any sudden noise or occasion of getting quickly out of the way will cause him to fall down." The following case came under my own observation. A weakly-nerved, but plucky man, on the occasion of the volunteer review in Hyde-park, suffered the greatest discomfort from a sensation of impending syncope some time before and while his regiment was marching past the Queen. As soon as the review was over, all this discomfort disappeared. A comrade actually did faint, and had to leave the ranks. In both these cases there was no fatigue, and certainly in one no heart disease to account for the functional disorder. In such instances as the above there is no real deficiency of motor power, but the emotional centres exercise an inhibitory influence on those from whence the motor nerves proceed. The following case is one of much interest, and its phenomena seem to me scarcely to admit of any other explanation than is afforded by the principle which I am now illustrating. P. S., aged 47, male, was admitted into St. Mary's under Dr. Alderson's care, July 31, 1863. He had had a sore on glans penis eighteen months ago, followed by eruption of spots and some sore throat. He had been ill three weeks, had been attacked with hiccup, vomiting, and headache, which continued up to date of admission. About seven days before this both legs became rather weak, but he could walk for fourteen days after. He had double vision at first. This symptom was much relieved by a v. s. ad ʒviij., twelve leeches to the left temple, and a blister to the neck. His gastric and other symptoms also ameliorated; but his legs got worse, and by September 5 he was unable to walk, and could barely stand holding by some object. Before this time he had had pain in the back; but this had ceased. He had been cupped to ʒvi. Vision was perfect with both eyes; but there was slight ptosis of the left lid. He has not had any pains in the legs, nor any marked anæsthesia. They often change, being at first hot, and then turning cold and stiff, with a feeling of pins and needles in them; they start and jump also at times. The sphincter vesicæ has been much enfeebled; urine has escaped without his being conscious of it; the sphincter ani retains its power. Complains of some numbness about the

(c) Mr. Cox records the case of a girl, aged 11, who died in extreme asthenia after an illness of only four or five days. A tumour had been detected in the right iliac region of the size of an orange and extremely sensitive, but both the tumour and tenderness disappeared shortly after. At the autopsy no less than 365 ascarides lumbricoides were found in the intestine, all but a few being in the small. The symptoms were an unnatural coldness of every part of the surface uncovered by clothing and of the extremities, yet without any feeling of coldness on her part, extreme thirst, vomiting, a rapid and exceedingly feeble, thread-like pulse, rendered imperceptible by the slightest pressure. Two days later the coldness of the surface persisted even while she was in a heated room and wrapped up in warm blankets. Yet she scarcely appeared at all ill, made no complaint of pain, weariness, or debility, was buoyant and cheerful in spirits. The day before her death, though almost pulseless, she walked from her chamber to the room below. In this remarkable instance the inhibitory influence of the verminous accumulation told with fatal effect on the nervous centres of the heart and stomach, but left the cerebro-spinal unscathed.—*Edin. Med. Jour.*, August, 1869, p. 168.

(d) A very illustrative example of this is cited in Andral's work, p. 118, in which an effusion of blood in the substance of the left anterior pyramid was the sole lesion discovered in the brain of an old man who died of an attack of apoplexy, accompanied with complete loss of consciousness. In this case we cannot believe that the hemispheres had undergone compression, and yet their function was abolished, no doubt in consequence of the morbid influence transmitted from the seat of lesion.

nates, which came on when the legs got weak. Up to September 5 he took pot. iod. in gr. v.; during the last week in gr. viij. doses ter die; after this strychnia was given, gr. $\frac{1}{16}$th, ter die, which he continued till about the beginning of November. Local Faradisation was also employed. The muscles of the left leg were less sensitive to the current than those of the right. He improved notably for some time while taking the strychnia; was able to walk without a stick. The action of the left leg was most impaired; it always felt stiff about the knee; he could not bend it, nor raise the foot, as he could with the other. At this date (September 26) it was noted that the sensibility of the legs was not so good as that of the arms; there was no ptosis, but some frontal headache. Towards the close of October he got materially worse, lost the power of walking, and was confined to bed; the legs were cold, and the lower abdomen and hips felt numb and cold. Early in November he became very delirious at night; was rather rambling also in the day; said that he had no pain in back or head. He died on November 18. He had, during all his stay in the Hospital, very good use of his arms; could write, dress, and feed himself, but the grasping power of the hands may have been a little impaired. At the post-mortem, the liver and kidneys were found tolerably healthy; both lungs were inflamed at their lower parts. A cicatrix was observed on the penis, and a depressed one in the right groin. On the legs there were several dark stains, the remains of an eruption. The brain was healthy, with the exception of two tubercles situated at the antero-inferior part of the pons Varolii. The larger was about the size of a small bean, of firm consistence, greyish colour, and well-defined. It lay just beneath the most superficial layer of transverse fibres of the pons, and extended upwards into its substance about $\frac{4}{10}$ of an inch, its length was about $\frac{6}{10}$, and its thickness, $\frac{3}{10}$. It was situated just to the left of the median line, transgressing it slightly to the right. Under the microscope, the substance showed a granular fibroid stroma, imbedding numerous small, granular, non-nucleated cells. The smaller tubercle, of the size of a pea, lay close to, and quite to the left of, the median line; it was more superficial than the other. The tubercula quadrigemina appeared quite normal. The cord was carefully examined; it was flaccid in most of its extent, firmer in the lumbar enlargement; appeared to the naked eye quite normal, as did also its membranes and nerve-roots. Microscopic examination of the cord in the cervical, lumbar, and dorsal regions showed nothing that I could recognise as morbid; no exudation or granule-cells were found anywhere. In this instance, as far as the evidence goes, there seems no ground for believing that any other organic lesion existed than that which was evident in the pons Varolii. The tubercles in this situation, which were doubtless of syphilitic origin, seem to have acted on the tissue in an irritating manner, and to have made their influence felt in three different more or less remote centres, viz., that of the left third nerve, the hemispheres, and the lumbar enlargement of the cord. On the two former, the morbid action was temporary; on the latter, it seems to have been permanent. The ptosis is an evidence that the third nerve was partially paralysed, and the import of the double vision is probably the same. The disorder of the hemispheres may be described as one of paralytic irritation, signs of palsy and of excitement being blended together. The paraplegic phenomena are also partly indicative of irritation, partly of paralysis, the limbs being often cold and more or less stiff from excitation of vaso- and musculo-motor nerves, while there was also great deficiency of voluntary power. The almost entire absence of palsy of the arms is very remarkable, but is not more difficult of comprehension than the similar immunity of the facial, sixth, and other nerves whose origins are situated much nearer to the seat of the lesion than those of the brachial. Meynert gives a case of abscess in the pons of the size of a hazel nut, lying rather to the left side, in which there was no affection of the limbs, although the facial and part of the third nerve were paralysed. He explains this result by the statement that the longitudinal fibres in the pons were only displaced, and not destroyed. I am more inclined to think that in his case as well as in my own the exemption of certain parts from palsy is to be accounted for by the nervous power of their ganglionic cells being stronger and less liable to be depressed by the morbid influence transmitted from the diseased locality. Paralysis of both lower is a much more frequent occurrence than paralysis of both upper limbs, and it is difficult to account for this unless we admit that the tissue of the cord in the lower region is more prone to disorder of nutrition than the upper.

As a last instance of inhibitory paresis, I will briefly advert to hectic fever. This morbid condition is well known to have an intimate relation to debility, as induced, for instance, by over lactation or the drain of diabetes. It is equally connected in the way of causation with irritations which harrass and vex the nervous system, as a diseased joint, and will cease immediately on the removal of the irritation. Mr. Erichsen says of it "that it is essentially a fever of debility conjoined with irritation." Now, there can be little question that in the febrile paroxysm of hectic the vagi and arterial nerves generally are in a state of paresis, the enfeeblement of the former giving rise to the excited action of the heart, and of the latter to relaxation of the arteries and elevation of the temperature. When the hectic is the result of debility alone, the nervous paresis is primary; when it depends on and is kept up by pain and irritation, the paresis is of inhibitory character. The increased excretion which takes place by the skin, bowels, or kidneys is just of that kind which may be induced by paralysis of vaso-motor nerves, a good instance of which was mentioned in the case cited from Dr. Anstie.

If, now, we consider the various causes which we have seen to produce inhibitory paresis, we shall, I think, be satisfied that they are all such as are likely to exercise an injurious and depressing influence on the nervous centres. Over-strong currents of electricity, cold and wet, intestinal worms, fæcal accumulations, gastric, cutaneous, uterine irritation, diseased teeth, and the like, can scarcely be regarded as promoters of the natural and healthful functional excitement, but very much the reverse. The special effect they produce depends in great measure on which part is weakest, and, consequently, most prone to suffer depression or derangement of its normal mode of nutrition. The inhibitory influence seems to be more ready to act on the nervous centres which it first reaches, but it may also, as we have seen, diffuse itself very widely, or may only act on a remote centre. It probably produces its injurious effect wherever the resisting power is insufficient; in fact, *it finds out the weak point*. Diseased teeth commonly produce palsy of some of the highest situated nerves; but in a case recorded by Mr. Castle, of New York, they produced paraplegia, which soon ceased after their removal. The essential idea of the inhibitory theory is that an impression conveyed to a nervous centre by afferent nerves may weaken or paralyse, instead of exciting, its action, either from the congenital or acquired debility and sensitiveness of the centre itself, or because the impression is unduly intense or absolutely injurious. Both these things have, in every such case, to be considered,—viz., the state of the nerve force, and the kind and amount of impression, as the resulting phenomena will vary with the variations of either. A gentleman of high scientific attainments told me the other day that the music (:) of a street organ distressed him so as to render him almost pulseless. Here, of course, the nerve force was in a very feeble and impressionable condition. It is clear that these views are of very material importance in relation to practical Medicine, that they are utterly opposed to anything like routine procedure, and that they lead us to careful consideration of each individual case, not only as regards physical signs, but also as regards the very varying functional energies. It may be added that the state of the nervous centres seems also to determine to a great extent the length of time during which the depression shall continue, even after the inhibitory agency has ceased. Stronger centres recover at once, as soon as the morbid impression is removed; weaker ones, more slowly, and sometimes not without the aid of tonics and restoratives. Indeed, we find the same variations to prevail here as we do in many diseases. Two persons are affected with the same malady at the same time,—it may be rheumatic fever; in one the system soon throws off, as it were, the disorder, and springs back to health; in the other it abides in its ill state, and shows but little tendency to spontaneous recovery. This must, I think, ever greatly interfere with attempts to ascertain what is called the natural history of disease.

BEQUESTS.—Mr. James Breed, of Rickmansworth, lately deceased, has left, with other bequests, chiefly to religious institutions, £50 to Surgeons' College, no doubt intended for the Royal Medical Benevolent College at Epsom, and Miss Mary Catherine Garnett, of Hardwicke-Tornsham, Devon, has bequeathed £400, to be equally divided among the Idiots' Asylum, and the Middlesex, Cancer, and Brompton Consumption Hospitals.

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COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.(a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College, and of University College Hospital.

Lecture XI.

ALBUMINURIA WITH AND WITHOUT DROPSY;—IN CONNEXION WITH BRIGHT'S DISEASE, HEART AND LIVER DISEASE, PREGNANCY, FEVERS, ETC.—ITS CHEMISTRY, PHYSIOLOGY, PATHOLOGY, AND TREATMENT.

(Continued from page 597.)

Pathology.

There are two points to which I must here direct special attention, otherwise difficulties which need not exist may come in the way of beginners. In the first place, it occasionally happens that a number of granular cells are found in the field which look very like pus corpuscles (Fig. 2). They are bigger than than the red blood cells, and smaller than the epithelium. These, in the majority of instances, are simply white blood corpuscles, and are most numerous after meals. In some few cases, when the nephritis is accompanied by vesical catarrh, mucus cells are likewise abundant. In others, again (as in that of a child aged 3 years, four weeks after scarlatina and fourteen days after the first appearance of the dropsy began) the white blood corpuscles are actually more numerous than the red. This, however, is rare, for during fifteen years' special observation I have only once met with it. The increase in the number of white corpuscles after food is common enough, and is readily accounted for on physiological grounds, it being now an admitted fact that after every meal a large excess of white corpuscles are poured into the circulation.

Fig. 2.

The second source of difficulty to the beginner consists in the fact that in some instances the blood corpuscles appear nucleated. A remarkable case of this kind fell under my notice in June, 1859, the patient, a man aged 32, being at the time under the care of my colleague Professor Hare. The albumen in the urine had begun to diminish, the tube casts and free epithelium to disappear, when the red corpuscles were noticed to have the appearance presented at Fig. 3.

Fig. 3.

Some of the corpuscles possessed one, others two perfectly distinct macula. By slightly altering the focus of the lens a halo became apparent round each macula, which then assumed the characters of a black spot in the centre of a bright ring. It was further observed that the spot was not in the interior of the corpuscle, but only imbedded in its cell-wall, the appearance of its being in the centre of the corpuscle arising simply from the position in which the cells happened to be viewed. In many of the discs the spot was seen, as in the figure, to project beyond the cell-wall, thereby carrying, as it were, the latter with it. This irregularity in the form of the blood corpuscles I have seen still better marked in a case of hæmaturia. Some looked exactly like the developing nucleated blood corpuscles of the human embryo.

The peculiar appearances above described, which may prove so puzzling to the beginner, are due to the action of the saline urine upon perfectly normal blood cells. In 1860 Dr. Addison showed that sherry wine in certain proportions induced projections from the walls of blood discs, and in 1863 Dr. Roberts threw additional light upon the subject, by discovering that solutions of tannic acid and magenta bring into view a vesicle in the cell-wall of nucleated, as well as non-nucleated blood corpuscles. The inner vesicle being analogous, he thinks, to the primordial utricle of vegetable cells.(b)

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—Ed. *Med. Times and Gaz.*

(b) *Proceedings* of the Royal Society, 1863.

Till now I have spoken of Bright's disease as it affects both kidneys simultaneously, but it occasionally, though much more rarely, happens that it only attacks one, and in this case there is albuminuria, and all the microscopic appearances already described, *but no dropsy*. Anasarca, in fact, only makes its appearance when not alone both, but the whole of both kidneys are so much affected as to be unable to excrete the urinary products. So long as one kidney remains healthy, these manage to escape from the circulation, and dropsy does not appear. This, indeed, is, I believe, the true explanation of the occurrence of those cases of Bright's disease without dropsy which have hitherto been considered so anomalous. Having diagnosed the case properly, the next thing is to watch its course, and try and guide it to a successful termination.

The progress of the disease is best learned from the condition of the urine.

The first sign of improvement is a diminution in the number of the blood corpuscles; the second, an increased elimination of urine, which is soon followed by a decrease of the dropsy. The quantity of urine daily voided after the first stage of the attack has passed is sometimes very large, being far beyond the normal standard. Occasionally, the twenty-four hours' urine of a patient in the second stage of Bright's disease will amount to something above 3000 c.c. (more than 100 ounces). And, what is still more important, is the fact that with this excessive elimination of water, there is often a corresponding excessive elimination of the organic and inorganic salts. Luckily for the patient it is so, it being this accumulation in the blood of these excrementitious products which in general is the immediate cause of a fatal termination. In one case, three weeks after the commencement of the attack, or, I should rather say, of the onset of the dropsy—for it was the first thing the patient observed—Mr. Alexander Bruce, my former assistant, found that the patient—a young woman, aged 29,—passed the following quantity and quality of urine:—

Water . . .	2525 c.c.	= (81¼ ounces.)
Specific gravity .	1012	
Urea . . .	25·25 grammes	= 391·37 grains.
Uric acid . . .	0·233 ,,	= 3·6 ,,
Phosphoric acid .	8·837 ,,	= 137·0 ,,

And this, too, be it remembered, when the patient was taking very little food. As a case goes on improving the albumen diminishes, the specific gravity of the urine rises, and the tube-casts disappear.

Should, unfortunately, the affection resist the action of remedies, and run on to a fatal termination, which is rather the exception than the rule, the kidneys will be found enlarged, congested, sometimes softened, and always readily denuded of their capsules; but the capsule often has portions of the cortical substance adhering to it. They may weigh in very bad cases as much as twice the normal amount (which is about 10 ounces for the two). When examined microscopically, small irregular punctiform extravasations will be found scattered among the urine tubes. As regards the urine tubes themselves, some will be found entirely denuded of their epithelial lining, others distended and blocked up with detached epithelial cells, blood corpuscles, and amorphous granular matter, giving to them a well-marked dark outline, readily recognisable both in longitudinal and transverse sections.

The treatment of cases of Bright's disease will be considered after the other varieties of albuminuria have been explained. Meanwhile, it may only be remarked that the form of Bright's disease here described is one of the most amenable to treatment of all renal affections.

We now pass to the consideration of the *permanent* variety of *primary albuminuria*, which is, as shown in the table, met with in the following morbid conditions of the kidney:—Chronic hypertrophy, fatty, waxy, cirrhosis, tuberculous, scrofulous, and cancerous degeneration.

The chronically enlarged kidney, which is by far the most common accompaniment of permanent albuminuria, is in general the result of repeated attacks of inflammatory action (Bright's disease). It is likewise the ultimate product of prolonged passive renal action, such as arises from cardiac and hepatic disease. Besides this, however, all constitutional as well as local affections (fevers, tumours, calculi, etc.) which produce congestion of the kidneys may be said to pre-dispose to their permanent hypertrophy.

The simply hypertrophied kidney is exceedingly difficult to diagnose during life from the circumstance that so long as the enlarged organ remains in a quiescent state—that is to say, in an uncongested condition, or is not the seat of any

acute inflammatory attack—there are no symptoms sufficiently characteristic to admit of its ready detection, for the urinary secretion may be copious, normal in colour and specific gravity, as well as entirely free from any deposit; so that unless some accidental circumstance directs the attention of the Physician to the kidneys, the existence of albuminuria may be readily overlooked. Even the œdema of the ankles is often in such cases so trifling as to escape the notice of both patient and Medical attendant, until some slight attack of renal congestion specially calls attention to the state of the kidneys and their secretion.

Regarding the morbid anatomical condition presented by the hypertrophied kidney, little need be said, for, except being much beyond the usual size, it looks to the naked eye exactly like a normal kidney. At least, this is the condition met with when the patient is suddenly cut off by some other disease. In other cases, again, the hypertrophied kidney is found engorged with blood, softened, and friable, in consequence of its being, or having recently been, the seat of an acute inflammatory attack. It is, indeed, surprising how prone the enlarged kidney appears to become congested, and even excessively so, without any very apparent cause.

When in a congested state it pours out large quantities of albumen, blood corpuscles, and epithelial tube casts. The urine at the same time becomes scanty and high coloured, the feet and legs rapidly increase in diameter, and the patient presents all the appearances of a well-marked case of Bright's disease.

Moreover, the hypertrophied kidney is frequently the precursor of both the fatty and the waxy forms of degeneration, and the almost invariable forerunner, I believe, of the cirrhosed organ.

Fatty Degeneration.—Although the fatty form of kidney is frequently the result of chronic inflammation, it may occur quite independently of it, just as we find fatty degeneration arising from constitutional causes in other organs of the body. Hence we often find that fatty kidney is the accompaniment of phthisis, of heart disease, of fatty liver, etc.

Its most characteristic symptoms are permanent albuminuria and dropsy, but as in the early stage of the attack it is impossible to say whether the albuminuria is to be persistent or not, these symptoms of themselves teach us but little. It is to the microscopic condition of the urine that we have to look for further information, and, fortunately, we need not look in vain, as a peculiar form of sediment not only reveals to us the nature of the pathological lesion, but even indicates the stage of the renal disorganisation. In the first place, the presence of oil globules in the tube-casts, and in the free epithelium, tells us that the albuminuria is the product of a kidney in a state of fatty degeneration; while, secondly, the amount of the oil globules and the quantity of albumen, together with the special character of the tube-casts present in the fluid, indicate the exact stage of the affection. Lastly, the supervention of an acute inflammatory attack upon a fatty kidney is at once recognised by the existence of blood corpuscles in the urine, in addition to the presence of oily tube-casts and epithelium.

The accompanying drawing, which was kindly made for me by my former pupil, Mr. Ed. De Morgan, is a very faithful

FIG. 4.

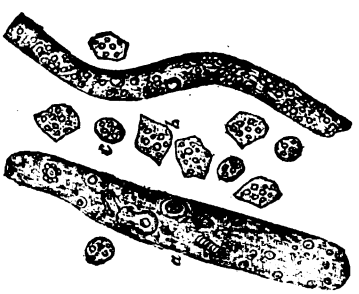


illustration of the condition of the tube-casts and epithelium met with in cases of fatty degeneration of the kidneys. The history of the case from which this drawing was taken is briefly as follows:—

A labourer, aged 36, was admitted into University College Hospital, under my care, on October 4, 1864. He acknowledged to have been a very intemperate man, but stated that he had, nevertheless, generally enjoyed good health. He could give no very definite account regarding the commencement of his illness, except that he noticed his legs first begin to swell about three months before his admission, from which time his health had gradually failed. There was no account of his having at any time had an acute attack of nephritis, nor of his present illness having been due to exposure to cold or wet. On admission, the legs and abdominal walls were exceedingly œdematous, but the face was only slightly puffy, and there was no anæmia to speak of. The urine was, however, highly albuminous, becoming almost solid on boiling. It was acid, contained oily tube-casts, and epithelium, as represented in the drawing; but there were also a few blood corpuscles and granular casts scattered among them. The case was, therefore, at once diagnosed fatty degeneration of the kidney, with the supervention of an acute inflammatory attack.

The patient continued much in the same state till November 9, when erysipelas, excited by a sore on the face, set in, and from then till December 5 he lingered on, sometimes better, sometimes worse, until he was suddenly seized with rigors and vomiting, followed by a worse outbreak of the erysipelas. He died on the 12th. The quantity of urine passed by this man varied from 70 to 116 ounces, and the specific gravity from 1010 to 1015.

On post-mortem examination made by one of my colleagues, the cortical substance of the kidneys was said to have appeared much increased in width, the line of demarcation between it and the pyramids being almost lost; while under the microscope the substance of the kidney was described as being in a state of granular and fatty degeneration, much free fat being scattered in globules over the field.

Where only one kidney is involved, fatty degeneration may run on to almost any extent, till at length the organ assumes almost the appearance of a fatty tumour. One such specimen has at least been brought under my observation. The case occurred in the practice of Dr. Hullett Browne. The patient was a boy, aged 11, who had for a considerable time suffered from renal calculus. At the post-mortem examination, the left kidney was found to be $6\frac{1}{2}$ by $3\frac{1}{2}$ inches in diameter, and so completely transformed into adipose tissue that only a mere trace of renal structure could be detected in the centre of the mass, faintly indicating, as it were, the outline of the original kidney. The right kidney was much enlarged, congested, soft, and friable. This was not, of course, an ordinary case of fatty renal disease; but I quote it merely to show to what extent fatty degeneration of the kidney may proceed. If both kidneys are equally affected, death would, of course, inevitably ensue long before the degeneration could extend to anything like the stage here indicated. (d)

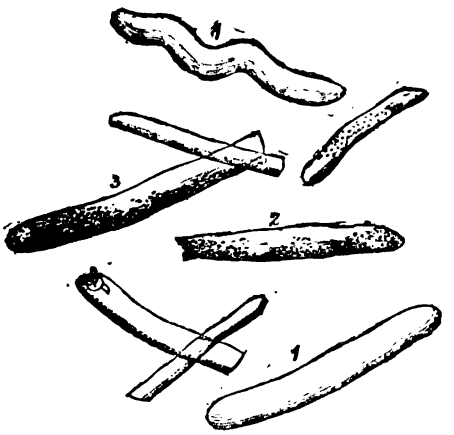
Between this and the healthy kidney there is every possible intervening grade of fatty degeneration. In the ordinary run of cases which terminate fatally, the kidney is found somewhat increased in size, greasy to the touch, and pale in colour. the cortical and medullary substances having generally much of the same appearance, and are so blended together that it is often extremely difficult to point out where the one begins and the other ends. A scraping of either part placed in a drop of water and viewed with the microscope presents, in an exaggerated degree, the appearances delineated in the figure —that is to say, the epithelium cells both in and out of the tubes are found loaded with oil globules.

Waxy Kidney.—Although this form of renal degeneration is not so common as the fatty variety, it is tolerably often observed, and is usually associated with a similar degeneration in some of the other organs, more especially of the liver and spleen. The waxy kidney is darker in colour than the fatty, and is easily distinguished by its smooth texture and glistening waxy aspect. To the touch it is firm, being sometimes indeed so hard as to take the impression of the nail without tearing. On section, the medullary and cortical substances are found to be blended together, and the malpighian bodies in the latter distinctly marked as translucent spots. The capsule is easily detached, and the surface beneath is smooth, pale, and slightly mottled with small rosettes of red vessels. The diagnosis of this form of renal disease during life is not so easy as that of the fatty variety; still, however, it can be accomplished by carefully examining the urine from day to day, when the detection of what are termed hyaline casts serve to indicate the pathological condition. The casts are often absent for two or three days at a time; then for the next two or three days they may be present. The annexed figure, which was also made for me by Mr. De Morgan, indi-

(d) The case is reported in the Path. Soc. *Trans.*, vol. xiii., p. 131. The specimen is in University College Museum; No. 4720 of the catalogue.

cates the appearance presented in the ordinary forms of hyaline casts.

Fig. 6.



The patient who passed the casts from which the above drawing was made was a woman, aged 30, with a well-marked syphilitic history (secondary eruption, sore throat, loss of hair, tibial nodes, etc.). She attributed her urinary symptoms to an attack of cold, which induced headache, thirst, shivering, pain in loins, scanty and high-coloured urine, with dropsy. This occurred several months before her admission into the Hospital. At the time the above represented casts were found there was still albumen in the urine, but comparatively little dropsy, the lower limbs only being œdematous, the face having quite a natural appearance. As the waxy is sometimes associated with a partially fatty condition of kidney, it occasionally happens that both hyaline and oily casts are met with in the same patient's urine. This is always an unfavourable complication. Hyaline casts alone, though generally indicating an advanced stage of disease, are by no means invariably indicative of immediate danger. The waxy form of degeneration is sometimes almost entirely limited to one kidney, or portion of a kidney, and however severely affected the part may be, it causes little disturbance so long as the other kidney, or portion of kidney, is healthy. With fatty kidney, on the other hand, it is usually the reverse. When once one part becomes affected the disease rapidly spreads; and this seems to be especially the case when the tissues of the organs have already become weakened by the pre-existence of other disease.

The waxy, like the fatty, kidney is prone to take on inflammatory action, and although during the quiescent stage of the disease no blood corpuscles are to be found in the urine, yet every slight attack of temporary renal congestion is apt to induce their appearance.

When examining the urine in a case of waxy kidney, a few epithelial cells are occasionally to be found scattered over the field of the microscope; but as all epithelial cells met with in the urine do not necessarily come from the diseased kidney, care must always be taken not to fall into an error of diagnosis, by mistaking urethral, bladder, or even vaginal epithelium, for renal. Renal epithelium, like the blood corpuscles, only appears in the urine of the waxy kidney, when an acute inflammatory attack or temporary congestion has disturbed its circulation. Grainger Stewart thinks that blood from the waxy kidney generally contains an excess of white corpuscles, but this, I imagine, can only occur when the spleen is also affected.

Cirrhosed Kidney.—The kidney, like the liver, after repeated attacks of inflammatory action is apt to become cirrhosed and atrophied. All the three varieties of enlarged kidney—the chronically enlarged, the fatty, and the waxy—are liable after a time to shrink and assume a granular appearance, but this is more especially the case with the former. The capsule at the same time becomes thickened, and so adherent to the renal tissue, that when it is being detached it brings away with it portions of the cortical substance, thereby giving to the surface of the organ a very roughened appearance. In acute nephritis, as before said, little patches of kidney substance often adhere to the capsule when it is torn off, but in that case the kidney is larger and softer, and in this case it is smaller and harder than natural. Besides, it has not the same granular appearance on section. The cirrhosed kidney sometimes even looks fibrous, in consequence of the obliteration of many of its tubes and blood-vessels. As the cirrhosed and atrophied kidney is also liable to attacks of inflammation, the appearances here described are not always those found after death, for the case often ends fatally during one of the inflammatory attacks, which of course considerably modifies the anatomical conditions.

The process which leads to atrophy of the kidney is thought to be very slow; some think it may extend over several years, but on this point I have not sufficient data at my disposal to admit of my offering an opinion. The cirrhosed and atrophied kidney is by no means easily diagnosed during life, for sometimes there is neither albumen nor tube-casts present in the urine during several days at a time, and then it is only the peculiar look, the pale, hydræmic face, the bleached lips, and puffy eyelids, with diminished flow of urine, which lead us to suspect the existence of renal disease. As a rule, the urine is acid and scanty, both as regards the frequency of micturition and the amount passed on each occasion. When tube-casts are detected they are usually small in size and somewhat granular in appearance. Their semi-granular nature has, indeed, led me to the conclusion that their presence in the urine in such cases, is perhaps not so much due to the atrophy or cirrhosis of the organ, as to the existence of trifling temporary congestions, which though insignificant in themselves, are nevertheless sufficient to disturb the balance of the circulation in an abnormally small organ, which even at the best of times has more work thrown upon it than it can well perform. The nature of the congestive granular tube-cast will be afterwards pointed out, when albuminuria arising from portal congestion is considered. We must now pass on to albuminuria arising from tuberculous, scrofulous, and cancerous degeneration of the kidney, regarding which I have only a few words to say at present, as their diagnosis and treatment come much better under the head of bloody and purulent urine.

In *tuberculous*, *scrofulous*, and *cancerous degenerations* of the kidney, the urine is coagulable by heat and nitric acid, not so much on account of the presence of ordinary albumen as in the preceding examples of disease, as from the existence in the urine of organised albumenoid elements—such as tubercle and pus cells, or blood and cancer corpuscles. In fact, in these diseases of the kidney, although the urine is both coagulable by heat and nitric acid, it is only when the other kinds of renal disease, previously described, supervene in the course of tuberculous, scrofulous, and cancerous degeneration, that the coagulability of the urine dare be said to depend upon the existence of albuminuria, or that the affection ought to be classified in the category now under consideration.

Mr. Thomas Ballard has recorded(e) a very interesting case of encephaloid cancer of the kidney, in which there was the complication just described—namely, permanently albuminous urine of low specific gravity, associated with malignant disease of the kidney. These cases must, however, be rare. Before death, the lady, who lived to the age of 70, had frequent attacks of hæmaturia.

It ought never to be forgotten that ordinary renal inflammation may, and does under certain circumstances, run on to suppuration; but then, if the Medical attendant has carefully watched the progress of his patient by a diurnal microscopical and chemical examination of the urine, the case is easily enough distinguished from one of tuberculous or scrofulous degeneration,—for in the former case the appearance of pus corpuscles in the urine has been preceded by blood corpuscles, renal tube-casts, and exudation cells; while in the latter the pus corpuscles have slowly and insidiously made their appearance independently of any inflammatory action. According to Basham, who is a good authority on such subjects, another of the peculiarities of nephritis ending in suppuration is the absence of dropsy. The existence of gravel or stone in an inflamed kidney is always a powerful provocative of suppuration; but here, also, we have the previous symptoms of the case to guide us to a correct diagnosis.

Before quitting this subject, I should like to remark that the exact converse of what we have been describing occasionally occurs—namely, that a kidney, the seat of tuberculous, scrofulous, or cancerous degeneration, may become suddenly the seat of nephritis, the supervention of which would be at once diagnosed by a change taking place in the urinary sediment, for, in addition to the elements of tubercle, cancer, or pus, the characteristic *débris* of Bright's disease, as already described, would become apparent.

(To be continued.)

(e) *Path. Soc. Trans.*, vol. x., p. 188.

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ORIGINAL COMMUNICATIONS.

THE CATTLE PLAGUE.

By Professor F. UNTERBERGER.
Directeur de l'Ecole Imperiale Veterinaire, Dorpat, Russia.

THE great calamity that after a lapse of above a century has again visited England, has certainly called forth much sympathy. But it is not only pity for a foreign trouble that is now resounding in all parts of Europe: it is something more. We have long been accustomed to look upon the English as masters in breeding cattle, and there is scarcely a state in all Europe in which English horses, horned cattle, and other domestic animals are not used in improving and refining the native breeds. A misfortune, then, that falls upon England's breeds — especially England's beasts — falls also upon the breeds of Europe, and is, when we consider the gigantic commercial connexions of Albion, and the possibility they create of spreading the plague over the whole globe, a misfortune for breeders and owners of horned cattle throughout the world.

It is therefore doubtless the duty of every expert having a voice in the matter, and more especially of those who have had more opportunity than others of becoming acquainted with the visitation, and who have been instrumental in stopping its ravages, not to hide their light under a bushel. Of this number I am one. Having before studied the cattle plague in Hungary, I was engaged from 1836 to 1849 in the Imperial Appanage Estates in the Government Simbirsk, as first Veterinarian, chiefly in eradicating the disease. Since that time I have taught epizootology in an establishment entrusted to my direction, but in the last sixteen years I have had occasion to become acquainted with the pestilence as it shows itself in Southern Russia, and for two years in succession I conducted the inoculation for it in the neighbourhood of Odessa. It cannot, therefore, be denied that I am justified in expressing an opinion upon the plague now raging in England. If its publication should not be attended with the success I sincerely wish it, then I hope my good intention to be of use, even in this far distant land, to the breeders and owners of cattle, especially in England, will not fail to be recognised.

That the epizooty now reigning in England is none other than the cattle plague (*typhus bovin contagiosus*), no veterinarian on the Continent, who was able to meet his colleagues from England in Vienna at the International Congress of Veterinary Surgeons, called into existence by John Gamgee, can doubt. But also those who not having been able to do this, have yet read the excellent article on the question in *The Veterinarian*, September, 1865, concur beyond a doubt in this assertion. The malady now reigning in England is indeed the cattle plague, the same cattle plague by which Russia loses every year about ten millions of silver roubles on the average (£1,562,500).(a)

The disease, I consider, is a typhus, and very taking. The contagion seizes on the firm and fleshy part of the organism; and in addition, the patient developes an infectious atmosphere, which, like a fixed contagion, being brought into contact with animals of susceptibility—as experience shows, with sheep and goats—calls forth in them exactly the same malady as that to which it owes its existence. This contagion is not, however, so volatile as that of the chicken pox, and, according to my experience, is of no effect at a distance of ten paces. One must be careful, however, not to mistake the cattle plague for the common abdominal typhus. This mistake has already caused much evil. So late as 1844 the protomedicus of Bohemia, Nadherny, considered the contagion not as one imported into Bohemia, but as having arisen in the country itself from the confluence of different deleterious matters, an infectious epizooty resembling the dysenterical typhus in man. It may be generally known that in consequence of this, merely lax police measures were taken, and hence the cattle plague soon spread over all Bohemia, and threatened to invade the neighbouring States, and could only be eradicated by energetic police measures when the veterinary professors called in from Vienna had recognised in it the real cattle plague. The malady is a typhus, but a typhus *sui generis*, related to the common abdominal typhus as Asiatic cholera to cholera nostra, influenza to a violent cold, and the malignant distemper in the feet of sheep to the mild, etc. I am firmly convinced, from the experience and observations of thirty years, that the cattle plague never arises out of the south-eastern steppe country of Europe. When, therefore, it is asserted that it arose in England from the experiments just commenced in England for producing new races, that is simply false. It is not to be denied that the products of crossing are often more sensible to unfavourable external influences, and therefore fall ill oftener than pure breeds; but crossing will never produce the cattle plague. Professor Gamgee is perfectly correct in saying the disease was imported into England; but, if my highly respected friend will excuse the expression, he is quite wrong in saying it was imported from Revel. Here I can only repeat what I said on August 16, at the meeting at Vienna, when my excellent colleague from London, Ernes, maintained the same position: "It cannot have been imported from Revel, for it reigns neither in that town nor in the government of Esthonia." Up to this time, Heaven be praised, the Baltic provinces have been spared the scourge of the cattle plague.

But how and when did the pestilence reach England? This question must for the present remain unanswered; but as it was possible at the beginning of the last century to show that the cowherd of Count Borromeo, by receiving into his stalls an ox abandoned by the drovers from Dalmatia, caused the plague to visit Italy, whence it spread over a great part of Europe, including England, destroying first the cattle of the man himself, so, I have no doubt, sooner or later, it will be possible to explain how, after an interval of 121 years, the cattle plague again struck that country.

What measures should be taken to eradicate the disease in England with the greatest speed and least loss? According to the political papers, the following have been proposed:— 1st, Use of medicaments; 2nd, inoculation; and, 3rd, energetic execution of veterinary police regulations.

As to the use of medicaments, we veterinarians in Russia have long been persuaded that there exists no medicine with which we can successfully resist the cattle plague. From pig's gall, which in 1853 was used at Zarskoe Selo, to arsenic, all have been tried; but all are of no avail. After treatment sometimes some of the animals recovered when the plague was already dying out, but then some recover even without medicines. As in the course of Medical treatment the contagion may very easily be passed from affected to healthy subjects, it ought, as a commonly dangerous thing, to be resorted to as an experiment only in cases where there is no danger of propagating the evil.

Touching inoculation as a proposed means of extinguishing the plague, I take the liberty of making the following remarks:—The operation was first tried in England by the English, yet we Russians can now judge more soundly of it than the English themselves. Since Dodson first made his trial 121 years have passed, whilst in Russia, in modern times, from 1853 to 1864, inoculation has been used on a most extensive scale,—viz., on four thousand and some hundreds of heads of cattle. Though it cannot be denied that by this favourable results have been attained,—just as in England and in other states in the eighteenth century,—yet inoculation has been, on the whole, unable to maintain itself. The Imperial Russian Government, therefore, in the spring of 1864, gave up the inoculation establishments which it had formed in the governments of Cherson and Orenburg.

Every one who knows that the Austrian Government has abandoned the establishment for inoculating for chicken-pox which for many years formed part of the Veterinary Institution of Vienna, because experience has shown that the inoculation of the sheep cannot be depended on, and may be the means of spreading the pock, and who knows how much more dangerous the cattle plague is than the chicken-pox will approve of the determination of the Russian Government.

Nevertheless, I myself have advised inoculation (b), but not for England, nor, indeed, for all Russia. It is only to be recommended where the carrying out of energetic measures for stopping the pestilence has been hindered by the invincible apathy of the people. And here it must not be forgotten that the cattle plague is in many districts in Russia of frequent recurrence, and, therefore, not so malignant in its appearance as that now in England. It is different in the Baltic provinces, in which it appears seldom, but then it comes in a

(a) V. Bericht über die ersten, auf Befehl Sr. Majestät des Kaisers, in Neurussland angestellten Impfungen. Von Professor P. Jessen. Dorpat, 1854, p. 2.

(b) "Beiträge zur Geschichte der Rinderpestimpfung." Dorpat. 1865.

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malignant form. During the time I have been at Dorpat the plague has been twice brought into the neighbourhood of our town. In both cases it was impossible to render the infected herds innoxious to the neighbouring herds by separation, and it was therefore quickly determined to kill all really infected beasts and such as were suspected of being so. With the greatest readiness, the landed proprietors of the environs made up for the loss caused by the visitation, which was entirely stopped. With us, then, no man ventures to propose inoculation either as a measure of precaution or in an exigency, and when the disease is present it is but wasting words to talk about inoculation. This will also be the case in England, for it must be considered that in the same proportion in which the plague is increased by inoculation, the danger of its propagation is enhanced.

Having thus seen that neither medicines nor inoculation are to be recommended, we have now only to say a few words upon the strict execution of veterinary police measures for the eradication of the pestilence. If I, in my practice, have been successful in stopping the plague, I owe it entirely to the circumstance that, on the breaking out of the disease, I have always devoted my attention principally to the herds at places situated near the point of its appearance, and have taken every possible means to keep the still healthy cattle in the same condition. I have attained this end by measures tending to prevent anything like an immediate or, as far as practicable, mediate contact of the healthy and the infected animals.(c) In the locality where the malady exists, all practical veterinary police regulations must be made, separation of the healthy from the unhealthy, seclusion, disinfection, etc. I say separation of the healthy from the unhealthy, and not *vice versâ*. Little is gained by removing the sick animals from the stalls. By so doing the sick animal is got out of the way, but all the objects that have been in contact with it, and which, as bearers of contagion, may spread the plague, cannot be removed. It is an excellent step, as we saw above, to kill the actually infected and the suspected beasts; in doing this, however, one must not be too hasty, but take the advice of some experienced Veterinary Surgeon, who will in many cases recommend, not the executioner, but the butcher. But killing alone does not put an end to the plague, for a dead ox, if the veterinary police regulations be neglected, may do as much, or even more, mischief than a live one. For example, what harm may not the skin of a single beast dead of the plague do? Killing is also an unnecessary measure if the diseased beast can be made innoxious to the others by other means. Whether this course would be advisable for England I cannot say, for, unfortunately, I have had no opportunity of making myself acquainted with the state of things there. But when I consider that when employed on the Volga I generally obtained good results without killing, though I had to do mostly with Tartars, Tschuwaschen, and Tscheremischen, I cannot help thinking that, in so intelligent a State as England, such draconic measures are not always necessary, and all the less so at the present time of the year, when pasturing has ceased, and the coming winter necessitates the sequestration of the herds in small parcels.

In conclusion, I may be permitted to say a few words about disinfection. Commonly, chloride of lime is advised, and it works very efficaciously; but there is a second and a cheaper means, one everywhere accessible and just as sure in its operation—one, therefore, particularly recommendable for disinfecting articles of clothing, stalls, implements, flesh, etc.; I mean heat. It has long been known that by a high degree of heat contagion is destroyed, and that this is the case with the contagion of the cattle plague has just been proved by experiments in Russia. These experiments were made under the control of experienced Veterinarians, partly professors, in the Government Wjatka in 1853, and in the Government Cherson in 1863. Skins of beasts dead of the plague were during one to four days placed in a bathing-house and submitted to a temperature of 30° to 40° Reaumur (100° to 122° F.). In one case the skin remained only one day on the stove of a highly-heated peasant's room, in another boiling water was poured over it, and all these hides proved, at the trials lately made, to be innoxious. I trust these remarks will be considered in England. There also are poor people whose whole wealth is a milch cow: if this calamity should fall on them, may these remarks enable the hide at least to contribute to feed them.

(c) Those who desire to follow this advice may rest assured that if their cattle, having been separated from others, do not become ill in the course of ten days, they will, if the observation of these rules be continued, remain in sound health. The *stadium incubationis*, which begins with the day of taking, and ends with the breaking out of the disease, lasts about four to five days; sometimes, but very rarely, ten. In this period no symptoms of the malady can be perceived.

UNUSUAL COURSE AND TERMINATION OF AN ABDOMINAL TUMOUR.

By WM. WATMOUGH, M.R.C.S., etc.

L. M., aged 61, spinster, of florid complexion and tolerably healthy appearance, states that since the age of 25 she has suffered from repeated attacks of liver complaint, for which she has been bled three hundred times, blistered over the right side until you might have seen her ribs, and salivated on several occasions. Her description of one of these attacks is a truthful record of the symptoms met with during the passage of gallstones through the common bile duct. It was during one of these attacks in April last, that my friend and partner, Mr. Kemp Welch, saw her, and upon examining her abdomen, discovered a tumour rather larger than an orange in the right hypochondriac region, extremely hard, circumscribed and moveable. Her acute symptoms were soon relieved, but the tumour remained and increased slowly in size, until about the middle of July, when it felt exactly like a small child's head, occupying part of the right lumbar and hypochondriac regions, with its centre on a line with and five inches to the right of the umbilicus, giving rise to little or no pain, and no symptoms of the formation of pus, but to considerable emaciation and loss of strength. Great doubt was entertained as to the nature of this tumour by the Surgeons who examined it, the prevailing opinion being that it was malignant, although there is no history of cancer in her family that I can make out.

Matters went on much in the same way, the patient continuing to lose flesh and strength, confirming, as was supposed, the diagnosis, until August 4, when she noticed the epidermis raised like a blister over the centre of the tumour, which had now become firmly adherent to the wall of the abdomen; this soon burst, giving exit to a large quantity of pus and blood, and consequently diminution in the size of the tumour. The discharge, however, was soon arrested by a hard substance, which the patient herself picked out of the opening in the abdominal parietes with a pin; about a dozen smaller bodies of the same character then came away, immediately followed by a copious discharge of pus and blood, and marked diminution in the size of the tumour. From this time she improved rapidly, the discharge of pus continuing until the first week in September, when it was again stopped by one of these masses blocking up the artificial outlet; the picking process was again resorted to, and twenty more stones expelled. About three weeks ago, twenty more, exactly like the first, came away. There is still a slight discharge of matter, which rather annoys her, otherwise, she considers herself perfectly well, and able to resume her household duties. The stones in my possession are fawn coloured, consisting of cholesterine, with nuclei of carbonate of lime and biliary pigment; varying in size from small peas to hazel nuts; with well-marked facets on each. I cannot persuade her to send me all she passes, since she delights in presenting them to her friends, who look upon her as a living wonder.

Christchurch, Hampshire.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—At the November sittings of the Examiners in General Education of the Royal Colleges of Physicians and Surgeons, the following gentlemen obtained certificates of having passed the preliminary examination in general education. Those marked * gave in papers of superior merit:—Joseph F. W. Brass, Kirkwall; Archibald Campbell, Perthshire; James Bremner Crole, Edinburgh; John Kerr Davidson, Wick; John Gillies, Isle of Skye; Archibald Grieve, Langholm; Peter Gowan, Markinch; *Joseph Higham, Glasgow; Jas. Hunter, Peebles; John Gulland Hunter, India; Christopher Jackson, Jamaica; R. A. Jackson, Lancaster; John Lennon, Glasgow: John William Macdonald, Nova Scotia; David M'Lean, Nova Scotia; Donald Malcolm, Wick; William Jones Morris, Liverpool; Francis Cobham Nicholson, Australia; William Agar Renshaw, Lancashire; Wm. Riley, Warwickshire; *Edward Smith, Arbroath; John A. Sutherland, Wick; Josiah Williams, Swansea.

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REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

RESUMÉ OF A WEEK'S ADMISSIONS.

THE SUBSTANCE OF A CLINICAL LECTURE.

(Cases under the care of Mr. HUTCHINSON.)

[Reported by Mr. WARREN TAY.]

GENTLEMEN,—My week of Hospital duty ended on Tuesday, and I purpose, as on a former occasion, to give you a brief resumé of the cases which were admitted during it, and to say a few words respecting some of the more interesting. The following is a list of them :—

Wound of ankle-joint	1
Inflammatory œdema of scrotum	2
Retention from organic stricture	2
Dislocation of the tibia at knee-joint	1
,, of the humerus (old case)	1
Hernia (strangulated)	3
Contusions, inflamed legs, arms, etc.	17
Scald and burns	3
Lacerated scalp	2
Compound separation of the lower epiphysis of the humerus	1
Fracture of the humerus	1
,, ,, tibia	1
,, ,, fibula	3
,, ,, tibia and fibula	3
,, ,, ribs	2
,, ,, neck of femur (impacted)	1
Erysipelas	1
Concussion of brain	2
Orchitis	1
Epithelial carcinoma	1
Ulcers	4
Morbus coxæ (old)	1
Condylomata	1
Outgrowth on ulna, etc.	1
Abscess	2
Total	58

Of the total fifty-eight cases forty-seven were accidents or urgent cases, and the remaining eleven were admitted by governors' letters. First of all, let us take the case of wound of the ankle-joint; John C., aged 14. He had had his leg jammed between a fly-wheel of an engine and a wall. There was a transverse contused and lacerated wound about an inch and a-half long, beneath the inner maleolus. The House-Surgeon saw the articular cartilage of the joint exposed. There was no fracture nor rupture of tendons, etc. Our treatment has been by the persistent application of ice, two bladders of which, one on each side of the joint, have been in constant use. There is now healthy suppuration of the wound, and very little evidence of inflammation of the joint. He is doing well. This is the second case which we have under care now of wound of the ankle-joint. The other is much more severe, but is going on favourably. *Two cases of œdema scroti.* One patient, aged 29, was so ill; there was such a large amount of swelling of the scrotum and penis, with a history of his having suffered from stricture, and as no instrument could be passed into the bladder, the diagnosis of extravasation of urine was made, and the scrotum was incised on either side. The further progress of the case, however, has militated against this diagnosis, for the swelling has gradually subsided without the escape of any urine through the incisions, and without sloughing of the incised portions of the scrotum, as is so usually the case in extravasation. Therefore, we now look on the case as one of inflammation of the cellular tissue of the scrotum and penis. The cause of the inflammation seems doubtful, but one rarely secs it excepting in connexion with gonorrhœa or stricture, as in this case.

The second case was less severe, and there was no suspicion of extravasation. He had no retention. The scrotum pitted on pressure, but was not boggy at any part. There was no suspicion of suppuration anywhere. The prepuce was elongated to the extent of two or three inches beyond the glans, and was twisted on itself. Three weeks ago he had gonorrhœa, but the discharge has now ceased. There is no orchitis nor effusion into the tunica vaginalis. No incisions were made into the scrotum, and he is doing well. His urine is not albuminous.

Next come two cases of *retention from organic stricture.* One patient, aged 68, was under Mr. Luke's care fifteen years ago, who then, after much difficulty, passed a No. 3 catheter. No one has since been able to pass a catheter for him. He has a perineal abscess, and I shall not trouble him at present with the use of instruments, but have ordered him potass. bromid. gr. x., ter in die.

The other patient, aged 63, has an enlarged prostate with a stricture in front of the bulbous portion of the urethra. A No. 6 could not be passed, and hæmorrhage followed the attempt to do so. He says he has been troubled with hæmaturia before. Ordered potass. bromid. gr. x., ter die.

We now come to a very remarkable case—one of *complet dislocation of the tibia forwards.* There could be no doubt as to the diagnosis. The condyles of the femur were pro minent behind, the skin being tightly stretched over them. The edge of the tibia was evident in front, and you could press your fingers from above downwards on to the head of the tibia and feel the semilunar cartilages. The quadriceps was quite lax; the patella was quite moveable; the hamstring muscles were lax; in fact, there was no muscular tension at any part. At the outer part above the knee there was a tense band, probably fascia. There was about an inch and a half shortening. The limb was nearly straight. One very important complication was that no pulsation could be felt in the tibial arteries either before or after the reduction. The limb was cold, and he complained of pain in it. Reduction was easily accomplished (owing probably to the condyles of the femur presenting an inclined plane for the tibia to slide on) by slightly flexing the knee and bringing the femur forwards.

The great danger has been from the tendency to gangrene. The leg looked very suspicious yesterday, but to-day is much better. I am inclined to attribute this improvement in a great measure to the administration of opium. One often notices that persons who die while under the influence of opium usually have a warm skin, owing to relaxation of the arteries having been produced, and it struck me as advisable to try it in this instance. Our object, of course, is to favour the speedy establishment of the collateral circulation, and this we hope to do by diminishing the resistance offered by the smaller vessels.

The question arises why was there no pulsation in the tibial arteries? There is no traumatic aneurism nor effusion of blood into the popliteal space, indicating rupture of the vessel. I think it is to be explained in one of two ways; either a clot formed above the part pressed on by the condyles of the femur, or the internal and middle coats of the artery were ruptured across by being stretched and then their ends doubled in and obstructed the flow of blood. We know that this occasionally takes place when an artery is violently stretched, the external coat being far less fragile than the others. I think it exceedingly probable that this is what has really occurred. It is not at all likely that during the short period of three hours, which elapsed between the accident and the reduction, that permanent occlusion by coagulation could have taken place.

I now show you a case of *old dislocation of the humerus.* The patient is a man, aged 25, and the accident occurred six months ago. You will see that the usual symptoms of dislocation into the axilla are well marked; projection of the acromion, the hollow beneath it, stretching of fibres of deltoid, altered direction of the axis of the arm, etc., etc. Observe that his elbow is, as is usually the case, some distance from his side, but observe, also, that it can be brought close to his side with ease, and without causing him any pain. It is sometimes said that the possibility of bringing the elbow to the side is conclusive as to reduction having been effected. No doubt in this case the time which has elapsed has done something, but I have seen a few recent cases of dislocation of the axilla in which the arm could be made to touch the side without material pain. In the case before us, the House-Surgeon reduced the dislocation in the receiving-room over his knee, but the bone almost immediately slipped back again. I incline to leave him alone, because he has already acquired good use of his arm for anything in front, although he cannot get it behind him. It is not probable that I could keep it in position if I reduced it, and reduction of old dislocations is by no means unattended with danger. You will

most of you recollect the case of an old woman last year, in whom suppuration of the shoulder-joint followed an attempt at reduction of an old dislocation, and who died in consequence.

Next we come to *three cases of strangulated hernia*. Two of these were inguinal, and were reduced by the taxis. In both tight strangulation existed. In one ice was applied, after a first attempt at the taxis had failed, and two hours later I succeeded in reducing it. In this case the stricture was evidently in the sac itself, an inch below the external abdominal ring. In the other the man had a warm bath, with the same satisfactory result.

I do not think it advisable to wait in any case long before resorting to an operation; but I would wait longer in a case of inguinal hernia, if the symptoms were not very urgent, than in a case of femoral hernia. Statistics show that more inguinal herniæ are reduced by the taxis than femoral, and the seat of stricture is generally in the former case in the sac itself, involving the necessity of opening the sac in most cases of inguinal hernia, should an operation be necessary; whereas in femoral hernia the stricture is generally outside the sac, and may be divided without opening it. You will see, then, that we have a double motive for perseverance in attempts with the taxis in cases of inguinal as compared with those of femoral hernia. First, we have much more reason to be hopeful of success by this means; and, secondly, the operation, if we are compelled to resort to it, will be a more dangerous one. I have insisted on these points in a paper published in our last volume of Reports. The subject of the femoral hernia which we have admitted this week is a woman, aged 30. Strangulation had existed for thirty-six hours; the hernia was large, and the skin over it was thickened and reddened; but as she had applied a mustard poultice to it one could not lay much stress on that symptom. The sac was opened to the extent of about an inch; but the intestine was not seen nor exposed in the least. She has had a sharp attack of peritonitis, and is still in a critical state. A grain of calomel and a quarter of a grain of opium were administered every two hours with apparently great benefit. She seems better to-day.(a)

Amongst the sixteen cases of *contusions, inflamed legs after bruises or lacerations, lacerated toes or fingers, or inflamed arms*, there is very little of special interest. One young man, who had fallen into a hole and hurt his back, was unable to pass any water for two days. On the third morning he evacuated his bladder without material inconvenience, and has continued to do so. He was unable to get up after the accident; but on admission no paralysis of his legs or loss of sensation could be detected. Ought this to be considered as a case of concussion of the spinal cord? My own opinion is that concussion (mere shaking) of the spinal cord is decidedly rare. The cord is so well protected by the fat and fluid around it, by its bony case, and by the pad of muscles in the back, that it is scarcely possible that it can be damaged by any violence short of fracture of the vertebræ. It is well known, too, that retention of urine often follows injuries to large nerve trunks and contusions of the loins and pelvis without there being any reason to suspect actual concussion of the cord itself.

We have taken in one case of *scald of the throat* in a child who was said to have swallowed some boiling water. The child was taken in as a matter of precaution, no very urgent symptoms being present. Let me caution you against being in too great a hurry to operate in such cases unless very urgent symptoms are present, but watch the child carefully, Tracheotomy is always a very hazardous measure, and many apparently severe cases will do well if let alone.

The cases of burn do not present anything of note.

We have next a case of orchitis in a boy aged 15. He says that he fell off a chair and hurt himself. He had no gonorrhœa, but one cannot help suspecting masturbation, which is a frequent cause of orchitis in boys.

Next comes a case of synovitis of the left knee-joint after a fall. This was but slight. We treated it by keeping the joint at rest by means of a back splint.

Next, cases of *lacerated scalp*. Two of these present no features of importance at present; but as in each a portion of bone is laid bare, it will be interesting to note whether inflammation of the bone follow or not. If it should, as I have often brought before your notice, the patient is very likely to get pyæmia as a consequence. The third case presented some features of considerable importance, and I shall reserve it for a future occasion. An exceedingly interesting case of compound separation of the lower epiphysis of the humerus I must also refrain from entering upon at present, as I purpose to make it, in connexion with some parallel ones, the subject of a clinical lecture at an early date.

The cases of fracture of ribs, tibia and fibula, humerus and neck of femur, we may pass by with slight comment.

The case of *fractured tibia* only presents an instance of that form of fracture known, and very appropriately, by the term intra-periosteal; that is, the violence has been sufficient to crack the bone in two, but has not ruptured the fibres of the periosteum; so that one gets very little or really no displacement, the chief symptom being crepitus. Such cases, of course, give very little trouble; they are the most favourable of any for treatment.

The case of fractured humerus was admitted because there was some difficulty at first in reduction.

Amongst the committee cases is that of a patient, aged 49, whom you just now saw in Talbot Ward, with *epithelial carcinoma* of the mucous membrane beneath the tongue on the left side. He has noticed a lump there since last November, but it has only taken on malignant action during the last six months. The disease is too deeply seated for excision (involving the parts beneath the tongue) without a severe operation, and as he already has enlargement of the cervical lymphatic glands, I do not think it worth while to submit him to the risk of cutting it out. In this case there does not appear to have been any local cause; but in two other cases which I have seen during the past week there was an evident local irritation as the exciting cause. In one sent to me by Dr. Stutter, of Sydenham, the patient had several bad teeth, which had irritated her gums, and ended in producing not the ordinary form of epulis, but true epithelial cancer of the gums. The disease was too advanced for removal in this case also, the lymphatic glands being already enlarged. In the other patient, whom I saw at the Metropolitan Free Hospital, there had been syphilitic disease of the tongue for a long time, for which he had been under treatment, and which had at length taken on cancerous action. Although a large sore, it was limited to the tongue, and excision of the whole organ was strongly advised, but for the present he will not consent. I mention these cases because they afford instances of the effect of local irritation in exciting cancerous action. They also show how rapid the progress of epithelial cancer often is.

(a) This patient subsequently died. Death occurred just one week after the operation. The autopsy showed most extensive peritonitis.

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Medical Times and Gazette.

SATURDAY, DECEMBER 9.

CHOLERA REFUGES.

Ever since the first alarm was sounded that cholera was on its way towards us, we have insisted on the necessity of setting our house in order, so as to be able to ward off the invader, or, at least, to confine its mischief within as narrow limits as possible. We have still some months before us in which to complete our preparations. It is true that cholera is in our midst, but it is not likely to spread widely until spring. When the trees begin to put forth their leaves, and winter is fairly gone, then we may dread that the pestilence, which has smouldered so long, will burst forth in all its fury.

It will not do to bow our heads and accept our fate. It will

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not do to burnish up our weapons of attack and neglect our means of defence. Cleanse as we may, we may not be able to destroy the disease by active antagonistic measures; we must strive to starve it to death by denying it victims. And, first of all, we must dismiss the idea that the cholera poison is not transmissible from person to person. We find the disease travelling along the most frequented routes. In India it has been observed to travel twenty miles daily against the monsoon. We find that an island may keep itself free from cholera, as Sicily has done this year, by cutting off all communication with suspected ports. But it is useless to multiply cases. The evidence is so much in favour of the doctrine of the possibility of personal transmission of cholera, that every unprejudiced person must be convinced by it.

Now, when cholera breaks out with all its violence, what are we to do with our poor patients? Are we to send them into the general Hospitals? If we do, we shall have the disease spreading to a frightful extent among the other patients. Dr. Jules Worms, in an excellent pamphlet which he has just published,(a) tells us that the number of patients attacked by cholera while in the Parisian Hospitals was, in 1849, 33 per cent. of those admitted into the Hospitals suffering from cholera; in 1854 it was 44 per cent. In the Hôpital de la Charité 89 home cases occurred for every 100 received in 1849; and in 1854, 94 for every 100.

This is no mere coincidence. The ravages which cholera makes in an Hospital are not to be explained merely by the weakened state of the subjects which it finds there. MM. Briquet and Mignot tells us that before October 9, 1854, no case of cholera had occurred in La Charité. On the 9th and the 14th two cholera patients, a man and a woman, were received and placed in the best aired wards in the Hospital. From the 15th to the 19th eight cases of cholera broke out in the Hospital in patients placed near to one or other of the cholera cases. On the 19th five new cases were developed, four in the wards already affected. More marked cases could be cited. Dr. Worms tells us that in the wards of M. Recamier a patient died of cholera. The next six patients who occupied his bed were seized with cholera while in the Hospital, and died of it. Dr. Williams cites a still more extraordinary case, where the cholera poison clung about a bed for months.

With such facts before our eyes, it would be crime to introduce cholera patients into general Hospitals. When the disease breaks out upon us, there will be a great outcry and a great deal of activity. Sheds will be knocked up for the accommodation of the sick, and Medical men will show their usual self-denial and heroism in attending upon them. But would it not be better to be prepared? If we show a little forethought now, we shall save a great deal of trouble in the future, and shall be more likely to be able to keep the disease within bounds than if we allow the first few cases to scatter wide their morbific influence. Would it not be well if each parish were to construct some kind of cholera refuge? It need not be a fine building. A wooden shed, properly warmed and ventilated, is all that is necessary. But those who have the management of those sheds must know that the seeds of cholera lurk in the sick man's linen and in the bed-pan.

In Dr. Worms' pamphlet are many facts which show conclusively that soiled linen is often the vehicle by which the disease is disseminated. Dr. Riegler, although an anti-contagionist, was struck with the large number of washerwomen who were attacked in Constantinople in 1848.

Again, the cholera poison is often diffused by means of dead bodies. There has already been some talk of erecting mortuary chapels; and we hope that in overcrowded districts some stringent rule will be enforced to prevent infection from the dead.

(a) "De la Propagation du Choléra et des Moyens de la Restreindre." Paris: Victor Masson et Fils. 1865.

It is to the parish authorities and to the Medical officers of health that we look. Let the parish provide proper accommodation, with proper attendance, and let the Medical officers seek out cases, and send them where they will be well cared for and will be harmless to others; and then we venture to affirm that disease will be cheated out of many of its victims.

THE COMMISSION AT THE ADMIRALTY.

We recently informed our readers that a Commission was sitting at the Admiralty to investigate into the causes of the grievous unpopularity of the Army and Naval Medical Services: we gave them its constitution, and the names of the President and members, and we stated that the examination of witnesses had commenced. We now learn that the Commission has examined all the witnesses it deemed requisite, and we may, therefore, soon expect to hear the results of the deliberation. As far as the civil Medical members are concerned, there can be no doubt as to their anxiety to do justice to our Profession and to those members of it in the public services. Mr. Busk is an eminently conscientious and able man, fully acquainted with the requirements of the services, sensible of the great changes which have taken place in the education and social position of the men who now study Medicine, and, above all, fully alive to the lamentably inferior quality of the candidates who are seeking to serve Her Majesty. Dr. Markham, at the cost of much time and labour, had thoroughly sifted the question, and must have satisfied himself that the grievances which have been so long and so loudly proclaimed have a firm foundation. We have no doubt, therefore, that they have earnestly striven to perform their duty, and they deserve the hearty thanks of the Profession and of every soldier and sailor for their efforts. A private Commission is, no doubt, much less satisfactory than a public one; however, a great many eyes have been turned to that Committee-room in the Admiralty. Many have been the exclamations that the whole thing was a sham,—an attempt on the part of the Government to hoodwink the public by an appearance of something being done, and to delude the Profession into entering the public Services by false hopes. We have heard much dissatisfaction expressed at the class of witnesses brought forward. Honorary Physicians to the Queen, Senior Inspectors-General, and a Surgeon notoriously favourable to the Horse Guards, could hardly afford the Commission an adequate and fair view of the existing discontent of other ranks. Had these been all the witnesses, the Commission might have ceased from its labours, but the civil element did not probably allow these to be all. As a class, the Army and Naval Assistant-Surgeons are more affected than any other rank, yet, from what we can learn, they appear to have had no voice in the matter, for none were summoned as witnesses. It surely would have been well to have asked some of the men that have resigned the services, their reasons for doing so, and to have inquired of the many who are only retained by the appointment of this Commission, what their grievances were. It ought to be remembered that the Army inspectorial ranks personally know nothing of the complaints made by Regimental Surgeons, because these complaints have only arisen of late years, and were due to the working of the Medical Warrant. We have even heard old regimental Surgeons say that they are infinitely happier in their regiments under the old *régime* than now. For the state of things in the navy we would refer to a letter published in the last number of the *United Service Gazette* by a late Assistant-Surgeon, which letter, by the way, we commend to the perusal of the Commission. It is not the calumnious emanation of some coward, sheltering himself under an anonymous appellation; but it is the outspoken avowal of a man who gives his name as the guarantee of his sincerity and truthfulness. Can it be won-

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dered that the navy urgently wants fifty or sixty men, and only get three or four; or that Professional *gentlemen* refuse to remain in it? The army Medical service, bad as it is, is certainly better than this. Thirty or forty years' service as an Assistant-Surgeon, on a maximum pay of 13s., is, at any rate, preferable to the loss of self-respect entailed by service in some of the ships of our navy. Still, the Army Medical Department has nearly exhausted the number of those who care for the sweets she offers, and her last batch of Medical aspirants exceeded all the others in the extent of their—ignorance!

We believe, then, that something must be done at once. The two Services together require, *at the very least*, upwards of 100 men, and the Government may be sure they will not be forthcoming unless some changes are made; at least, if they be, the members of our Profession will have to accept the lot they deserve, and can expect no sympathy.

We never want to see Medical men transformed into mere officers; we have no sympathy whatever with the man who thinks he can enhance his importance by an over-weening love and display of military rank or dress. We heartily dislike—and all the really good men of both Services do the same—that very small, but very noisy, class of men who enlarge the "officer" to such a degree as to over-shadow and conceal the "Medical" prefix: men whom Thackeray rightly fixed on as a type of the military snob. Doctors are not wanted in order that they may look "nice" in their uniform or make a "smart" appearance at parades, but they are required to treat and cure the sick soldier at the Hospital, and the more they are encouraged to consider the latter as the sphere of their duties and the less their presence is required at the former the better. What we want to see is *well-educated gentlemen in our services*. These cost more, but they are well worth the outlay. Ability, industry, and Professional zeal *do* consort more than is generally believed with dignity, urbanity of disposition, and a contempt for mean and false semblances of military rank. Ambitious men of great talent will, nineteen times out of twenty, seek to remain in metropolitan or large towns to practise their Profession, and acquire fame and wealth in connexion with large Hospitals and Medical schools. But be the talent and ambition never so great, it generally requires great patience, enduring courage, and some means to command success, and some gladly shun the trial. These will enter the public services, and they will be very few, because giants in intellect, like giants in stature, are very rare and costly, and they are quite aware of the fact. But there are very many capital men,—men above the average, men who would not rest in a country or county town without getting on the staff of the Hospital, and who would in time command means and position. Now, a goodly number of these would, under happier auspices, turn their attention to the army and navy. Should the services be so fortunate as to procure this class of men, sure we are that they will prove a real acquisition, valued as much by the admiral as the common seaman, by the general as the private soldier.

THE WEEK.

THE CONSERVATION OF OPEN SPACES IN AND AROUND LONDON.

THE work of the new Parliament is being rapidly sketched out. Reform and Jamaica, America and the cattle plague, will, we suppose, afford topics for palaver which must occupy a goodly portion of such time and attention as honourable members can be expected to spare from the pressing claims of railway schemes and similar matters of personal interest. Political, foreign, and commercial relations will doubtless be discussed with the usual amount of prolixitity and dulness, and half-a-dozen brilliant speeches from the leaders on both sides, about the same number of measures for the interests of the many, and a disproportionately larger number of measures for the interests of the few, will be the practical results of the Session. We have some hope, however, that the fear of cholera and the presence of the cattle plague will make the House more attentive than usual to hygienic subjects. History shows that it is only under the pressure of present or expected epidemics that sanitary reforms have ever been undertaken on a large scale in England. In the middle ages plague and sweating sickness were always followed by cleansing the streets and removing laystalls and offensive trades from the towns, and our present progress in sanitary matters dates from the early epidemics of cholera. Our existing fears and losses, therefore, may reasonably be expected to lend weight to the opinion that an extension of the franchise is not the only thing needful for the health and happiness of the population, and that a want of good food, good water, fresh air, and means of recreation for body and mind will not be compensated for by the honour of assisting to return a metropolitan member. We, therefore, hope with more than usual confidence that Government will find time to listen to the recommendations embodied in the second Report of the Commissioners appointed to inquire into the best means of preserving for the public use the forests, commons, and open spaces in and around the metropolis, and will interfere to prevent the wholesale sacrifice of the hygienic interests of the people with which we have of late been threatened.

We are, however, glad to see that an Association has been formed for the express purpose of taking care of the people's pleasure grounds within a circuit of fifteen miles round London, and that they propose to introduce a Bill in the next session for the appointment of Commissioners who shall be enabled to purchase or to accept on the part of the public the right possessed by lords of manors, commoners, or others, over such heaths, forests, and commons in the neighbourhood of London as have hitherto been virtually the property of the people. We say to accept, as it is not impossible that some lords of manors may be found who will follow the generous example set by Mr. Alcock, who has made a gratuitous grant of his manorial rights over Banstead Downs to the public for ever. The proposed Bill will empower the police to superintend such open spaces, and to prevent evils the occasional occurrence of which is often urged as an argument against their public use. The drainage of the lands will be provided for, and the payment of the necessary expenses will be defrayed from the funds of the Metropolitan Board of Works. Lastly, the Inclosure Commissioners for England and Wales will be prohibited entertaining any application for the inclosure of commons or open spaces within fifteen miles of the Post-office.

We cordially agree in the principle upon which the Association has been formed and in the provisions of their Bill, which, indeed, embodies the recommendations of the Commissioners, and we wish them all success in their appeal to the House of Commons.

THE CATTLE DEATH-RATE.

THE cattle plague is spreading with increasing rapidity and severity. Up to November 25 the number of cattle attacked was 33,983; of these, 16,384 had died; 10,061 had been killed, and 2420 had recovered, leaving a remainder of 5118. The recoveries, therefore, have hitherto amounted to about 7 per cent. The returns of the week ending November 25 show a fearful increase in the number attacked. The number of cases in the week ending November 11 was 2580; that of the week ending November 18, 2669; whilst in the week ending November 25 the total of attacks was 3610. These figures completely justify the worst forebodings of the Veterinary Surgeons and of the Cattle Plague Commissioners. The remedy originally proposed by the former—the pole-axe—is now at least powerless to stop the dissemination of the poison. If any good is to result from the recommenda-

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tion given by the majority of the Commissioners—that the traffic in living cattle be stopped—the Government must act peremptorily and at once. It is evident that no half measures can succeed. The country can better sustain a temporary disturbance in the meat trade, and a consequent rise in prices, than lose three or four thousand head of cattle per week throughout the coming year.

THE EDINBURGH COMMITTEE ON THE TREATMENT OF RINDERPEST.

The Edinburgh Committee on the Cattle Plague, considering it desirable, in addition to the experiments which they propose to institute themselves, to obtain a record of observations and experiments bearing on the prevention or cure of the plague, have drawn up some suggestions for methods of treatment of various kinds. After referring to the impolicy of pressing food upon the sick animal, and the necessity of regulating the bowels, either by laxatives or by astringents, particular methods of treatment are classified under the following heads:—A, Diaphoretic and stimulant treatment; B, Acid treatment; C, Restorative treatment without drugs; D, Prophylactic treatment. In the diaphoretic treatment the vapour bath is an essential agent. It may be easily extemporised by placing the animal in an enclosed stall, with high sides, and throwing a tarpaulin over the top of it. The head of the animal ought to be outside of the tarpaulin. Steam is generated by a constant succession of hot bricks thrown into boiling water. The action of the vapour bath may be aided by, 1st, oil of turpentine, two ounces twice daily; 2nd, infusion of coffee, two ounces of the ground beans every six hours; 3rd, carbonate of ammonia, half an ounce thrice daily. The acid treatment is suggested in consequence of the alkaline state of the secretions which is found to exist uniformly in the cattle plague. Three drachms of dilute muriatic acid may be given twice daily, or two ounces of vinegar four times a-day. The restorative treatment without drugs consists in carrying out in full the sanitary instructions of the Royal Cattle Plague Commission, in regulating the diet, in keeping the animal warm, and administering two quarts of good Scotch ale three or four times daily. The prophylactic treatment consists in the administration of one ounce of sulphite of soda twice daily, or a wine-glassful of McDougall's solution, or a mixture of half an ounce of sulphite of soda with two tablespoonfuls of McDougall's solution. The Committee have also drawn up a schedule for the purpose of rendering definite the record of the results of the method of treatment suggested by them.

UNIVERSITY OF LONDON.

The results of the examinations of the present year for Degrees in Medicine at this University offer some features worth noticing from their bearing on Medical education. At the "Preliminary Scientific" and at the "First M.B." examinations a large percentage of candidates was rejected; while at the final examination for the Degree of "Bachelor of Medicine" all the candidates passed; and at that for the Degree of "Doctor of Medicine" two only, out of seventeen candidates, were rejected. Now, assuming that the papers at the final examinations are, at least, not of a less rigorous character in their own spheres than are those in the first two examinations for the degree, and allowing also for the fact that habitude of answering questions enables a man to make more show with even a smaller amount of knowledge, there yet remains something to be accounted for in the difference of the results. We think that the true solution of the question rests not so much on the matter of the final examinations as on the mode in which candidates are prepared for them—in the element of real teaching, which obtains most in the latter part of their career. At the "Preliminary Scientific" and "First M.B." the subjects are those into which the tutorial element (as at present constituted) enters but feebly; a student attends lectures on anatomy, physiology, chemistry, botany, etc., but he is not subjected to that system of groundwork and thorough drilling that a clinical clerk or a dresser has to go through. The tutors in the Medical Schools have more the character of Professors; they do not exact from the students sufficiently often written answers to written questions, so as to inculcate a style of terseness and perspicuity, so necessary to the well-passing an examination. This, we know, is not so much the fault of the tutor himself as of the system. In most of the schools where a tutor is employed, he is paid a small annual stipend to instruct a class, consisting of a great number of men, for an hour a-day. A systematic number of questions to each man is, of course, impossible, and the consequence is that the numbers diminish, and the tutor's class becomes a mockery. In some schools the tutor is not allowed to take private pupils except through the medium of the school itself, which both makes a high charge and gives only a small modicum to the tutor. He cannot, of course, be expected to devote more time to the separate instruction of particular students, when the remunerations are so small for what is always an irksome office at the best. Then, again, we have to complain of the men chosen to fill the office. With few exceptions, they are not first-rate University men—not men who have taken first-class positions in the things they are called upon to teach—often, indeed, they have not passed in the subjects they profess. With such a system of things, there never can be any certainty of success in sending a number of candidates to the University. Young students require to be shown the fundamental principles of what they have to learn, and to have their attention especially fixed upon those minutiæ which too often the Professor has not time to dwell upon nor (we fear we must add) the tutor the capability to teach. The remedy we would propose is, to make the tutor's position more like that at Oxford and Cambridge. Let it be a post worth having; let there be no small salary, with a diurnal lecture of an hour's duration and an occasional examination; but let the tutor be a man of capacity and standing, let him make his own charge for tuition (a good man might thus secure to himself from two to three hundred a-year), and let the teaching consist of written questions, involving written answers. The Professorial style, universal in British systems of Medical education, has certain advantages; but its main disadvantage is, that young men rely on it to make them thoroughly acquainted with the master-cards of a subject—a thing totally outside its province. Let lectures be attended for what they may be worth; but we should advise those who present themselves to be tested by severe examinations to combine with the lectures a large dose of the tutorial element.

FROM ABROAD.—ATTEMPTED INTRUSION ON THE PARIS FACULTY—POPULATION RETURNS OF RUSSIA—NEUTRALISING THE WOUNDED IN NAVAL BATTLES.

The Paris Faculty of Medicine has just been subjected to an impertinence which must have been very annoying. Dr. Liebreich, a young German oculist, formerly an assistant of Von Graefe, settled down in Paris a short time since for the purpose of practising his speciality there. Although unprovided, we believe, with any French qualification for practice, he has been well received by the Profession, and has met with a considerable share of success among the higher class of patients, having, moreover, his Dispensary, at which he may deliver lectures and promulgate any improvement in his art of which he may hereafter become the author. This seems liberal treatment enough, but M. Liebreich, probably believing that his mission is to teach the principles and practice of the true opthalmology to the rising generation of Frenchmen, has made, through powerful friends, a demand to have instituted for him in the Paris Faculty a Chair of

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Clinical Opthalmology, which would of course involve assigning to him a certain number of beds in one of the Hospitals. A startling demand, in truth; but, an accomplished singer and a guest at the fêtes at Compiègne, he has known how to interest in his favour influences which are usually paramount. Still, in the face of its utter illegality, it has been successfully resisted, and just on the eve of the delivering an unanimous adverse report on the part of the Professors of the Faculty it has been for the present withdrawn. This is probably a mere matter of tactics, and it is anything but certain that the end sought will not yet be accomplished. However this may be, one cannot but be gratified at the resistance offered to so unwarrantable an intrusion. German opthalmology is admirable, both for the laboriousness with which it has been pursued, and the results which have attended upon its development; but surely France and England are not reduced to such a point as to be unable to provide the means of teaching this branch of Surgery with the same distinguished success that has attended their efforts in all the other departments? Certain it is, that no method could be found more effectual for damping native energies than for the prizes of laborious study and proved ability thus to be snatched by interlopers from those whose lives have been devoted to the struggle for obtaining them.

In continuation of a former paper, Dr. Blumenthal, of Moscow, furnishes us with some statistics of the population of the Russian Empire. He deplores the present imperfections of this class of researches in that country, and observes that material errors are less likely to occur by taking for investigation periods including several years. His former paper referred to the seven years 1850-56, and the present one relates to the next six years, 1857-62. The difficulty of making an exact census in so large a dominion, and where the persons employed for the purpose are often of defective education, is very great; but Dr. Blumenthal thinks that the mean *population* for the six years in question may be put down with tolerable accuracy at 70,364,271. The *births* during the same period amounted to 17,754,853—viz., 9,049,921 boys, and 8,704,932 girls. The male births exceeded, therefore, in 1857-62 those of the female by 39 per 1000, while during the period 1850-56, they exceeded them by 48 per 1000. Taking the means, we have 2,970,808 births per annum, 8139 per day, and 339 per hour. Comparing them with the population, there is a birth for every 23·69 inhabitants, while during the former period this was only 1 in 23·96. No other European country can show so high a proportion, Saxony, which approaches nearest to Russia, exhibiting the proportion of 1 to 24·82, while France has only 1 to 35·82. The increase of births over deaths during the six years amounted to 4,574,297, or an annual mean of 762,382 or 1·08 per cent., being an increase of 0·15 per cent. over the former period. The *marriages* during 1857-62 amounted to 4,026,886, or a yearly average of 671,147; therefore 1 to 104·81 inhabitants as compared with 1 in 120·06 in 1850-56. With respect to the proportionate number of marriages, Russia also occupies the first rank among European States. In the present period under review, not only have the births and marriages increased, but the *deaths* have diminished. During 1857-62, 13,180,556 individuals died, 6,673,809 being males and 6,506,747 females. The male deaths have only surpassed the female deaths by 25 per 1000; whereas during 1850-56 they did so by 51 per 1000. The mean number of deaths was 2,196,759 per annum, 6018 per day, and 250 per hour. The mortality amounted to 3·12 per cent., or 31·21 per 1000, the deaths being 1 in 32.03 of the population. In the period 1850-56, the figures were respectively 3·22 per cent., 32·28 per 1000, and 1 death in 30·97. This improvement must not, however, be set down entirely to an actual and durable improvement in the condition of the people, without taking into consideration certain circumstances. The period 1850-56 closed the Crimean War, with all its material suffering, and loss, and moral depression, while the period 1857-62 brought with it not only the fruits of peace, but the vast social changes undertaken by the present sovereign. Dr. Blumenthal next enters into speculations on the mean duration of life in Russia; but with material so confessedly imperfect as to inspire no confidence in the results. Those who may wish to examine the circumstances he adduces we may refer to the ninth number of the *Petersburger Medicinische Zeitschrift* of the present year just issued.

Most of the European Governments having agreed at the Genevese Congress to make some attempt to ameliorate the condition of the wounded on the field of battle, and provide for the safety of those in attendance upon them, Dr. Le Roy de Méricourt, in a memorial addressed to that body, called their attention to the position of those engaged in naval warfare. He has published the document in the November number of the *Archives de Médecine Navale*, and here are his conclusions, or rather aspirations:—

"1. When a ship engaged in naval combat is imminently menaced with total loss, whether by springing a leak or by fire, it is desirable, that, upon making a signal agreed upon, the enemy, made aware of its critical situation, should cease firing, so as to allow the ship to at once disembark the wounded. 2. Every boat loaded with the wounded should carry a distinctive flag. 3. Ships in the vicinity of the vessel should aid in saving her wounded. 4. When the wounded are received on board the enemy's ships, the Surgeons and nurses in charge of them should be regarded as neutrals. 5. When recovered, the wounded should be dispatched to their various countries on condition of their abstaining from bearing arms during the future course of the war. 6. It is desirable, under these grave circumstances, that a suspension of hostilities should take place, as is the case in armies, for the removal of the wounded and dead from the trenches during sieges. (The men who are uninjured, or, if wounded, not incapacitated from bearing arms, when removed from the ship, under these circumstances, to be regarded as prisoners of war.) 7. In the case of a vessel after a naval combat not being able to provide the necessary attendance for its numerous wounded, and not being able to reach other than a port of the enemy's, it is desirable that she should be permitted to land her wounded there. After the proper communication, she may be authorised to entrust them to the enemy's hands, accompanied by one of her Surgeons. When cured, they are to be restored to their country on parole, all expenses being paid. 8. In no case should the Surgeons or nurses of the fleet be treated as prisoners of war when they fall into the hands of the enemy during the fulfilment of their duties."

PATHOLOGICAL SOCIETY OF DUBLIN.—It was intended that the first meeting of the twenty-seventh annual session of the above Society should have been held on Saturday, the 27th ult., in the Anatomical Theatre of Trinity College; and at the usual hour, four o'clock, a large number of members and of senior students admitted, in accordance with the practice of the Society, as visitors, occupied the benches. Dr. Churchill, the President, however, on taking the chair, stated that it was his melancholy duty to adjourn the meeting to the following Saturday, in consequence of the lamented death, on the preceeding day, of Dr. Hutton, a former president of the society; but he thought it well, before dismissing the students and visitors, to announce that the subject of the essays to be sent in at the close of the session 1865-6, in competition for the Society's gold medal, would be: "the Diagnosis and Pathology of Renal Diseases." The members having remained for the transaction of indispensable business, the following officers were elected for the ensuing year:—*President:* Benjamin George M'Dowel. *Vice-Presidents:* Joseph M. O'Ferrall, Alfred Hudson, Awley Banon, George Kidd, Robert Adams, Dominick J. Corrigan. *Council:* John Banks, Thomas Beatty, Fleetwood Churchill, John Denham, James Duncan, Christopher Fleming, Samuel Gordon, James S. Hughes, Robert Law, Alfred M'Clintock, George H. Porter, Jolliffe Tufnel. *Honorary Secretary:* William Stokes. *Secretary and Treasurer:* Robert W. Smith. *Secretary for Foreign Correspondence:* Robert D. Lyons.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF LEAMINGTON.

(Continued from page 610.)

The Springs of Leamington.

The sources of the water of the springs of Leamington have not been studied with any great accuracy. Sir Charles Scudamore—whose chemical and Medical report on the properties of the mineral waters of several English springs famous for their medicinal properties is still amongst the best of such works—explains that the springs are situated at the eastern side of that extensive flat, called the plain of Warwick, which is covered with the formation known in this country as the red marl. This bed, he says, is the same as that in which the salt mines in Cheshire are placed, and it also frequently contains gypsum. Both these are accordingly found at Leamington. The salt, however, is not met with in a state of rock, but only as a salt spring. To the east lies the lias, or oolite range.

The same author gives a very clear and correct description of the waters of the various springs. The saline water he describes as transparent, but not sparkling, and this observation applies to all the waters here. The temperature of all the springs varies according to the season of the year, the range being from 46° to 56° Fahrenheit. The taste of the water from the saline spring is strongly saline, and considerably bitter; the specific gravity is 1·0119. This estimate of the specific gravity by Scudamore differs from that by Weatherhead, who makes it as high as 1·072. The error lies with the latter observer in the main; but I believe that both are to an extent correct, as there is in all mineral springs a variation in the amount of saline constituents at various times. Scudamore made an analysis of the water of the saline spring. He showed from this that the water possesses a considerable share of free carbonic acid, and that it contains lime and magnesia, muriatic and sulphuric acids. He further infers the existence of soda. Scudamore's analysis of the saline water was as follows:—

Analysis of Saline Water.

In a pint—

	Grains.
Muriate of Soda	53·75
,, Lime	28·64
,, Magnesia	20·16
Sulphate of Soda	7·83
	110·38

Oxide of iron, a trace.

Regarding the sulphur spring, the same analyst reports that the taste is saline, and, together with its odour, discovers its strong impregnation with sulphuretted hydrogen. The specific gravity is 1·0042. He appends the following analysis:

Analysis of Sulphur Water.

In a pint—

	Grains.
Muriate of Soda	15·00
,, Lime	7·96
,, Magnesia	3·30
Sulphate of Soda	11·60
	37·86

Oxide of iron, a trace.

The water of Lord Aylesford spring is reported by Sir Charles as pleasantly saline and slightly chalybeate. The specific gravity is 1·0093.

Analysis of Water from Lord Aylesford's Spring.

In a pint—

	Grains.
Muriate of Soda	12·25
,, Lime	28·24
,, Magnesia	5·22
Sulphate of Soda	32·96
	78·67

Oxide of iron, a minute portion.

This is supposed to be the original spring known in the middle ages, and referred to by Camden.

A spring, called Robbins' Spring, is described by Scudamore as supplying a water having a specific gravity of 1·0118, and an agreeable saline taste. It contained a trace of oxide of iron, and the same saline constituents as the Aylesford Spring; and the same remarks apply to Wise's and Smith's Springs, except that the specific gravity of the water in the former was 1·010, and in the latter 1·0085.

In the pump-rooms, in Sir Charles's time, the water was supplied from urns, which were the temporary reservoirs of the water. The urns were made of cast-iron, and the sulphuretted water became darkened by the metal. From one of these urns the water was sulphurous, and the specific gravity was 1·011. This water contained the following ingredients:—

Analysis of Sulphur Pump-room Water.

In a pint—

	Grains.
Muriate of Soda	45·60
,, Lime	25·84
,, Magnesia	7·30
Sulphate of Soda	26·64
	105·38

Oxide of iron, a minute portion.

From another urn, called the left urn, the water was strongly chalybeate, the chalybeate flavour overcoming that of the saline; the specific gravity was 1·0067. The composition is thus stated:—

Analysis of Chalybeate Water.

In a pint—

	Grains.
Muriate of Soda	7·38
,, Lime	9·20
,, Magnesia	3·13
Sulphate of Soda	11·20
	30·91

Oxide of iron, probably almost two grains to the gallon.

This chalybeate spring has, I believe, been closed of late years.

Lastly, Sir Charles investigated a water supplied by what was called the middle urn. The specific gravity of this water was 1·0054. The taste was saline and chalybeate; the composition was rendered as follows:—

Analysis.

In a pint—

	Grains.
Muriate of Soda	9·33
,, Lime	3·07
,, Magnesia	6·77
Sulphate of Soda	8·24
	27·41

Oxide of iron, probably a grain to a gallon.

Speaking of the medicinal value of these waters, Sir Charles Scudamore expresses opinions which experience generally has confirmed. The saline water, he says, is strongly alterative and considerably aperient. The sulphur water is an alterative and mildly aperient. It contains very good proportions of the muriates of lime and magnesia, and an active impregnation with sulphuretted hydrogen. Sir Charles points out, if the sulphur water of Leamington be bottled and retained, however carefully it may be corked up and sealed, it loses, after a time, the sulphuretted hydrogen. In this respect it differs from the water of Harrogate, which retains its gaseous impregnation seemingly undiminished for many months. He explains this difference of behaviour in the two waters by the argument that the water of Leamington contains free atmospheric air, and that, in the process of keeping, the sulphuretted hydrogen becomes converted into sulphuric acid, which may combine with any basis present. The change in the Leamington water takes place very slowly.

On the other springs Sir Charles Scudamore reported that they are alterative and aperient, but the water from the left urn of the marble bath pump-room was, he held, powerfully chalybeate, and when due share is given to the muriates contained in it, very stimulating and seldom fit to be employed until after a preparatory course of saline water; or of medicines which have freed the habit from every material symptom of excitement or visceral obstruction. Lastly, this author strikes a comparison between the waters of Cheltenham and Leamington. These waters, he holds, are considerably different in their medicinal character. The saline class are much more highly impregnated with muriate of lime; the sulphuretted, in the one instance, is powerful, and in the other is almost negative; the chalybeate is of very superior

activity. "But," he adds, "it does not follow that the invalid should from this statement give a necessary preference to the springs of Leamington. On the contrary, in all those cases in which the most saline, or, in familiar language, the most cooling aperient waters are required, Cheltenham will deserve the preference. In general terms the waters of Cheltenham should sometimes be introductory to those of Leamington, as being less stimulating."

In the above account of the Leamington springs I have followed the narrative of Scudamore with much exactness. I have pursued this course because Sir Charles Scudamore is one of the most unprejudiced and faithful of guides. For his day, he was advanced in science, his observations were always well based, and his experience was large and laborious. Since his time many changes have taken place in Leamington: the chalybeate spring of which he spoke so favourably has been closed, or, at all events, has been allowed to fall into disuse, and numerous alterations in names and local peculiarities have been carried out, as might well be supposed, in a period of forty-six years, for it is so long since he wrote. But the waters there may take up the words of the Poet Laureate—

> "For men may come and men may go,
> But we flow on for ever."

There is in them the same qualities; and these, such as they are, will not easily be described with more accuracy than by the author whom, out of many, I have chosen to accept as guide. The latest description of the medicinal action of the waters of Leamington is from the pen of my friend Dr. Jeaffreson, whose knowledge (derived from long experience obtained on the spot) and whose candour are equally sound. I make, therefore, no apology for supplying to the reader the following epitome of his experience and opinion from his Presidential Address at the last meeting of the British Medical Association:—

"The Leamington waters (for I shall speak of them generally) belong to the class of mild evacuants; their chief evacuant action being on the alimentary canal; they act also on the kidneys, and in some few instances I have found them inconveniently diuretic, without some modification of their use. They are also slightly diaphoretic; and actively so, when their internal administration is combined with their external use in the form of baths. They also pre-eminently belong to the class of alteratives and deobstruents; and it is chiefly in this respect that they are so valuable—modifying the secretions of the liver, kidneys, skin, and all the excretory glands, as also of the mucous membrane of the alimentary canal, and acting strictly as a blood-remedy. The specialty of the action of most mineral waters probably depends more on those minute traces of certain subordinate components in them, than on those that constitute their chief bulk; and I am disposed to think, judging from their effects, that our waters owe much of their virtue to the presence of small proportions of iodine and bromine, as also, in some cases, of iron. The best period for their administration is the spring, summer, and autumn. They are not inadmissible in the winter, if it be mild and open; but should only be given occasionally, or in short courses of five or six days. In intensely cold weather I never recommend their use. They should always be taken on an empty stomach, from three-quarters of an hour to an hour before breakfast, in quantities varying in the adult from ten to thirty ounces. I most frequently give from twelve to eighteen ounces, and advise the dose to be divided into two or three draughts, with an interval of a few minutes between each, which promotes their absorption and assimilation, and prevents the inconvenience so often arising from too rapidly swallowing any large bulk of fluid. In some few cases of very weak and irritable stomach, they agree better cold; but as a general rule I prefer to use them about new milk warm, as most conducive to their absorption and diffusion through the system. It is always preferable that they should be taken at the spring itself, when the weather and the physical powers of the patient will admit of it; if not, they may be brought home to the patient's house. In warming the waters great care should be taken not to drive off their gaseous contents; and this is best contrived by drawing them into a stone bottle, carefully corking down, and then placing it in hot water. Their administration should, if practicable, be followed by a little gentle exercise, and that, if possible, in the open air. On the principle, I suppose, 'that you cannot have too much of a good thing,' the older attendants used to persuade their votaries to swallow enormous quantities of the waters, to the prejudice of their stomachs, and to the hindrance of their alterative effects by exciting too great alvine and renal excretion.

Some patients, from the first, rather like the water than not; but any distaste they may at first feel for it speedily passes off, especially when it agrees. I have very generally found that its use is followed, in the course of half an hour or so, by considerable increase of appetite, which, however, should be appeased by a simple breakfast, with or without a little broiled bacon, an egg, or a slice of meat, according to the requirements of the system. The duration of a course of the waters should never be less than two weeks, and may often be advantageously carried on to four or five. I have often been compelled from circumstances to give much shorter courses, and have occasionally, from the steady benefit obtained, carried on their use for a much longer period; but, in the main, it is preferable to continue their use from two to four weeks, then lay them aside, and resume them at the end of a week or two, or later in the season, or in the following season. Patients who have been greatly benefited, frequently visit the Spa several seasons in succession with great advantage. On the whole, the Leamington waters are but little injurious when not beneficial; but they should not be used without caution, especially in large quantities: since their accumulation in the system is liable to induce congestion of the abdominal viscera, brain, &c. I have been called to many patients, who having come here with general instructions to drink the waters, have done this without advice, and have become exceedingly unwell, with fulness and distension of the stomach, loss of appetite, nausea, and even vomiting, with headache and vertigo. The surcharged system often relieves itself by free purgation; if it has not begun to do so, all disagreeable symptoms usually pass off rapidly on the administration of a dose or two of aperient medicine, pills being preferable. I have often had the curiosity to learn the subsequent effects of this mismanaged course of waters, and have found that the patients have got great benefit from them afterwards, in spite of the temporary inconvenience. They are inadmissible, except as an occasional mild laxative, in confirmed phthisis, and during the febrile stages of chronic maladies. In all congestive maladies attended by febrile symptoms, it is proper that these should be first reduced, and then the administration of the waters generally becomes useful.

The following is a synopsis of some of the cases in which the Leamington waters have been found useful within the range of my own experience. I should state, however, that in many of these cases the mineral and other baths have also been largely used; particularly in the cutaneous, rheumatic, gouty, and some of the hepatic and dyspeptic affections; in most skin diseases, especially lepra, psoriasis, eczema, acne, acne rosacea, urticaria simplex and inveterata, prurigo, and in many anomalous and secondary eruptions; in gout and rheumatism, and more particularly in the sequelæ of its acute forms; in obesity; in hypochondriasis, hysteria, and some cases of paralysis; in a variety of hepatic affections, with or without jaundice: in a great variety of forms of dyspepsia; in chronic obstinate constipation; in most forms of hæmorrhoids; in many cases of kidney affection, especially congestion and lithiasis; in some cases of diabetes complicated with hepatic congestion; in some cases of chronic bronchial affections and asthma; in many instances of uterine disturbance, especially in menorrhagia and other functional disturbances associated with liver derangement, and in amenorrhœa connected with torpid bowels, debility, and deficient nutrition."

The following short paper bearing on the question under discussion is worthy of notice, as indicating the conjoint experience of several members of the Profession, on the medicinal value of the Leamington waters:—

"Report to the Warneford Trustees by the Medical Officers of the Warneford General Bathing Institution and Leamington Hospital, as to the Diseases for the cure of which the Leamington Spa Waters are peculiarly useful.

Leamington Hospital, December 12, 1855.

We, the Medical and Surgical officers of the Warneford General Bathing Institution and Leamington Hospital, having been requested by the Committee to enumerate the principal maladies in which we find the Leamington Waters useful, beg to state that they are more particularly useful in the following maladies, whether used internally as a medicine, or externally in the form of baths, whether cold, hot, shower, or douche:—

Most forms of dyspepsia and constipation; in derangements of the liver, especially in congestion of that organ, as also of the spleen and other abdominal viscera; in jaundice; in some

forms of diseases of the central nervous system, especially in the sequel of acute attacks, such as paralysis, etc.; in epilepsy (occasionally); in cholera, hysteria, neuralgia; in many forms of deranged kidney; in gout; in most forms of rheumatism, more especially the sub-acute and chronic; in many periosteal affections; in scrofula; in many cases incidental to females; in most sub-acute and in almost all chronic affections of the skin, especially eczema, herpes, lepra, and psoriasis.

HENRY HOMER, M.D.
SAML. J. JEAFFRESON, M.D. and L.I.M. Cantab., F.R.C.P.
WILLIAM MIDDLETON, F.R.C.S.
R. JONES, F.R.C.S.
JOHN HITCHMAN.

To the Trustees of the Warneford Hospital."

The reader will accept these experiences, coming, as they do, from the best sources of information, with all the respect they should command. Looking at the composition of the waters, it must be admitted as beyond question that they possess active properties as aperients and eliminatives. In this particular they are certainly as good as any eliminative medicines which could be prescribed by the Physician; and inasmuch as they are more likely to be taken by the majority of invalids than medicines formally prescribed and bottled, they are probably more serviceable in cases of a chronic nature requiring an eliminative course. Above all, they are taken on the spot, which means more than the waters themselves or the drinking of the same.

Since the analyses of the Leamington waters by Sir Charles Scudamore, the labour of analyses has been undertaken by one or two other Medical chemists. The tables of results now most relied upon are by a Physician practising in Leamington, Dr. P. Brown. Dr. Brown conducted his researches in the year 1857 for publication in Beck's admirable "Guide to Leamington." I herewith append the results:—

Analysis of Water from Saline Springs.

In a pint—

	Grains.
Sulphate of Soda	35
Chloride of Sodium	30
Chloride of Calcium	23
Chloride of Magnesium	11

Silica, peroxide of iron, iodine, bromide of sodium, minute quantities.

Gases in Cubic Inches.

Carbonic acid	3

Oxygen and nitrogen, minute proportions.

Analysis of Water from Sulphuretted Saline Springs.

In a pint—

	Grains.
Sulphate of Soda	28
Chloride of Sodium	25
Chloride of Calcium	15
Chloride of Magnesium	9

Gases in Cubic Inches.

Sulphuretted hydrogen	1·144
Carbonic acid	3·156
Oxygen	·025
Nitrogen	·425

Natural range of temperature of the springs, 44° to 54° Fahr.

Dr. Althaus, in his most able and comprehensive work on the "Spas of Europe," defines the waters of Leamington as "muriatic alkalines."

At the present time there are four saline springs open for the public—viz., Lord Aylesford's spring, Hudson's, Wood's, and the Royal Pump-room. Hudson's spring, near the Crown Hotel, yields the main supply of sulphuretted water. I have named these specially, but there are in all eleven springs of saline water in the town. Every accommodation is made for bathing, and the baths in the Royal Pump-room are, for convenience, cleanliness, and I may add elegance, the best I have visited. Wood's baths, the original baths of Abbott, are also exceedingly good. Into this establishment hot air and vapour baths have also been introduced. There is a fine swimming bath in the town, called Oldham's; and admirable Turkish baths, conducted under the superintendence of Mr. Hudson.

Reviewing all the advantages offered by Leamington, the reader will not wonder that the place has risen rapidly into favour. It is not to be denied that the inhabitants, under the guidance of the Medical Profession, have spared no effort to render their town useful as well as attractive. In a word, I think I do not say a syllable too much in pronouncing that there is no town in the kingdom where a patient who requires hygienic treatment can get precisely what he wants better better than in the new town on the old Leam.

I make this observation without desiring to draw any comparisons, good, bad, or indifferent, between the specific properties of the waters of Leamington and those of other spas. To my mind, in all cases the waters are secondary agents in the process of cure, and I speak, therefore, of Leamington altogether as a hunting-field for health, not as specially good in one particular, in medicinal waters.

(To be continued.)

REVIEWS.

The Legal Doctrine of Responsibility in Relation to Insanity. (A Paper read at the Annual Meeting of the National Association for the Promotion of Social Science, held at York, September, 1864.) By S. W. NORTH, M.R.C.S.

WE have received the report of an able paper on this subject, read by Mr. North, of York, at the meeting of the National Association for the Promotion of Social Science, held at that city in September, 1864. It is one of the clearest and most comprehensive statements of the facts bearing on the Medico-legal aspects of insanity that we have seen, and demands the attention and careful consideration of the legal as well as of our own Profession. Mr. North contends with great cogency that the law is unfair to the criminal lunatic in judging him solely according to his *knowledge* of what is right and wrong, without paying due attention to his *power* to act rightly. He says:—"The proof that the act itself was criminal or illegal is no proof of the responsibility of the agent; for I take it, any dogma of the law to the contrary notwithstanding, that, if punishment is with justice to be inflicted, the person punished must, at the time of his offence, not only have known that the act was illegal, but must have been in possession of the power to act or to abstain."

Into the question of the propriety of capital punishment we do not enter here. The Legislature has determined that murder shall be punished by death. Now, it is of great consequence that legal punishments should be both certain and just; but, according to Mr. North, the law in the matter of criminal lunacy deals neither in certainty nor justice. If a man is admitted to have killed another, his chance of escaping the legal penalty of murder on the plea of insanity depends, Mr. North argues, rather on the skill of the witnesses employed in his defence than on the facts as to his mental condition when he committed the act. We give Mr. North's own words:—

"The mode in which the testimony of experts is obtained in these cases is, I venture to say, most unsafe, and prejudicial to the interests of justice and truth. I think all evidence of this kind should, in the first instance, be tendered as advice to the Court, subject to cross-examination by either side, both as to facts and the conclusions drawn from them. Under the present system, it depends more on the skill of the witness, and his power to baffle the dexterity of counsel, than upon the justice of the case, whether an acquittal shall be the result or not. An adroit witness, who will adapt his language to the dogma of the law, and who will refuse to answer in detail, thereby defeating the desire of counsel to fritter his testimony away, will secure an acquittal upon far weaker grounds than a more able man may do who is less skilled in the method of evidence."

The differences of opinion as to what constitutes legal insanity are certainly very painfully great; but the limited definition which the law gives of it is greatly to blame for this state of things. The law excuses a man if he acts under delusion, however criminal the act may be. The law also excuses a man who acts under coercion. Surely, as Mr. North contends, it is but fair to excuse the man, although he knows the act to be illegal, who acts under an impulse he cannot control.

"Knowledge is not power, in the sense of giving its possessor control over his actions. If I were asked to name the faculty most frequently impaired in insanity, I should undoubtedly say the will, or that power by which we convert our thoughts into actions. Daily experience of mankind ought to satisfy the most superficial observer that will is not synonymous with knowledge; it must be patent to everyone that, apart from any question of vice or virtue, some men are weak, yielding readily to the temptations of circumstances, whilst others, from the mere force of their will, may be said

scarcely ever to fall into temptation, and that nevertheless the virtuous knowledge and virtuous desires of the former may be of a far more exalted character than those of the latter. If this be true of sane men, how much more likely is it to be true of those who, by reason of some disease of the mind, have lost that faculty of co-ordination by which their thoughts are combined into regular and healthy operation? It would burthen my paper, and weary my hearers, were I to quote all the eminent Medical authorities at my disposal on this point—let one be sufficient. At a meeting of the Medical officers of asylums, held in July last, after discussion and deliberation, the following resolution was unanimously adopted:—'That so much of the legal test of the mental condition of an alleged criminal lunatic which renders him a responsible agent because he knows the difference between right and wrong is inconsistent with the fact, well known to every member of this meeting, that the power of distinguishing right and wrong exists frequently among those who are undoubtedly insane, and is often associated with dangerous and uncontrollable delusions.'"

Whilst duly eulogising Mr. North's paper, we need only add that the fact that any given person cannot control him or herself is one that requires to be proved, and not to be taken for granted. And that the safety of society requires that persons of violent passions, which they have never attempted to control, shall not be allowed to shelter themselves easily under the plea of irresistible impulse.

On Flooding after Delivery and its Scientific Treatment; with a Special Chapter on Preventive Treatment. By Lumley Earle, M.D., Obstetric Surgeon to the Queen's Hospital, Birmingham, etc. London: R. Hardwicke. 1865. 12mo. Pp. 240.

This is a handy little book, which takes for consideration one of the most momentous passages in the life of women and in the work of their Medical attendant. It goes into it in a thoroughly business-like way, treating of symptoms, causes, and treatment in an orderly and lucid manner. The chapter on Preventive treatment consists mainly in precepts for a careful, tender, and exact method of conducting the last stages of labour. The book is pretty full, without being tediously minute, and there are few Practitioners who may not consult it with advantage.

A Theoretical Inquiry into the Physical Cause of Epidemic Diseases, accompanied with Tables. By Alexander Hamilton Howe, M.D., Hon. E.I.C. Service. London: John Churchill and Sons. 1865. Pp. 170.

A work we take up with greedy anticipation, and soon lay down in disappointment. It is not a book. It might have been one, had the writer given himself time to elaborate his materials, but it is a mere abortion, an embryo, a shapeless mass of materials undeveloped. The materials are good; consisting of notices of epidemics from the earliest time, yet they are shuffled together in hopeless confusion, and contain much which the learned author would probably have sifted out if he had allowed himself time to revise his book. The author's theory is, that epidemic pestilence is regulated by the moon, and recurs at periods of eighteen and a-half years, corresponding with a lunar cycle.

Consumption, as Engendered by Re-breathed Air and Consequent Arrest of the Unconsumed Carbonaceous Waste; its Prevention and Possible Cure. By Henry MacCormac, M.D. Second Edition. London: Longmans. 1865. Pp. 240.

Dr. MacCormac is well known as one of the most laborious and learned workers amongst our Professional brethren in Ireland, and to have written much and well on many topics in Medicine and morals. The present book is definite and positive enough, and the doctrine which it teaches cannot really be better enunciated than in the words of the title-page—foul, used-up, once-breathed air is the great enemy; fresh air the panacea. We hesitate to accept the MacCormac Law, as he proudly terms it, in its absolute exclusiveness; but if not the whole truth it certainly involves one great truth, and it would be an immense step if his honest, vehement outspeaking on the subject of close and frowsy bed-rooms, school-rooms, work-rooms, and sitting-rooms could be brought home to every master and mistress in these islands. Like most books written by men of brains, it is readable and amusing in itself, apart from its subject.

The Diagnosis and Treatment of Cancer, and the Tumours Analogous to it. By Maurice Henry Collis, M.B., F.R.C.S., etc., etc. (Many coloured plates.) London: John Churchill and Sons. 1864. Pp. 317.

We write a few lines now in commendation of Dr. Collis's excellent work, because we are unwilling that longer time should pass without formal notice of it. The fact is, that one of our most esteemed contributors has had it in hand for some time, intending to make it the basis of a series of articles on the branch of pathology which it treats of. Whilst waiting for this more elaborate compliment, Dr. Collis's book may be recommended to the Profession as a fresh, unhackneyed study from the life.

Journal of Social Science; including the Sessional Papers of the National Association for the Promotion of Social Science. Edited by Edwin Lankester, M.D., F.R.S. Monthly. Price 1s. 6d. Chapman and Hall, London.

The title of this new monthly journal indicates its nature and objects, and the name of the editor is a sufficient guarantee of the able manner in which its purpose will be fulfilled. It begins with a full account of the Social Science meeting at Sheffield, which is extremely interesting to any one who, like ourselves, was not there. There are papers on Cholera, on Protective Duties in America, on Local Sanitary Legislation, sanitary news, etc.

Transactions of the Odontological Society of Great Britain. Vol. IV., 1863-4-5. London: Published by the Society. Pp. 312.

This handsome volume contains matter which renders it well worth a glance by the Medical philosopher. The accounts given of the more precise and effective modes now in use of treating dental decay are highly satisfactory; and the papers of Mr. Cartwright on the conformation of the jaws and face indicative of high breeding, contain matter which is highly interesting to the anthropologist.

Transactions of the Pathological Society of London. Vol. XVI., for Session 1864-5. London: Roche, 68, Paradise-street, Rotherhithe. 1865.

Readers of the proceedings of this Society, as given regularly in the *Medical Times and Gazette*, will be well able to appreciate the value of this great and increasing store of facts accumulated by the Pathological Society. The present volume contains twelve plates and twenty-four woodcuts, which, of course, give it greater value and completeness.

On Some Varieties and Effects of Cancerous Disease of Bones. Liston Clinical Prize Essay, University College, 1860. By William Hickman, M.B., F.R.C.S. London: Hardwicke. 1865. Pp. 47.

The author contributes some very interesting facts to our previous knowledge of morbid changes in bone. Cancer, like every inflammatory change, produces cell-growth in the Haversian canals, and expansion and rarefaction of the bone. Many bones in cancerous patients suffer this change; and the frequent fractures of the bones of cancerous patients, and probably some of the cases of fracture ascribed to *mollities ossium*, are really due to cancerous infiltration. This book has six good plates.

Lectures, chiefly Clinical. By T. K. Chambers, M.D. Fourth Edition. London: John Churchill and Sons.

The author, on returning to his Professional work after a serious illness, had the gratification of finding the third edition of this work exhausted. This fourth edition has had the benefit of thorough revision, and the addition of an index. We need not repeat what has been said before as to the character of the book—a vigorous, trenchant exposition of the author's views, not dull nor commonplace, and therefore sometimes provocative of dissent, as every original book must be.

At the monthly meeting of the Metropolitan Officers of Health, on the 16th inst., Dr. B. W. Richardson will bring forward his "Researches on the Origin and Nature of the Poisons which Produce Epidemic or Zymotic Disease."

GENERAL CORRESPONDENCE.

TREATMENT OF DELIRIUM TREMENS BY DIGITALIS.

LETTER FROM DR. USHER B. EATON.

[To the Editor of the Medical Times and Gazette.]

SIR,—As the treatment of delirium tremens by full doses of digitalis appears to be still under discussion, the following case may perhaps be deemed worthy of insertion in your journal:—

A European sergeant-major in the 3rd West India Regiment was admitted into the Hospital on the evening of the 12th of September last. The patient was a strong, muscular man, 37 years of age. His habits for more than a year had been intemperate, and for the last two months extremely so. When admitted he was under the influence of liquor. His wife stated that he had for some nights past been in a very nervous and excitable state. As the intoxication passed off he became very restless. His expression was wild and anxious; his pulse 120, skin cold but covered with sweat. In this state he remained for forty-eight hours, sleeping only three or four hours in the twenty-four. The treatment consisted of opiates, nourishing food, and stimulants in moderate amount. On the evening of the 14th, he passed into a state of intense excitement. He constantly attempted to get out of bed, talked loudly and incoherently, and was haunted by illusions of a frightful kind, To have half a drachm of liq. opii sed. every two hours. He remained in this state until the morning of the 16th, when the opiates having produced no effect, it was agreed in consultation to administer the tincture of digitalis. Half an ounce diluted with an ounce and a-half of water was given at 10 a.m. His pulse was then 120, moderately strong; skin cold, covered with sweat; pupils much contracted; tongue moist and loaded; bowels costive; has not made water for twenty-four hours; excitement very great. In about an hour after he had taken the digitalis, the pulse began to intermit, losing one beat in twenty. He passed a quantity of very turbid urine. 4 p.m.: no change; draught repeated. 10 p.m.: no change; draught repeated. In a quarter of an hour afterwards, he fell asleep, and slept quietly until 5 a.m. of the 17th, when he awoke quite free from delirium, which did not return. He slept almost constantly for the next forty-eight hours, only awaking occasionally to take nourishment. Pulse 72; skin cool and dry; bowels and urine free. There is slight salivation. There was enlargement of the liver and spleen; with slight jaundice. These symptoms soon yielded to treatment, and he left the Hospital on the 23rd to return by the mail steamer to England. I am, &c.,

USHER B. EATON, M.D., Staff Assist. Surgeon,
Bathurst, River Gambia, Western Africa, Oct. 26.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 28.

Dr. ALDERSON, F.R.S., President.

A PAPER, by Dr. SAMUEL GORDON, describing a

CASE IN WHICH THE OPERATION OF TREPHINING OF THE SPINE WAS PERFORMED,

was communicated, with observations, by Dr. ROBERT M'DONNELL. The case reported is that of a man, 31 years of age, who met with an injury of the spine on March 27, 1865. He was thrown from a horse into a ditch while hunting, and was immediately affected with paralysis of the lower limbs, rectum, and bladder. When admitted into the Whitworth Hospital, under Dr. Gordon's care, these symptoms still continued, a bed-sore had formed, and there was incontinence of urine, which fluid was alkaline, and contained copious mucopurulent deposit. One of the vertebræ in the lower part of the spine was displaced. The extent to which the spinous process projected was shown in a cast exhibited. Dr. Gordon performed the operation of trephining at the patient's urgent request on June 3. The operation lasted fifty minutes, and was not accompanied by much hæmorrhage. Soon after the operation signs of improvement were noticed. On the fourth dry after it the urine became acid, but this condition did not continue; sensation improved, and some days later there was observed an increase of motor power. After some time the urine, which was sometimes alkaline, sometimes neutral, became permanently acid, power over the bladder was restored, and the patient was conscious of the passage of fæces. Within eight weeks he was able to go out, reclining in a basket carriage. He has now regained control over the bladder, and he can sit erect with ease and comfort; but he cannot stand, or of course attempt to walk. His general health is excellent. In making observations on this case, Dr. M'Donnell draws attention to the following points:—1st. There is nothing in the operation of a necessarily fatal kind; neither is it of necessity followed by exfoliation of bone, formation of matter, etc., which makes convalescence very tedious, if not impossible. 2nd. He thinks that even those who do not advocate the operation in question must admit that in this case the operation was the cause of improvement. 3rd. Judging from our present experience, he recommends that in future cases the operation should be performed early, before structural change has taken place in the cord, and the muscles have fallen into a state of atrophy, from which it is difficult for them to recover. 4th. He advocates removing the posterior arches of more than one vertebra as a proceeding which adds little to the difficulty or severity of the operation, and nothing to its danger, and which gives the patient a better chance of ultimately being able to stand and walk.

The PRESIDENT remarked that the paper just read was a beautiful specimen of caligraphy, and he hoped it would be taken as the prototype of future papers.

Mr. URE rose to return thanks for the author's very important communication. The case related was the first in which recovery had followed such a procedure. Mr. Ure referred to Mr. Cline's and to Mr. Tyrrel's cases. In the latter the injury was at the tenth dorsal, and after the operation the patient recovered sensation and motion, and tried even to get out of bed, but died in a fortnight of peritonitis. Mr. Ure referred to a case by a French Surgeon. This patient died on the fourth day after the operation. Here the spinal cord was torn across and the bone much shattered. He agreed with Dr. McDonnell that it was important to operate early, and he thought where there was fracture with depression of one or more laminæ, attended with paraplegia and retention of urine, it was justifiable to act without hesitation. Mr. Ure then related a case recorded by M. Louis, in which paralysis of the lower extremities and retention of urine followed a bullet wound of the spine. The bullet was extracted, but the symptoms persisted. Some splinters of bone were then removed, and the symptoms passed off. Twelve years after the occurrence the man could get about with but slight difficulty. He (Mr. Ure) thought this case showed the necessity of getting rid of displaced bone when doing mischief. Dr. McDonnell's case proved that the operation was not so serious as it was generally supposed to be.

Mr. BARWELL thought the record of this case valuable, as proving that such an operation was not fatal, but he thought it proved nothing more. We knew, he said, that such cases do recover, and he related a case in point, in which the symptoms had been precisely those of the case related in the paper.

Mr. SOLLY was a pupil of Mr. Travers when Mr. Tyrrel operated on the case referred to. Mr. Solly then said that Mr. Heckstall Smith knew the particulars of the case well. Mr. Travers, who was present at the operation, expressed to Mr. Solly afterwards his fears that the operation never would succeed, as the cord was always too much bruised to be capable of reparation. In consequence of his previous observations, Mr. Solly made a drawing of the cord after death, which verified Mr. Travers' observations.(a) Mr. Solly believed that the opinions expressed by his senior at that time retarded considerably the adoption of the operation.

Mr. HECKSTALL SMITH said he had recorded the case in the *Medico-Chirurgical Review* for 1827. He had never ceased to take an interest in cases of this kind. There was but little Surgery in the country, and he had not come across a case of the kind again; if he had, he would have performed the operation. In Mr. Tyrrel's case, the operation had been performed pretty much in the same way as this. The result

(a) This drawing Mr. Solly showed, he tells us, at his lectures at the College of Surgeons, at the same time expressing his opinion in favour of the operation.

Google

led to the operation being discouraged, but it ought not to have done so. After the operation there was considerable improvement, especially on the second, third, and fourth days; but it was not so rapid afterwards. On the ninth day, pleuro-pneumonia set in; it was treated actively, and the patient died. He evidently did not die from the operation, nor from any lesion of the spinal cord, but from pleuro-pneumonia. In this case the condition of the urine alternated from acid to alkaline. Before this case had been published, it had been held that an alkaline condition of the urine always arose from decomposition, but in this instance he (Mr. Smith) had clearly proved that the urine was alkaline when secreted. Mr. Smith concluded by saying that he hoped Dr. McDonnell's paper would lead Surgeons to select cases and to operate.

Mr. Shaw considered the Society honoured by receiving so valuable a communication from across the Irish Channel; and as other important papers had been lately presented from the capital of Scotland, and we had expected one this evening from the western metropolis of England—Liverpool—the Society might without presumption be called the "British" Medical and Chirurgical Society. He had listened to the details of the cases with much interest. He was unwilling to appear captious, but neither of them touched on the very important point—the effects of trephining the spine (as it was incorrectly called) directly after the receipt of the injury. In the successful case, the operation was not performed till the second month after the accident. Now, during that time the vertebral column must have undergone essential changes; if the bones had not perfectly united, at least all the adjacent parts must have become consolidated by the processes of repair. And observation shows that when patients have passed through the first stages of the accident, and have lived long enough for the injured parts to acquire some solidity and firmness, their chances of surviving, although with paraplegia remaining, are greatly increased; the probable reason being that, as they can then be moved more freely in bed, and their positions more frequently changed, the bed-sores are more likely to be cured. Mr. Shaw next made some remarks on the anatomical structure of the spinal cord at the seat of the injury. In Dr. McDonnell's case the fracture was found, on dissection, to have been at the junction of the last dorsal with the first lumbar vertebra; and in Dr. Gordon's it was supposed to have been at the same locality. Now, that is the very place at which the numerous roots given off to form the cauda equina envelope the cord. And it is important to remark that these roots, by thus surrounding the cord, afford it a great protection against injury. Accordingly, it is allowable to suppose that in both cases the lesion of the spinal cord was not so severe as it would have been had the fracture occurred elsewhere. He (Mr. Shaw) had recorded four cases of fracture, with dislocation, at or below the second lumbar vertebra, in which the patients had no paraplegia at all, and recovered. The explanation was, that the injury had been committed below the point where the spinal cord ceases, and at a part where the cauda equina alone is contained in the vertebral canal. So it has been observed that in the majority of those rare cases in which the patients have been so fortunate as to have had motion and sensation restored, after they had been lost from fracture, the injury had taken place in the dorso-lumbar region—viz., near the point at which the cauda equina commences.

Mr. Holmes Coote said that, without expressing an opinion respecting the probable verdict of the Profession on the operation proposed by Dr. McDonnell, he yet thought that it merited the earnest attention of Surgeons. All were aware how fatal were accidents combined with fracture of the spinal column; it mattered little where was the seat of fracture—death so commonly ensued that a fatal issue was regarded as the rule. A specimen of repair after fracture of the spine of a Welsh miner, who lived several years after the accident, was once shown to him as a great curiosity and rarity. Under these circumstances, he thought the Profession indebted to those gentlemen who had brought the matter before the attention of the Society.

Mr. Spencer Wells agreed with Mr. Coote in his remarks upon the extreme rarity of recovery after severe injuries to the spine. In the course of his service in the Navy, and in the Eastern Hospitals during the Crimean war, many such accidents had fallen under his (Mr. Wells's) notice, and he did not remember a single instance of recovery. Some lived several months in great misery, but he did not remember one patient who lived a year; and such cases as those alluded to by Mr. Barwell and Mr. Shaw must be quite exceptional. The only instance of recovery he had met with was in a gentleman who met with a fall when hunting. Inflammation and caries of the intervertebral substances and bodies of three of the dorsal vertebræ followed, and paralysis, which lasted two years. But recovery was so complete that the gentleman lived for twelve years afterwards, married and had a child, rode, danced, and shot, and only died last year of Bright's disease. The spine (which was exhibited at the meeting) showed that the whole of the body of one vertebra and half of two others had been destroyed, and that these two were very firmly anchylosed. While this case proved the possibility of recovery, it was rather to be taken as an encouragement to Dr. Gordon and Dr. McDonnell that the man whose case was before the Society would completely recover power over his legs than as supporting the views of Mr. Shaw and Mr. Barwell in favour of non-intervention. It was very hard upon a Surgeon, who might be blamed if an operation was not successful, to discourage him when it was successful by saying that the patient would have done just as well if he had been left alone.

Mr. Wm. Adams thought the members were much indebted to the Surgeons of Dublin for bringing this interesting and valuable case before the Society. In reference to the time which had been allowed to elapse between the accident and the operation—in Dr. Gordon's case this was two months—and the observations made by Mr. Shaw, it was certainly necessary to bear in mind the history of the paralysis in acute and chronic cases. The chronic cases, or those in which much time had been allowed to elapse between the accident and the operation, approached nearer to the cases of diseased spine, and in these cases the paralysis as a general rule undergoes spontaneous and complete recovery in a period of from one to two years. This Mr. Adams had frequently witnessed, both in children and in adults, in cases of disease with angular curvature of the spine. In the case at present before the Society, Mr. Adams only regretted that the operation had not been performed at an earlier period. He should have no hesitation, in a case of fracture of the spine where there was compression, in trephining, or removing the posterior arches of the spine. It is true that the compressing cause is in front, and depends upon the displaced vertebral body, but the cord is compressed between this and the arches posteriorly, so that by removal of the laminæ the compression may be relieved. When the cord itself was not lacerated, as it is sometimes found to be in the more severe injuries, the prospects of relief from the operation were favourable, and the recent cases in Dublin were valuable additions to our knowledge of this subject.

Dr. R. McDonnell, in reply, observed that he was greatly gratified, not only at having been able to be present, but at the discussion which this case had elicited. He expressed some surprise that those who were opposed to operation in such cases had not laid more stress on the mechanical objection urged against it by Sir Benjamin Brodie in his well-known paper—viz., that as the body of the vertebra was, in the vast majority of cases, the seat of fracture, and as this part was out of reach, no good could be gained by operative interference. It was quite certain that in such cases it was only that part of the vertebra against which the cord is pushed back that could be removed; it was only, in fact, possible to take away the counter-pressure. But this mechanical objection took no account of the cases which, although forming a very small proportion of the whole, yet sometimes occurred, in which the body is not broken, the posterior arch being the part fractured. Boyer had recorded such a case. While the operation of trephining the spine, as it is called, is set aside in practice, as it virtually has been, such cases must be lost which might otherwise possibly be saved. He did not conceive that any advocate for the operation would think of performing it in any case when the symptoms of compression of the cord did not exist. It would be less justifiable in such a case than it would be to trephine the skull when there existed no signs of compression of the brain. In reference to the cose alluded to by Mr. Barwell, he could only say that the experience of those who had the largest opportunities of seeing such cases, as well as the shelves of the museums of Europe, showed how rare such cases were. In his own limited experience, he had never been fortunate to see a case presenting such features as Dr. Gordon's case did just before the operation which had not run a fatal course. Dr. McDonnell did not think it probable that at a period of two months after fracture of the spine any considerable attempt at consolidation had taken place in most instances. It generally happened that the intervertebral substance was more or less lacerated,

and the first thing nature does before setting about the work of consolidation is to absorb the lacerated intervertebral substance. This is always accomplished slowly; and even when patients lived five or six months after the injury, consolidation was sometimes found to have made but little progress. Dr. McDonnell hoped—and, indeed, from the character of the discussion on the case just detailed he hardly doubted but that some of the Surgeons connected with the Hospitals of this great metropolis, profiting by the experience of his own and of Mr. Gordon's case, would undertake to perform the operation in question, and he earnestly hoped that, improving upon what had been already done in this field, they might obtain successful results.

OBITUARY.

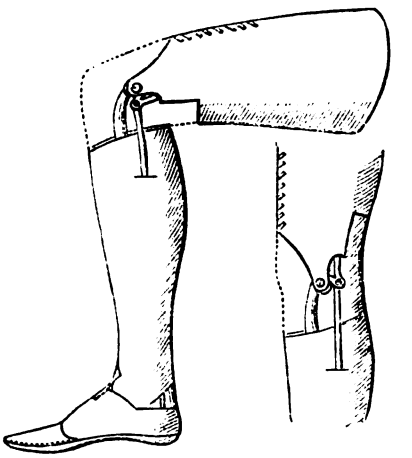
EDWARD HUTTON, M.D., OF DUBLIN.

We regret to have to announce the death of the above eminent Surgeon, which took place, after a long and lingering illness, on Friday, the 24th ult., at his residence in Merrion-square. Dr. Hutton was an apprentice of the late Dr. Robert Moore Peile, of whom on his death at the advanced age of 93, we gave an obituary notice in our number for February 13, 1858, p. 171. On the termination of his apprenticeship, Mr. Hutton was admitted, in 1819, as a Licentiate of the Royal College of Surgeons in Ireland, and was soon after appointed Medical Inspector to the House of Industry, now the North Union Workhouse. In 1822 he graduated as Bachelor of Medicine in the University of Dublin, and in the same year was appointed Surgeon to the Richmond Hospital. In 1824 he became a Fellow of the Royal College of Surgeons in Ireland, of which body he was, in 1852, elected President. On the termination of his presidency he was elected to the secretaryship of the College, an office which he continued to hold until the annual election in June last. In 1842 he proceeded to the degree of M.D. in the University of Dublin. He also filled the offices of President of the Pathological Society of Dublin, of Lecturer on Surgery in the Richmond Hospital School, now the Carmichael School of Medicine, a post which he resigned so long as twenty years ago in consequence of ill-health. He was for some years an examiner in Surgery in the Royal College of Surgeons in Ireland. Dr. Hutton was a member of the Royal Irish Academy. In the words of a morning contemporary (*Saunders's Newsletter*) "his advice was sought for equally as Physician and as Surgeon; a kind and courteous manner, combined with sterling ability, gained for him the regard and esteem of all with whom he came in contact socially or Professionally." He was a skilful and practised operator, but with the exception of a paper on the treatment of aneurism by compression, published in the *Dublin Medical Journal* in 1843, of communications to the Dublin Pathological Society, and to the British Association for the Advancement of Science, and of some minor papers in the *Dublin Medical Press* and *Dublin Hospital Gazette*, he contributed but little to the literature of his Profession. Dr. Hutton was 68 years of age.

NEW INVENTIONS.

AN IMPROVED ARTIFICIAL LEG.

An improved artificial leg for amputation below the knee has lately been shown to us by Mr. Masters (of 210, New Kent-road), the manufacturer. The engraving shows the form of the joint and the position of the tendon when standing and sitting. The tendon is attached to a small joint, projecting at right angles from the main joint, and cannot bend in any position. At the same time it produces all the action of the former tendon leg, and adds greatly to the strength and durability of the limb, without increasing the weight. The tendon always remaining in a straight line retains its rigidity, and is sufficient of itself to elevate the foot in walking, thus springs of all kinds are dispensed with, Another important advantage in this leg is that it neutralises the counterpoise in walking. By referring to the engraving this will be readily understood. When the leg is at right angles, the axis on which the tendon revolves is directly under the main joint. The least flexion of the knee shortens the lever, and the patient can bring his body over the line of direction, without any extra effort. Natural philosophy has been carefully studied and applied in the arrangement of this leg.



BOOKS RECEIVED.

A Treatise on Smoky Chimneys; their Cure and Prevention. By J. Edwards, jun. Third and cheaper edition. London: R. Hardwicke.

*** We believe Mr. Edwards's principle to be entirely correct, and that the general adoption of his method would give us more warmth indoors and less smoke both within and without. The escape of the vast quantities of unburned fuel, testified by the clouds of black smoke that overhang London, is a barbarism and disgrace.

A Practical Essay on the Use of the Nitrate of Silver. Third Edition. By John Higginbottom, F.R.S. Pp. 172. London: John Churchill and Sons.

*** To destroy indolent, irritable, and unhealthy cell growth; to decompose foul secretion; and to effect an impermeable covering from the atmosphere, and from accidental contamination, and to protect a diseased surface by means of a non-sensitive pellicle from contact with external bodies, are functions effected by the nitrate of silver, whose use in Surgery has made Mr. Higginbottom's name a "household word" to the Profession.

The Science and Practice of Medicine. By W. Aitken, M.D. Fourth Edition. London: C. Griffin and Co. 1865.

*** This fourth edition, which has succeeded so rapidly to its predecessors, needs announcement, but not commendation. Suffice it to say, it has been again revised, condensed, and partially re-written, and that with these improvements it will probably be a greater favourite, if possible, than its predecessors.

On Epidemic Cholera and Diarrhœa. By John Grove, M.D. Third Edition. Pamphlet. London: R. Hardwicke.

*** This is a temperately-written tract, in which the probable benefits of treatment by *sulphur* are set forth, and some cases given of its supposed efficacy.

The Cause, Prevention, and Treatment of the Cattle Plague. By John Parkin, M.D. London: Hatchard and Co.

*** Believes the disease, like other pestilences, to be *telluric*, and recommends carbonic acid.

On the Speedy Relief of Pain by means of the Hypodermic Method. By Charles Hunter. London: John Churchill and Sons.

*** This pamphlet gives a good account of the hypodermic method, of which the writer has been a great promoter, if not originator.

Essay on the Nature and Treatment of Cholera and Fever. By James Tucker, M.D. Pamphlet. London: John Churchill and Sons.

*** Recommends means for restoring the character of the blood, and especially Dr. Stevens's saline treatment.

Photographs of the Diseases of the Skin. Parts IX., X., XI., and XII. By A. B. Squire, M.B. London: John Churchill and Sons.

*** A general review of these photographs and of the very terse and practical descriptions shall be given shortly.

Lectures on Inflammation. By John H. Packard, M.D. Pp. 276. Philadelphia: Lippencott and Co.

*** These thinnish and somewhat old-fashioned lectures are the results of an endowment given to the College of Physicians of Philadelphia, together with his pathological museum, by the late Dr. Mütter. We fear that if they got into Mr. Gladstone's hands they would strengthen his arguments against endowments.

Cholera: its Pathology, Diagnosis, and Treatment. By William Story. London: E. and J. Spon.

*** The writer seems to put more faith in sanitary amendment than in curative measures, and amongst the latter (if we understand him aright) prefers warmth.

Practical Observations on the History, Nature, and Treatment of Cholera Asphyxia. By John Coghlan, M.D. Dublin: Fannin and Co. Pamphlet.

*** Rational, but not new.

The London and Continental Times. Price 6d. Published at 4, Ave Maria-lane.

*** An European railway guide; cheap and easy of reference.

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The Prescriber's Analysis of the British Pharmacopœia. By J. Birkbeck Nevins, M.D. Third Edition. 1865. London: John Churchill and Sons.

*** There is a great amount of information in the introductory part on the nature and uses of most of the new remedies in vogue, especially such as are not in the Pharmacopœia Britannica.

The Dublin Quarterly Journal of Medicine. November, 1865. Dublin: Fannin and Co.

*** Two successful cases of ovariotomy by Mr. Butcher. Some cases of *onychomycosis* by Dr. Purser, a new parasitic disease of the finger nails. Good papers on Diphtherial Paralysis, by Dr. Cummins; on Exophthalmos, by Dr. De Ricci and Dr. Moore.

The Australian Medical Journal. July.

*** A good paper on Diphtheria, by Dr. W. L. Richardson, and a case of extra uterine fœtation, by Dr. J. Burn Malcolm.

The New York Medical Journal. No. 6.

*** A fatal case of ovariotomy by Dr. G. T. Elliot, jun., a case of excision of head of femur for gunshot fracture, and a paper by Dr. Burn on injuries of nervous centres from explosion of shells without wound or contusion.

The Fortnightly Review. December 1. London: Chapman and Hall.

*** Articles on the Black Death and on Workhouse Hospitals.

De L'Etat Naissant dans le Domaine Medical. Par Jean Bernard. Paris: Bailliere et Fils.

*** A puffy kind of book, in which, so far as we can take the trouble to read it, nascent iodine is recommended as the panacea.

The Geological Magazine. November. London: Longman and Co.

*** Dr. Leith Adams contributes an account of the discovery of the Maltese elephant.

The Fourteenth Annual Report of the Cancer Hospital, for the year 1864.

*** Contains nothing of interest, Medical or Surgical.

Jackson's Gymnastics for the Fingers and Wrist, for Developing and Strengthening the Muscles of the Hand, for Musical, Mechanical, and Medical Purposes. London: Trubner and Co. 1865.

Journal de Médécine Mentale. September et October, 1865. Paris: Masson et Fils.

Bulletin de L'Académie Royalé de Médécine de Belgique. Nos. 6 and 7. 1865.

On the Cure of Club Foot Without Cutting Tendons. By R. Barwell. Second Edition. London: R. Hardwicke.

Memorandum for the Chairman of the Sanitary Committee to accompany a Map of the Sanitary Districts of Glasgow.

The American Journal of Medical Sciences. October.

Elements of Physics or Natural Philosophy. By Neill Arnott, M.D. Sixth Edition. London: Longman and Co.

Descriptive Catalogue of the Pathological Preparations in the Museum of the Medical College, Calcutta. London: Smith, Elder, and Co.

A Dictionary of Science, Literature, and Art. Part VI. and VII. London: Longman and Co.

Guy's Hospital Reports. October. London: John Churchill and Sons.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON. M.D. EXAMINATION, 1865.—The following is a list of candidates who passed the late Examination for the Degree of M.D.:—

Frank Buszard, Guy's Hospital; William Dale, Leeds, and Middlesex Hospital; Thomas Fairbank, St. Bartholomew's Hospital; Samuel Jones Gee, University College; Francis William Gibson, B.A.,(a) University College; Gwynne Henry Harries, King's College; Charles Albert Hingston, B.Sc., St. Bartholomew's Hospital; Edmund Holland, University College; Horace Jeaffreson, St. Bartholomew's Hospital; Henry Law Kempthorne (gold medal), King's College; Thomas Morton, King's College; Walter Rickards, University College; Eustace Smith, University College; Richard Patrick Burke Taaffe, M.S., St. Bartholomew's Hospital; Thomas James Woodhouse, St. Thomas's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary Examinations, were admitted Licentiates in Midwifery at a Meeting of the Board on the 6th inst.:—

Henry Weekes, L.S.A., Brompton, Kent, Diploma of Membership, dated July 26, 1865; Thomas Leigh, L.R.C.S. of Lond., Chiswick, January 21, 1863; Samuel George Freeman, Bolton-row, Mayfair, April 21, 1863; John Soane, L.S.A., Dock-street, Whitechapel, July 30, 1863; Robert Charles Earle, L.S.A., Paignton, Devon, May 10, 1864; Robert Wooding Sutton Barraclough, Streatham-hill, April 28, 1865; Andrew Christopher Jackson, Cape Town, November 14, 1865; Frederick John Burge, L.R.C.P., Hammersmith, November 15, 1865; John Henry Bryant, Sussex-square, May 10, 1865; and John Davies, L.R.C.S. Ed., Leominster (not a Member).

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, November 30, 1865:—

John Waller Melson, Newhall-street, Birmingham; William Evatt Wright, Witham, Essex; Algernon Ewen, Long Sutton, Lincolnshire; Theodore Fennell, Rainhill, Lancashire; William Soltau Eccles, 15, Granville-square, W.C.

(a) Obtained number of marks qualifying for the medal.

APPOINTMENTS.

***** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to and new Appointments that take place.**

BRUSHFIELD, THOMAS N., M.D. St. And., has been elected to the office of Medical Superintendent of the Surrey Additional Lunatic Asylum at Brookwood, near Woking.

CAPE, JOSEPH T., M.R.C.S. Eng., has been elected House-Surgeon and Apothecary to the South Salop and Bridgnorth Infirmary.

GOSS, TREGENNA B., M.R.C.S. Eng., has been elected Surgeon to the Bath Western Dispensary.

HINGSTON, J. TREGELLES, M.R.C.S. Eng., has been elected House-Surgeon of the Northampton General Lunatic Asylum.

SMITH, HUGH H., L.F.P.S. Glasg., has been appointed Surgeon to the Kilmarnock Prison.

WATKINS, CHARLES S., M.R.C.S. Eng., has been appointed Medical Officer to the Corps of Commissionaires.

WILLIAMS, E. S., M.D., has been appointed Visiting Surgeon to the Chester General Infirmary.

DEATHS.

BURGESS, THOMAS H., M.D. Edin., at Southsea, on December 1.

KEMPSTER, FELIX H., M.R.C.S. Eng., at Fitzroy, Victoria, Australia, on September 19, aged 28.

MORGAN, JEROME, M.D., F.R.C.S I., at 36, York-street, Dublin, on November 29.

MORTON, WM. A., L.F.P.S. Glasg., at Gateshead-on-Tyne, on November 22.

PLOWMAN, W. TAUNTON, M.D. St. And., at sea, aged 33. He was a passenger on board the *Fiery Star*, which was burnt off New Zealand, and he left the ship on April 20 in one of the ship's boats, and has not since been heard of.

RUTHERFORD, JOSEPH, M.B. Dub., Staff Assistant Surgeon Army, at Simmon's-court, Donnybrook, Dublin, on November 24.

SMYTHE, ARTHUR, M.D., at Pau, France, on November 20, aged 54.

SPENCE, RICHARD G. C., M.R.C.S. Eng., at Clifton, White Cliffs, New Zealand, on August 14, formerly of Otley, Yorkshire.

TREZEVANT, Dr. OCTAVIUS N., of Charleston, S. Carolina, at Carrolton, Louisiana.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

St. Ives Union.—Mr. G. S. Girling has resigned the St. Ives District: area, 13,043; population, 7024; and the Workhouse; salary, £30 per annum.

Lexden and Winstree Union.—Mr. S. N. Squire has resigned the Lexden District: area, 2890; population, 2577; salary, £28 per annum.

Whitechapel Union.—Mr. John Allinson has resigned the Second District; salary, £65 per annum.

Wycombe Union.—Mr. W. C. Small has resigned the Saunderton Workhouse; salary, £60 per annum.

APPOINTMENTS.

Honiton Union.—Robert F. Mayne, L.R.C.P., M.R.C.S.E., to the Ninth District.

Taunton Union.—Fenwick Metcalfe, M.R.C.S.E., L.S.A., to the Second District.

Wareham and Purbeck Union.—Woodruffe Daniel, M.R.C.S.E., L.S.A., to the Second District and the Workhouse.

EDINBURGH OBSTETRICAL SOCIETY.—At a meeting of this Society, held on the 29th ult., the following gentlemen were elected office-bearers:—*President:* Professor Simpson. *Vice-Presidents:* Dr. Burn and Dr. Charles Bell. *Treasurer:* Dr. James Sidey. *Secretaries:* Dr. Stevenson and Dr. James Young. *Members of Council:* Dr. Thomas Balfour, Dr. Wilson, and Dr. Pattison.

ROYAL INSTITUTION OF GREAT BRITAIN. — At the general monthly meeting held on Monday, December 4, 1865, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, the Hon. Robert Bourke, the Viscount Cranbourne, M.P., the Rev. John Henry Ellis, M.A., John Heugh, Esq., Sir Edward Hilditch, M.D., and Stavely King, M.D., were elected Members of the Royal Institution. The special thanks of the meeting were returned for the additions to "The Donation Fund for the Promotion of Experimental Researches." Lecture arrangements for the ensuing season:—Christmas Lectures, 1865 (adapted to a juvenile auditory): Professor Tyndall, F.R.S., six lectures, "On Sound." Before Easter, 1866: Professor Tyndall, F.R.S., twelve lectures, "On Heat;" Professor Frankland, F.R.S., eight lectures, "On Chemistry;" Professor R. Westmacott, R.A., F.R.S., six lectures, "On the Way to Observe in Fine Arts;" Rev. G. Henslow, four lectures, "On Structural and Systematic Botany, considered with reference to Education and Self-instruction." After Easter: Professor Frankland, F.R.S., four lectures, "On Chemistry;" G. Scharf, Esq., Secretary and Keeper of National Portrait Gallery, three lectures, "On National Portraits;" Rev. C. Kingsley, M.A., two lectures,

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"On Science and Superstition;" Professor Huxley, F.R.S., twelve lectures, "On the Physiological Methods and Results of Ethnology;" Professor Ansted, F.R.S., five lectures, "On the Application of Physical Geography and Geology to the Fine Arts." An extra course may possibly be given by Dr. Du Bois Reymond, "On Electric Fish." The presents received since the last meeting were laid on the table, and the thanks of the members returned for the same.

SCHOOL OF PHYSIC, TRINITY COLLEGE, DUBLIN, DECEMBER 5, 1865.—At the Examinations recently held for Medical and Surgical Degrees and Licences the following candidates passed satisfactorily:—*Medical Degrees*—Henry R. Swanzy, B.A. Dub.; Thomas A. Compton, B.A. Cantab.; John H. Benson, B.A. Dub.; Charles Mayo, M.A. Oxon., and Fellow of New College; Edward Kough, M.A. Dub.; Francis W. Greene, B.A. Dub.; Samuel B. Gamble, C.B. *Medical Licence*—Fredk. Wm. Higginson, S.F.; Wellington Gray, S.F. By a recent regulation of the Board of Trinity College, the membership of the Royal College of Surgeons of England is received from Graduates in Arts of Oxford or Cambridge as a sufficient Medical qualification for attending the examination for Degrees in Medicine in the University of Dublin, which they are permitted to attend on taking out their *ad eundem* Degree in Arts.

LIABILITY TO RATING OF PUBLIC HOSPITALS, ETC.—A decision of the very highest importance to the public generally has just been pronounced by the House of Lords. We refer to that which is commonly known as the Mersey Dock Case, by which it has been virtually held—in accordance with a judgment attributed to Mr. Justice Blackburn, and which has been correctly characterised as one of the most luminous and exhaustive ever given—that all property, except such as is expressly exempted by statute, or such as may belong to the Crown, or be used by the Government for purposes of State, is rateable to the poor-rate. The consequence of this decision is therefore, practically, that almost every institution founded or used solely for charitable or eleemosynary purposes, such as, for instance, a Hospital, is so rateable.—*From the Leeds Intelligencer, December 2.*

SANITARY CONDITION OF BOMBAY.—You have been taught in England to consider Calcutta a hotbed of pestilence, but it is purity compared with Bombay. Mr. Crauford, the new Municipal Commissioner, and a civilian, has drawn a picture of "the fearful recesses" of the native city, to the truth of which I can personally testify. "On all sides," he says, "is filth unmeasurable, indescribable, and at places almost unfathomable; filthy animals, filthy habits, filthy street smells, filthy privies, filthy courtyards round the houses of the rich, masses of filth around the dwellings of the poor, foul and loathsome trades, crowded houses, foul markets, foul meat and food, foul wells and tanks and swamps, foul smells at every turn, unventilated drains, and sewers choked with ordure; men, women and children, the rich and the poor, living with animals of all kinds and vermin, inhaling the tainted deadly atmosphere, and dying by the thousand." A Department of Health has been energetically organised, and as the first result is the removal of forty-five tons of filth a day from the city more than before, you may imagine what Bombay has been.—*Times' Correspondent, Dec. 6.*

THE Metropolitan Sanitary Association intend to hold their first Conference Meeting on Thursday evening, December 14, at the rooms of the Society of Arts, John-street, Adelphi. Thomas Chambers, Esq., Q.C., M.P., has consented to preside, and Dr. Druitt, President of the Association of Medical Officers of Health of the Metropolis, will deliver an address on "The Defects in the Existing Sanitary Laws, with Suggestions for their Amendment;" after which, discussion on the subject will be invited. The chair will be taken at 8 p.m. A subscription of 5s. or upwards constitutes a member, and may be paid to the Hon. Sec., A. Hall, Esq., at the office of the Association, 1, Adam-street, Adelphi, or to any member of the Council.

THE CHOLERA IN SOUTHERN ITALY.—NAPLES, NOV. 28.—At length it may be confidently reported that cholera has not only greatly diminished, but is leaving Naples. From the 23rd the cases have gradually fallen from 84 to 60, 54, 36, while the deaths have been 48, 43, 28, 21. This is most satisfactory information, and, though the state of the public health is not such as to justify any relaxation in the use of all reasonable precautions, still, the comparison between the present day and November 13, when there were 272 cases, has naturally created here great joy. In the environs the improvement is corresponding, and from the provinces no bulletins arrive, from which we may conclude that the malady has altogether ceased there. The number of burials is still considerable, amounting to 112 and 109 for the last two days of which I have any report. A state of things, therefore, which only a month since would have awakenened general consternation, is now hailed with excessive pleasure, and the only fear is that many may fall back prematurely into their old habits, for, with that elasticity of character which distinguishes the Neapolitans, they are as readily elated as they are depressed. One word of counsel may be given to those who are absent from Naples, and it is that it will be better for a short time to defer their return, as experience has shown both here and in other places that there is a greater susceptibility of the malady on the part of those who have been absent, and especially towards the decline of the malady. A week or two, however, will, I trust, restore Naples to its ordinary sanitary condition. As a proof of the great improvement which has taken place, the day schools are now permitted to be opened where, in the opinion of the local authorities, it is considered safe, but of the evening schools not a word is said. The merchants have been much gratified, too, by a Ministerial order relieving all vessels arriving from infected places around the Bay from quarantine, a bill of health only be required and a strict examination by a Medical man. Efforts are being made to relieve vessels coming from Genoa and Leghorn from similar quarantine regulations, which are as useless as they are dangerous to commerce. Among those of note who have been carried off this week have been Monsignore Carbonelli, who was for a long time the Confessor of Ferdinand II., and Signor Monaca, the largest house proprietor in Naples. His illness was very rapid, for while on the evening of one day he was in perfect health, by dawn on the next morning he was dead.—*Times' Correspondent, Dec. 6.*

JUST before going to press we have received the last week's Cattle Plague Returns. It will be observed that there have been 5731 attacked, 3552 deaths, 726 slaughtered, and 489 recoveries, since November 25, the date of the numbers which appear in another column.

Census Divisions.	1. Attacked. Week ending December 4.	Week ending November 25.	Week ending November 18.	2. Result of reported Cases from the Commencement of the disease. Attacked.	Killed.	Died.	Recovered.	Remaining.
1. Metropolitan Police District	44	78	216	6708	2978	2924	222	584
2. South Eastern Co.	104	71	92	3850	1387	1923	318	222
3. South Midland Co.	510	392	211	3149	941	1556	139	513
4. Eastern Counties	180	136	212	4807	1788	2276	305	438
5. South Western Co.	23	18	39	280	76	150	8	46
6. West Midland Co.	102	78	34	1085	342	513	59	171
7. North Midland Co.	78	95	63	542	227	210	35	70
8. North Western Co.	423	216	145	1427	239	689	102	397
9. Yorkshire	938	726	453	3698	849	2109	351	909
10. Northern Counties	119	63	70	925	380	417	67	61
11. Monmouthshire and Wales	116	185	96	819	81	566	65	107
12. Scotland	1191	1582	1040	12424	1999	6603	1258	2564
	3828	3610	2669	39714	10787	19936	2909	6082

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Inquirer should consult the Medical Directory.

Birmingham.—Consult the *Annual Register* for 1817 for an account of the case of the Princess Charlotte.

The *Pentastoma constrictum* is described in Dr. Aitkin's fourth edition of the "Science and Practice of Medicine."

Mr. Lundy's pamphlet on the uses of gypsum as a disinfectant and means of fixing volatile exhalations from manure in cases of Rinderpest and otherwise, well deserves perusal.

Q.—If homœopaths, as they call themselves, use palliative, or allopathic, or heteropathic, or enanticpathic remedies, as they call them, are they not dishonest? They fight under false colours, using the name homœopath to delude the vulgar, but really make a sneaking use of ordinary Medical treatment.

The new Army Medical Blue-book for 1863, containing accounts of some most brilliant Surgical exploits—excision of shoulder, etc.—in New Zealand, shall be noticed ere long.

Facta non Verba.—The dispute is so threadbare now that it may as well be let drop. Ere long we may find that men who desire to be respected in society will omit all Medical designation whatever from their cards and signatures.

We have read with much pleasure Mr. J. F. Bateman's scheme for bringing water from Wales to London. It is detailed in a privately printed pamphlet by Vacher and Sons, 29, Parliament-street. The thing seems feasible, and the sooner it is done the better.

The *Journal* of the Scottish Meteorological Society gives the rainfall at Carbeth Guthrie, eleven miles N.N.W. of Glasgow, as 42½ inches, and states that this is a fair average of the West of Scotland. The average annual rainfall at Haddington is 25 inches; this may be taken as a fair sample of the East coast.

The *Medical Mirror* for October contains Mr. Spencer Watson's cases of Abscess in the Orbit; Dr. Lucas on Abscess near the Rectum; Dr. Paterson on Asphyxiated Children; and Dr. Thorowgood on Hypophosphites in Phthisis. The Profession is so numerous and so active that facilities for the publication and interchange of opinions admit of multiplication without rivalry. The paper on Unsuccessful Medical Cases by 'Ιατρος is conceived in the true spirit of Medical philanthropy.

Cambridge and Dublin.—We are sorry that the heavy demands on our space will not allow us to publish the admirable examination papers forwarded to us by our correspondents in the two Universities. Every student who is desirous of a degree should accustom himself to the business of answering questions in writing with accuracy, perspicuity, and brevity. The publication of examination papers, therefore, is useful to a large class of readers; but it is not necessary to publish those that are set every year, as all the student really requires is an occasional specimen of the kind of questions he will be required to answer.

A New Cure for Cholera.—We have received from Florence a copy of a tract entitled "La Insufflazione di Forte Corrente Atmosferica, come Rimedio dei Colerosi," by Signor Guiseppe Bruno, of Nicosia—whose name in English we fear is Joe Brown—in the form of a letter to the most illustrious Professor Maurizio Buffalini. It begins with the usual amount of chemical, physiological, pathological, and other philosophical data, treats of the action of cholera and state of the patient, and, proving clearly that thorough ventilation can be the only remedy, ends by recommending a good pair of bellows to blow air into the mouth, or in urgent cases into the œsophagus, in order to give the stomach and intestines a good blow out. We observe that Signor Giuseppe Bruno appends no Medical titles to his name, not even the cheap decoration M.D., and therefore fear that our Profession cannot be credited with this new method of cure.

Cholera in the Punjab.

(From a Correspondent.)

In the protected native State of Bussahir, in the Himalaya mountains, on the banks of the Sutlej river, it is a remarkable fact that during the frequent visits of the cholera the disease, beyond a certain point, has always been confined to the villages on the left bank of the river. It is very bad at Rampore, the capital, and visits either side of the river as far up as Serahun, but from that point upwards it has never appeared on the right bank of the river. In 1857 the disease spread as far up as Wangtoo, where the Sutlej runs through a mountain gorge of great magnitude, but it has never been known beyond Wangtoo in the Kunnawar district. The natives drink spring water, and are very dirty in their habits, seldom, if ever, indulging in ablutions. The villages are filthy, but often cleansed by torrents of rain, and as they are built on slopes it is done effectually *pro tem.*; but in a long protracted drought the outskirts of the village are very offensive.

Hay Fever.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can you or any of your correspondents inform me whether any monograph upon "Hay Fever," besides the one by W. Abbotts Smith, M.D., has been published either in England or on the Continent? I enclose my card. I am, &c., INQUIRER.

Manchester, November 30, 1865.

*** Dr. Bostock, in the Medico-Chirurgical *Transactions*, and Dr. Elliotson, in his lectures published in the *Medical Gazette*, have both given good accounts of "Hay Fever."

The "Lancet" and the Indian Medical Service.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The *Lancet* is fond of self-laudation, and ofttimes very illogical in its statements. Here is an extract from an article in last week's number on the Medical Retiring Funds of the Indian Service—an article, by the way, written with an imperfect knowledge of the subject:—

"This journal has from first to last done justice to the Government of India. We have made known in all the schools of this kingdom the at least comparative merits of the Indian Warrant. We have refused to give space in our columns to unreasonable complaints; and in our anxiety to see the Government of India and the Profession reconciled to each other, we have even suppressed much that might, we fear, have been justly urged against the former in regard to its dealings with the Medical Service of India."

It refuses space in its columns for "unreasonable complaints," in its great anxiety to serve the Government; and yet immediately adds that it "has suppressed much that might have been justly urged against the Government in its dealings with the Medical Service." This suppression, of course, was at the expense of the well-being of his hard-worked and underpaid Professional brethren. Truly may one say, "Save us from our friends!" I am, &c., AN INDIAN MEDICAL OFFICER.

December 4, 1865.

British Rainfall.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have to ask your readers' attention for a few moments to a request on the above subject, the importance of which in relation to engineering and drainage questions is well known. It is now some years since I began collecting returns of the fall of rain—with what success I will mention presently; but my main difficulty has been to find out the persons who keep such records, and one of the most obvious sources of assistance is the public press. I now, therefore, ask from each and every journal in the British Isles their all-powerful aid. When the collection was first organised in 1860, scarcely two hundred persons were known to observe and record the rainfall. By steady perseverance and the aid of a portion of the press, the number has been raised until there are now more than 1200 places whence returns are regularly received. Still I know there are many more, probably hundreds, who have either never heard of the establishment of a central depôt to which copies of all rain records should be sent, or they have been too diffident to send them. It is of paramount importance to gather these, and make the tables yet more complete. I therefore beg leave through your columns to ask every reader to think for a moment if he or she knows of any one who keeps, or has kept, a rain-gauge, or who has any tables of rainfall (or old weather journals) in their possession. And if they do know of such persons, I ask them, on behalf of science, of my fellow-observers, and on my own behalf, to use every effort to secure their assistance and to favour me with their names and addresses. We want old records, we want records for the present year, and from many parts of the country we want returns for the future, if a few persons will notify to me their willingness to assist and to pay 10s. 6d. for the very cheap and simple gauge now supplied.

To prevent needless correspondence, I annex a list of the places in Middlesex whence returns have been already collected for the years mentioned in the last column, and shall be very glad of any additions or corrections. Other counties or the complete list for the whole country shall be sent to any one willing to make good use of it. I may add that an influential committee of the British Association has been appointed to superintend and assist in my investigations, and that they cordially support my present application. I am, &c.

136, Camden-road, London, N.W. G. J. SYMONS.

The Committee consists of J. Glaisher, Esq., F.R.S., Lord Wrottesly, F.R.S., Prof. Phillips, F.R.S., Prof. Tyndall, F.R.S., Dr. Lee, F.R.S., J. F. Bateman, Esq., F.R.S., R. W. Mylne, Esq., F.R.S., and myself.

Middlesex.

Station.	Elevation.	Observer.	Period.
Camden-town	100	G. J. Symons, Esq.	C 1858-
Chiswick	..	Royal Hort. Soc.	1825-
Colney Hatch	..	R. G. Rose, Esq.	1857-
Edmonton	..	C. H. Adams, Esq.	1792-96
,, ...	..	,,	1811, 1816-40
,, (Lower)	..	Mr. J. Brown.	C 1860-
Enfield (Back-hill)	89	W. Mylne, Esq.	1864-
,, (Vicarage)	110	Rev. J. M. Heath.	1849-
Finchley-road	270	G. W. Moon, Esq.	C 1860-61 T
,, ...	306	,,	C 1860-61 T
Hackney	40	Dr. Tripe.	1856-58, 1860-
Hammersmith	12	F. J. Burge, Esq.	1856-58, 1860-
Hampstead	360	R. Field, Esq.	C 1862-
Harrow-on-the-hill	375?	Dr. Hewlett.	1864-
Highgate	394	J. Cutbush, Esq.	C 1862-
London (Bryanstone-square)	93	C. O. F. Cator, Esq.	1861-
,, (Chiswell-street) ..	..	W. Fletcher, Esq.	1850-59, 1861-
,, (Crane-court) ..	..	Royal Soc. *Trans.*	1729-35
,, (Gray's Inn-road) ..	55	Mr. Strachan.	C 1862 T
,, (Guildhall)	50	W. Haywood, Esq.	C 1857-
,, (,,)	123	,,	C 1857-
,, (Hatton-garden) ..	..	Mr. R. C. Woods.	1838 imp.
,, (Mile-end)	..	F. Charrington, Esq	C 1862-
,, (Offord-road).. ..	90	Mr. Strachan.	C 1864-
,, (Somerset House) ..	150	Philos. *Trans.*	1774-81, 1787-1809, 1812-27, 1829-42 T
,, (Spring-gardens) ..	36	J.W. Bazalgette, Esq.	1863-
,, (,,) ..	95	,,	1863
,, (,,) ..	95	,,	1863
,, (Temple-bar).. ..	..	Bent's *Met. Jour.*	1795-1807
,, (Westminster Abbey)	..	Dr. Heberden.	1766-67 imp.
,, (,, House)	65?	,,	1766-67 imp.
,, (,, Garden)	25?	,,	1766-67 imp.
,, (Whitehall)	..	J. C. Haile, Esq.	C 1854-60
,, ...	..	Nicholson's *Journ.*	1808-10
,, ...	..	..	1817-21
,, ...	..	Lady Bayning.	1836-42 imp.
Notting-hill	..	S. B. Blunt, Esq.	C 1865-
Paddington	..	..	1854-56
Poplar	25	Mr. Gaster.	C 1862-63 T
St. John's-wood (Lit. Soc.) .	161	H. J. Montague, Esq.	1857-
,, (Melina-pl.)	..	G. Leach, Esq.	1852-57 imp.
Spring-grove	70	T. E. Wyatt, Esq.	C 1864-
Tottenham (Vicarage) ..	..	Rev. J. S. Winter.	C 1861-62 T
,, ...	60	— Fowler.	1842-45
,, (Lordship-lane)..	..	W. D. Howard, Esq.	1847-
Twickenham (Observatory)	24	A. Wiss, Esq.	C 1863-
Uxbridge (Harefield-park) ..	..	W. Vernon, Esq.	C 1864-
Winchmore-hill	..	Mrs. Feltham.	C 1858-

Rules for Country Midwives.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A friend has directed my attention to your notice in the last number of the *Medical Times and Gazette* of my tract containing "Plain Directions for Midwives," intended principally for those who practise in villages remote from the immediate attendance of the general Practitioner.

Having been engaged in Midwifery for nearly half a century in an agri-

cultural district, I have often met with instances of ignorance and mismanagement by poor women who practise it. It was this circumstance which induced me to draw up a few plain rules in plain language which they can understand; and, therefore, I do not agree with your remark on the word "bowels," terming it "absurd." However disparagingly you may speak of my humble attempt to alleviate the sufferings and preserve the lives of the poor, I have the satisfaction of knowing that my plain directions have been useful in more cases than one.

Whether I suppress my name or not, reputation cannot be of much consequence to one of my advanced years. My day is past for that; but still I hope the tract will be useful. It is quite a gratuitious assumption your stating it has been circulated widely in the Western counties, as no one can possibly know it has been so or not but myself.

I am, &c..

AN OLD SUBSCRIBER TO THE "MEDICAL TIMES AND GAZETTE."

*** So as good be done, well.

ARMY MEDICAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Seeing that there is at present no pressure from without, the grievances of Army Medical officers may be redressed without the appearance of having been extorted, and without compromising the dignity of the authorities. The desiderata are, briefly,—

1. Promotion to the rank and pay of Surgeon after twelve years' service, as in the Indian army.
2. A moderate half-pay retirement after twenty years.
3. Retirement on full pay after thirty years, which would be a great boon to unpromoted Surgeons.
4. Promotion by seniority to the administrative ranks, special merit being rewarded by conferring brevet rank, the pay of the superior grade, and honorary distinction.

The Director-General is able in various ways to forward the views and interests of meritorious officers without promoting them over the heads of their seniors,—a proceeding which is at all times bitterly resented, premature promotion being generally the result of accidental position rather than relative superiority, and not unfrequently attributed to influence and solicitation. Senior Surgeons look to administrative rank as the just and natural reward of long and faithful service, and Dr. Gibson has now an opportunity of carrying out his desire of seeing the Medical Department of the Army assimilated in this respect to Artillery and Engineers.

I am, &c. A REGIMENTAL SURGEON.

MELBOURNE GENERAL HOSPITAL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The election of the honorary Medical and Surgical staff to the Melbourne General Hospital took place at the board-room of that institution on September 4. There were seven vacancies to be filled up on the Physicians' side, and eight on that of the Surgeons; and, according to a late regulation, the appointment of the staff was for ten years. There were thirteen candidates as Physicians, and twenty as Surgeons. The Hospital contains only 360 beds, and it is considered that the number of Medical officers appointed is far too great; and a rule has been passed not to fill up in future any vacancies that may occur until the number of Medical officers is reduced to four on the Medical, and the same number on the Surgical side.

The system by which the election took place was anything but satisfactory, as it rested entirely with the subscribers, who, it is maintained by the most intelligent part of the community, are not the proper judges of the fitness of the various candidates to fill so important a post; and a man having received the minimum amount of Medical education stood a much better chance of success than the most studious and the most accomplished and experienced, provided the former carried out a vigorous canvass. This led nearly the whole of the candidates to stoop to either a personal canvass or to employ "touters." Cards were also distributed, soliciting the subscribers' votes; and, on the day of election, nearly all the candidates were in the grounds of the Hospital, earnestly soliciting the voters on their behalf as they went to the poll. Many took their friends and supporters round by the back door, and by this means kept the respectable portion (who scorned such means) waiting for entrance through the proper channel,—the front door. Many had to wait so long that they lost all patience, and went away in disgust, without voting at all. Several of the old staff men who had been for years attached to the Hospital, and had done their duty, were thrown out, from a feeling that seemed to pervade most of the subscribers,—of the necessity of the infusion of new blood. Amongst those who were elected, there were two only who neither supplicated votes nor distributed cards; these were Dr. Motherwell, one of the Physicians, and Dr. Thomas, one of the Surgeons.

The Professor of Anatomy, Physiology, and Pathology offered his services as one of the Physicians, the Council of the University having permitted him to do so, thinking it might be advantageous to the students to have a Pathologist, and not a mere Demonstrator of Morbid Anatomy, which he now virtually is. For some time he stood high on the poll, and seemed likely to succeed; but a report was circulated amongst the subscribers that the Professor's sole object in wishing for the appointment was to have an opportunity of experimenting on the patients under his care, and when they died he might have the chance of demonstrating to his class the nature of the disease, and the effects of his treatment. This had the effect of sending him gradually lower and lower on the list, until at last he lost all chance.

I hope that when the next election takes place it will be conducted in a very different way.

I am, &c.

Melbourne, Victoria, September 25. MEDICUS.

HINTS ON REFORM IN THE ARMY AND NAVY MEDICAL SERVICE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Attention being once more directed to the unsettled and unsatisfactory condition of the Army and Navy Medical Service by the appointment of a Commission to inquire into its grievances, investigate its lack of attraction to a sufficient number of eligible candidates to fill existing vacancies, etc., and, if possible, devise means to place it on a firm and satisfactory basis in its relations inwardly towards itself, and outwardly towards its military brethren, it is to be sincerely and devoutly hoped the Commissioners will succeed in solving these difficult and much-vexed questions, and will for ever set them at rest. The present time is, therefore, favourable for throwing out a few hints, which, perchance, may meet the eye and approbation of some who are actively engaged in either receiving or giving evidence on the subject. The great stumbling-block seems to be the difficulty in deciding to the satisfaction of all parties whether it would be most desirable that the Medical branch of the Service should be placed on a military or Professional and separate footing. If on a par with the military, there is little doubt that nothing short of equality in every respect, even to our proper position in the Army List, save and except command, will satisfy those of our Profession who advocate such measures; on the other hand, it may be deemed almost equally certain, from the unfortunate experience of the past, that such an equality would be very distasteful to the Executive, and would meet with the utmost opposition if proposed, and the greatest passive, if not active, resistance if attempted to be carried out in practice. Such a result would but increase the coldness and widen the breach of friendship already existing between the two branches of the service, and completely frustrate the grand object to be obtained,—the bringing them together in happy unison and efficient working.

I feel certain if Medical officers were granted such privileges to-morrow, they would have to fight for the possession of every one of them, and more than probably lose some in the encounter. The experiment has before been tried, and failed, and is not more likely to succeed on a second occasion. It seems most prudent to take warning from the past by trying to improve the future. If our military *status* is viewed with such jealousy and intoleration that it cannot be established, let us turn our endeavours in another direction. Many who have maturely considered the question in all its bearings, and whose convictions are, in some instances, opposed to their private feelings, hold the opinion that, in the present state of affairs, it would be most advantageous that we should be established as a separate body, and placed on a similar foundation to the chaplain or commissariat department. Medical officers in such a case would not be regimental officers, but attached to regiments for a definite period,—say of five or more years—and not be subject to more frequent removal, as frequent changes would be detrimental to the public service in many ways, which are familiar to those who are acquainted with the working of the department. Not being regimental officers, they would be relieved of all band and mess subscriptions, and considered merely as honorary members of the mess. They would thus be placed in a more independent position, and command increased respect and courtesy, perhaps, from less familiar and frequent association with their brother officers. Those trifling disputes about precedence and authority in band and mess matters, which so often disturb the peace of regiments, would be also avoided, and more time would be at the disposal of the studious, without involving additional expense as at present. Such changes in the organisation of the department would necessitate many other modifications, so as to remove as much as possible all sources of collision or disputes in the clashing of interests with our military associates. To accomplish these ends, it will be further required that Medical officers should have,—

1. Special quarters allotted to them, or lodging-money if thought preferable.
2. A special uniform adapted for mounted and foot duties.

Reforms are needed in other respects to satisfy the just and moderate demands of the Profession:—

1. Optional retirement, after twenty or twenty-one years' service, on a liberal pension, remembering that in most cases a Medical man after twenty years' service is as old as a military man after twenty-five years' service, one being able to enter the service at a much younger age than the other; one comes into the army as an unformed officer, the other fully acquainted and qualified for his Profession. The boon would also accelerate promotion in the junior ranks.
2. After twenty-five years' service, the Medical officer should be allowed to retire with one grade of substantive rank, with the minimum retiring allowance of that superior rank.
3. Promotion of Assistant-Surgeons after twelve years' ervice, as in the case of Assistant-Surgeons in the Indian service.
4. The distinctive titles of Medical officers to be changed. The Assistant-Surgeon of six years' service is not now recognisable in rank and privileges from the Assistant-Surgeon of the last *Gazette*. Every step in rank to be gazetted, the Assistant-Surgeon after six years as much as the Surgeon-Major after twenty years' service. The title of Surgeon-Major is an anomaly, and leads to the natural assumption that his relative rank is that of a Major rather than a Lieutenant-Colonel. Why not classify Medical officers as Assistant-Surgeons on appointment, Surgeons after six years' service, Senior Surgeons or Surgeon-Majors on further promotion or after twelve years' service, Surgeons-in-Chief, Deputy-Assistant-Inspectors-General, or Surgeons and Lieutenant-Colonels, or some such appellation, after twenty years' service?
5. Separate rules and regulations for the Department, regulating the amount of pay, pension, prize money, forage, weight of baggage, travelling allowances, lodging money, light, fuel, etc., not according to military rank, but Professional worth and standing and the social requirements of the age.
6. In all cases of Boards, regimental or otherwise, Medical officers invariably to be summoned as scientific witnesses.
7. All alterations whatever made or embodied in the Queen's regulations to be in plain language that will admit of but one interpretation. This ought to be a *sine qud non*. The War Office and Horse Guards would then be guided by the same rules.
8. The Army and Navy Medical services to be assimilated to each other in every respect as much as possible, that they may be, what they ought to be, a united service.

In conclusion, as military as well as Medical officers are equally interested in the issue of such an important question, both sides ought to be heard, in order, if possible, to arrive at a compromise which shall be satisfactory to the profession of arms and of Medicine.

The public, as independent observers and the watchful guardians of their own interests, should certainly have the advantage of forming a judgment. It would be well, therefore, if the proceedings of the Commission were made public, and not private property. Would that the Profession as a body were more united and true to their interests in thought and in action! Where now we so often fail success would then attend our efforts.

November 27. I am, &c. NEMO.

ISIS AND ÆSCULAPIUS.

*** The following letter on the subject of Oxford extension appeared in the *Daily News*:—

"Sir,—All those acquainted with the recent history of the University of Oxford will recognise in the subject now beginning to receive interest and discussion—viz., that of the 'Extension of the University'—the revival of an old question, regarding which much may be found in the Report of the Oxford University Commissioners in the year 1852, and in the Report (upon that report) of the committee appointed by the Board of Head

of Houses and Proctors in 1853.(a) I, for one, am most glad that the matter is being considered by friends of the University out of Oxford as well as those who are resident, and venture to expect that after the lapse of so many years it will bear and receive different treatment from what it obtained on a former occasion; and I look upon the fact that such a scheme meets with approval, when viewed from different stand-points, as a good test of its necessity and a promising omen of its accomplishment. It would appear from the various letters floating about, and from the intelligence which here in London we receive from Alma Mater, that the proposed 'extension' at Oxford is considered likely, ere long, to have reference 'exclusively' to those 'who are desirous of admission into the Christian Ministry.'

"The question formerly raised, again, of course, requires solution, namely, as to the method which should be adopted whereby to carry out this extension, and to provide accommodation and supply education for a poorer class of students than those who now for the most part resort to the University of Oxford (the solution of which problem will anxiously be awaited by many parents throughout the country). Whether the scheme should be carried out by means of affiliated or of independent halls, or what the particular objections are which may be urged against the individual plans proposed, are questions which it is not my wish to dwell upon. I would merely now, by your permission, submit a few observations touching upon the supposed probability that the hoped-for extension of Oxford will have reference merely to theological students, and in so doing would express a wish that this prediction may not be verified. I would point out that there is every reason to anticipate that any plan which would be comprehensive (and therefore wise) enough, by reason of diminution of collegiate and academical expenses, to attract numbers of students with a view to education for the Christian ministry (much as that issue is to be desired), would have the result also of attracting students with a view to education for the Medical Profession. The attraction within the pale of our ancient universities of those who are destined to enter the ranks of our Profession has long been felt and allowed to be a desideratum; and this has been the more so of late years, since, in fact, these institutions have more completely adapted themselves to, and been better appreciated by, the country at large, and since the curriculum of study at those places has in a more marked degree embraced, encouraged, and provided facilities for, the study of physical science and such learning as is cognate to Medicine and Surgery. Whether it be owing to the lately formed 'middle-class examinations,' or whether it be the result of other influences, I will not stop to inquire, but it is the fact that most of the young men who now enter our Profession and 'walk' our London Hospitals (in many cases sons of clergy and Medical men) are second to no other class of the community for intelligence, gentlemanly manners, and honourable conduct; and it is confidently believed, that if those advantages which a university life and education pre-suppose could be secured at a moderate rate (say at from £80 to £100 per annum), (b) numbers of those intending to adopt the practice of Medicine or Surgery for their vocation in life, would gladly and quickly avail themselves of the opportunity. I know of several general Practitioners (not Physicians, who have themselves had the benefit of an university training) whose only difficulty in sending their sons to Oxford or Cambridge, with the view of their ultimately following their own calling, is the present excessive expense required for such a course; and I have reasonable cause for stating that, if the expense of university life could be reduced in the manner contemplated, many of our Profession would look forward with thankfulness to the chances of sending their children to those seats of learning. I need not attempt to show, on the one hand, how politic and honourable it would be to the universities to connect themselves with so large and influential a body as the Medical Profession, in such a manner as to bring their influence to bear upon many of its members; or how beneficial to the public and the Profession (intimately related as their interests are) it would, on the other hand, be, if more of the Medical Profession could by any means be brought continuously under the influence of the manners of life, the discipline, and other incidents of an university academical education. I would hope that in the forthcoming considerations and discussions on the advisability of university extension at Oxford and the mode of procedure best calculated to carry it out, the subject may not be handled exclusively in relation to theological students, but that room and opportunity may be found for asserting the claims of Physic also, in the proposed advantages. And I trust that these claims may be preferred, not only by the resident graduates in Medicine, who, from an *esprit de corps*, will naturally be desirous of seeing their own Profession less ignored by, and on a better footing with, the universities (possessing, as the latter do, actual and latent powers and resources specially applicable to the study of Medical science), and its members enjoying the educational benefits participated in by those of other faculties; but that the importance of these claims may be apparent to the common sense and appeal to the sympathy of the graduates in general, and thus have due weight along with other arguments in favour of the projected university extension. Might I suggest, in conclusion, that in carrying out the desire of extending the University for the benefit of poorer students, a good opportunity would present itself of indicating the sentiments towards the Chancellor of the Exchequer which many of his Oxford friends are about to give expression to by means of some suitable testimonial?

"London, Nov. 20." "I am, &c. "M.D. OF OXFORD.

COMMUNICATIONS have been received from—

Dr. A. Shears; Royal Institution; Dr. Fotherby; University of London; Mr. Wheelhouse; Metropolitan Sanitary Association; An Old Subscriber; Dr. D. Maclochlin; Dr. Kealy; Mr. Reginald Harrison; Mr. T. R. O'Berne; An Indian Medical Officer; Medicus; Epidemiological Society; Royal Medical and Chirurgical Society; Western Medical Society; Mr. James Robertson; Mr. D. F. Tyerman; Ethnological Society; Dr. John Patterson; Dr. J. Y. Vinen; Dr. James Young; Inquirer; Apothecaries' Society; A Regimental Surgeon; Mr. G. J. Symons; Dr. Taaffe; Dr. E. Bradford; Dr. B. W. Richardson; Dr. Hughlings Jackson; Dr. Ritchie; Mr. Hutchinson; Dr. Bence Jones; Dr. J. W. Cole; Dr. C. Handfield Jones; Dr. Harley; Dr. Stone; Mr. Spencer Wells; Mr. J. Chatto; Mr. T. Stone.

(a) This committee recommended strongly the experiment of 'extending' the University, and urged the authorities to make a grant of £10,000 towards the founding of a new hall for the purpose. Moreover, in 1845, an address, signed by Mr. Gladstone, Lord Sandon, Lord Ashley, and many others, in favour of opening the University to 'poorer' students, was presented to the Hebdomadal Board.

(b) See the evidence in the Report of the Oxford Commission (page 50), given by the Rev. D. Melville, of Bishop Hatfield's Hall, Durham; also that of the Rev. W. Price, of Pembroke College, and of Mr. (now Dr.) Temple, as to the possibility of procuring a university education with a moderate amount of expense.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 2, 1865.

BIRTHS.

Births of Boys, 1058; Girls, 1013; Total, 2071.
Average of 10 corresponding weeks, 1855-64, 1789·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	707	661	1368
Average of the ten years 1855-64	708·7	717·5	1426·2
Average corrected to increased population..	..	..	1569
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	..	14	6	2	6	9	4
North ..	618,210	7	11	17	5	8	33	4
Central ..	378,058	..	3	4	2	5	8	5
East ..	571,158	5	..	14	2	9	23	5
South ..	773,175	..	10	12	..	20	15	6
Total ..	2,803,989	12	38	53	11	48	88	24

ANALYSIS OF THE METROPOLITAN WATERS FOR NOVEMBER, 1865.

The following is the Return from the Metropolitan Association of Medical Officers of Health of the Quality of the London Waters for the month of November:—

	Total Solid Matter per Imperial Gallon.	Loss by Ignition.(a)	Oxydisable Organic Matter.(b)	Hardness. Before Boiling.	Hardness. After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction . .	20·37	0·90	0·69	13·4	3·0
West Middlesex . .	19·00	0·75	0·91	13·7	3·0
Southwark and Vauxhall.	20·25	0·80	1·03	14·0	3·0
Chelsea	20·75	0·75	0·73	14·1	3·2
Lambeth	18·88	1·00	1·06	13·7	3·0
Other Companies.					
Kent	25·50	0·70	0·27	18·0	5·9
New River . . .	20·18	0·65	0·79	14·0	3·1
East London . . .	22·67	1·00	1·10	14·9	4·0

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxydisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 to 8; and the results are controlled by the examination of the colour of the water when seen through a tube two feet in length and two inches in diameter.

APPOINTMENTS FOR THE WEEK.

December 9. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

11. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

12. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

Ethnological Society of London, 8 p.m. John Crawfurd, Esq., President, "On the Oriental Negroes—namely, Andaman Islanders, Papuans, Feejeeans, etc."

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Dr. Waters, of Liverpool, "On the Morbid Anatomy of Pneumonia." Mr. Nunneley, of Leeds, "Third Case of the Entire Removal of the Tongue for Epithelioma."

13. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

Hunterian Society (Council, 7½ p.m.), 8 p.m. Dr. Ward, "Some Results of Acute Alcoholism, with illustrative Cases."

Microscopical Society, 8 p.m. James Smith, F.L.S., "On a Method of Cell-mounting."

14. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

15. Friday.

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

ON GENERAL AND LOCAL CHEMICAL DISORDERS ARISING FROM PEROXIDATION,

AND ON THE MECHANICAL DERANGEMENTS THEY PRODUCE.

By H. BENCE JONES, M.D., F.R.S.

PART III.—LECTURE VIII.

ON GENERAL AND LOCAL INFLAMMATION.

HITHERTO in these lectures I have dwelt almost entirely on some of the diseases resulting from suboxidation; I shall endeavour now to give you a glimpse of some of those that proceed from peroxidation.

Among the multitude of disorders which may be included under the head of acute and chronic diseases of peroxidation, it becomes necessary for this course of lectures that I should choose only one or two subjects which appear to me most convincingly to prove that an excess of chemical action does originate some of the most serious diseases to which the body is liable, and that this first chemical wrong action sets up mechanical derangements which again become the secondary causes of further more or less serious chemical errors.

In this and the following lecture I shall endeavour to show you that inflammation is a chemical disease, a state of oxidation beyond that which occurs in health, varying in its mechanical results in consequence of the structure of the different textures in which the excessive action is set up.

Hitherto, altered vascular, and more lately altered nervous action have been considered as lying at the root of inflammatory action. These views are based upon the effect produced by section or paralysis of the nerves of the blood-vessels in increasing the circulation through any part, and on the phenomena which result from the obliteration of one artery going to any part, whereby such increased pressure and action of the blood in other arteries of the part are produced. When, however, the simplest possible case of inflammation, in which neither blood-vessels nor nerves exist, is taken, then we find that there is a chemical action which is independent and anterior to both the nervous and the vascular action; and to trace this excessive oxidation as it arises from physical and chemical action, and as it affects nutrition, circulation, motion, and sensation, is my present object.

No question lies more near the foundation of all pathological knowledge than that of the nature of inflammation. That it is closely related to the natural actions going on in the body is now fully recognised. Thus, it has been stated to be "a modification of nutrition," "a destruction of the equilibrium in the molecular attractions in the body and of the reciprocal changes between the textures and the blood." But these expressions are dark and fruitless compared with the clearness you will obtain if I can convince you that inflammation in its origin is an exaggeration or excess of the ordinary oxidising action that occurs in each part of the body, and that this increased chemical action sets up secondary mechanical derangements, which react on the chemical repair of the textures in which the inflammation is set up.

The law of the conservation of force must be applied to the heat produced in inflammation as it would be applied to any other question regarding heat. We have ceased to look for the cause of the ordinary heat of the body in vital or nervous action. We look further, and see it coming from part of the amount of force set free by the action of oxygen in the body, a definite amount of the total chemical force giving a definite amount of heat. In inflammation we must look to the same source for the heat. It is no solution to say that the heat comes from increased vital, nervous, or vascular action, and that these arise from the effect of some stimulus. If it be not fresh created, the increased heat must ultimately come from the force that exists in oxygen, hydrogen, and carbon; and it is more reasonable to refer the heat of inflammation directly to the same source as the ordinary heat of the body, thereby making the healthy and inflammatory heat proceed from different amounts of the same chemical action, than to attribute the ordinary heat to the molecular action whilst the extraordinary heat is supposed to be derived from some other and far less determined source which itself must ultimately be traced to its origin in the slow combustion that never stops within. The most simple case of inflammation that occurs in the body will best show you what takes place in more complicated organs.

The single fact that inflammation can be set up in the cornea or cartilage, where neither blood nor nerves exist, by increased friction, or heat, or light, or electricity, or by chemical irritants, as cantharides, turpentine, and other oils, or by irritating acids or strong alkalies, is sufficient proof that inflammation does not depend on nervous or vascular action, but that it is caused by increased molecular motion. Heat, and light, and electricity, and chemical actions are forms of molecular motion which, when added to the motion already existing in the cornea or cartilage, give rise to increased oxidation of the non-nitrogenous and nitrogenous substance, even in the bloodless textures; and this altered oxidation immediately determines an altered chemical circulation of lymph and an altered nutrition in the inflamed part.

That oxidation takes place where there is no blood-circulation is shown in an experiment on the respiration in the muscles of the frog by G. Liebig. The muscles, even when they were deprived of all their blood, if placed in oxygen, gave rise to carbonic acid and retained their power of contraction.

The increased molecular motion in the cells of the cartilage produces increased chemical circulation of lymph, increased consumption of oxygen, increased liberation of heat and of oxidised products, and ultimately of water and carbonic acid. This action spreads from cell to cell until it reaches the capillaries.

A capillary in ordinary action contains blood globules loaded with oxygen in its centre, with liquor sanguinis moistening the tube around. Oxygen diffuses from it with the lymph into the cells and structures, and thereby active oxidation is kept up outside the capillaries in and around the different parts of the different textures. The peroxidation which constitutes the first step of inflammation begins outside the capillaries where the animal heat is produced.

When the increased action reaches the capillaries, the oxygen bearers are, by the demand for oxygen, attracted in excess: they displace the liquor sanguinis—at first producing a more rapid flow through the part, and quickly rushing in, so as to cause a heaping up of the blood globules, giving rise, first to enlargement of the vessels, and then to obstruction, which immediately reacts on the heart, increasing the pressure and rate of the blood in all the arteries, among others, in those around the obstructed part, so that stronger motion of the blood occurs around the obstruction, and thus a larger area of increased chemical action tends continually to be produced.

That the first mechanical congestions can be caused by increased chemical actions, and not by any nervous action affecting the heart, is proved by the fact that when the circulation is arrested by a ligature in the frog, and then irritating substances are applied below the ligature, the blood is seen to be attracted to the irritated capillaries, which will remain congested after the circulation is re-established by removing the ligature.

In the obstructed part the mechanical results of over-fulness and pressure show themselves. The pressure causes pain, and the increased supply of blood makes the nerves around the obstruction more sensative than when less blood is there.

The tension causes the serum to be effused, and even fibrin, altered by the peroxidising action going on, also exudes when the pressure increases, and this fibrinous exudation causes intestinal thickening, and constitutes a much more permanent obstruction than the liquid matter, which can rapidly be reabsorbed.

When the primary increase of chemical action is excessive the whole blood participates in it. Peroxidation not only causes an excess of fibrin, but it produces a higher state of oxidation of the fibrin than exists in health. The membrane of the blood globules also probably is altered in composition, and becomes more adhesive, so that the blood globules aggregate together and fall more quickly when the blood is drawn from the body, whilst the altered fibrin contracts more firmly than ordinary fibrin usually does.

Oxidation and pressure cannot be increased in any part of the body without the chemical and formative actions of nutrition being at the same time altered. The destruction of old substance will be more or less increased, and the deposit and formation of new substance will undergo great changes, according to the heat that is present, and according to the different textures of the parts in which the increased actions are going on.

The cellular tissue furnishes perhaps the best example of

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altered nutrition during inflammation. There the increased action most rapidly leads to excessive cell-growth; pus-cells soon form and quickly multiply, according to the amount of increased action. The cell-growth spreads in that direction in which there is least resistance until the products of the altered nutrition are discharged.

When the obstruction is extreme and the pressure excessive in any part of the cellular tissue, oxidation and nutrition may be entirely stopped, and, though excessive action may be going on around, the part obstructed may die, and in it an entirely different sort of chemical actions will then be set up, which will continue until the slough is removed.

If, then, in a few words, I try to give you a summary of what inflammation is, I say that it has its origin in the causes which produce the natural heat of the body. The oxidation rises to a peroxidation; it is a purely chemical wrong, producing almost immediately a secondary mechanical derangement,—increased motion of the blood-globules—from which excessive motion and obstruction of the blood-vessels arises. Hence proceed increased tension, increased pressure, and increased effusion of lymph from the liquor sanguinis. The effused fluid varies in its composition with the amount of pressure and oxidation. Lastly, from the increased heat, and the increased circulation, and the increased effusion of lymph, an entire change in the nutrition of the part follows; and these actions are so related, and so react the one on the other, that it is difficult exactly to estimate the part which each one separately plays in producing the result.

In whatever part or texture of the body the inflammation is set up, the structure of the part will have an important effect on the chemical and mechanical actions that take place in it. Peroxidation will occur much less readily in the liver than in the lung. A resisting bone will oppose a much greater obstacle to congestion than an unresisting skin. Even in different textures of the same organ, the inflammatory action will be modified by the greater or less resistance of the different textures to oxidation and pressure. The inflammation of the outer unyielding covering of the lung will differ entirely from inflammation of the yielding mucous membrane of the bronchial tubes; and the finer structure of the air-vesicles, and of the capillaries on their surfaces, will give rise to very different results from the inflammation of the coarser mucous membrane. Let me for a moment contrast bronchitis with pneumonia.

The increased oxidation in the mucous membrane causes increased fulness of vessels, increased secretion of fluid containing modified albumen and salts, which wash off the epithelium; increased production of the lowest epithelial cells; interference with the passage of air to the air-vesicles. Gradual interstitial thickening of the tubes by fibrin, and even increased growth of the muscular coat in long-continued cases, may occur. In other words, the structure of the mucous membrane of the bronchial tube, and even its muscular and fibrous textures, determine to a greater or less degree the products and the results of the bronchitis.

In the air-vesicles, no epithelium, no muscular coat exists; the oxidation causes congestion of the capillaries; thence comes an exudation of blood-stained albuminous liquid, and the rapid effusion of oxidised fibrin into the vesicles. In the effused substance and in the obstructed capillaries, further chemical changes and altered nutrition then occur, whilst the mechanical obstruction, according to its extent, limits and retards the great chemical action which is going on between the oxygen of the air and the red globules of the blood.

The same chemical stoppage of aëration of the blood follows, not more surely, but much more manifestly, from mechanical action by an accumulation of fluid in the pleura. The structure of this tissue determines the effusion of altered serum and fibrin whenever excess of oxidation causes congestion of the capillaries. The amount of fluid and solid matter effused depends on the amount of obstruction of the capillaries, and the pressure is transformed to the surface of the lung; and, as it increases, the chemical action in the lung is lessened until so little oxygen passes into the air-vesicles that extreme suboxidation ends in stopping all the actions that constitute life.

In order, however, to bring before you still more clearly the dependence of mechanical on chemical diseaes, and the alteration of chemical function by the alteration of mechanical structure, I shall occupy your attention in this and in the following lecture with those different structural affections which, under the name of Bright's disease, have so united chemistry to medicine that, as regards this disease at least, no one can even now say that it is possible to be too chemical. For only by chemistry can the disease be recognised, only by chemistry can its progress be traced, only by chemistry can the effect of the different poisonous substances retained in the blood and in the textures by the stoppage of their chief means of escape be comprehended, and only by chemistry can the actions of the different means of promoting recovery be understood.

(To be continued.)

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.(a)

By GEORGE HARLEY, M.D., F.R.S.,

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LECTURE XI.

ALBUMINURIA WITH AND WITHOUT DROPSY;—IN CONNEXION WITH BRIGHT'S DISEASE, HEART AND LIVER DISEASE, PREGNANCY, FEVERS, ETC.—ITS CHEMISTRY, PHYSIOLOGY, PATHOLOGY, AND TREATMENT.

(Continued from page 626.)

SECONDARY ALBUMINURIA (CAUSE NOT PRIMARILY IN THE KIDNEY).

Albuminuria from Imperfect Digestion.—Every one who has had much experience with diseases of the urinary system is aware that cases of temporary albuminuria are occasionally met with in persons whose only symptoms are referable to disordered digestion. It may be that they are usually dyspeptic, or, what is still more frequently the case, they have been indulging in food that has disagreed with them. Thus, cheese has been known to cause albuminuria in children, and lobster or crab in grown-up people. The explanation of this is simple enough, as has already been explained in the physiological part of our subject, and which, therefore, need only be again alluded to here. In these cases there is nothing essentially wrong with the kidneys, and the albuminuria is simply due to the endosmotic equivalent of the albumen absorbed into the circulation being different from what it ought to be. Certain kinds of albumen, as before said, will not stay in the blood unless they have previously undergone modification by the digestive process. Hence, if the necessary modification be interrupted, either on account of the digestive organs being out of order, or by reason of the indigestible nature of the food itself, a temporary attack of albuminuria is the immediate consequence.

The effect of food on albuminurias of all kinds is much more important than most persons imagine; for, as I shall afterwards show when on the subject of treatment, by diet alone we can at pleasure augment or diminish the amount of albumen eliminated with the urine. Nothing further need therefore at present be said on the subject.

Albuminuria from Nerve Lesion or Reflex Irritation.—This, like the last form of the affection, is characterised by the absence of organic change in the structure of the kidneys. But the analogy does not proceed further, for although the albuminuria is due to no structural change, it can, nevertheless, be clearly traced to a disturbance of the renal circulation. It may be remembered that while on the physiology of the subject I mentioned that in the lower animals albuminuria can be produced at will by a variety of operative procedures—such, for example, as section of the renal nerves, division of the spinal cord, lesion of the cerebral peduncles, etc. So we cannot be in the least surprised at the detection of albumen in the urine of patients labouring under similar nerve lesions, the result of disease. As the cause of the albuminuria is apparent enough in the lower animals—namely, renal congestion—there need be, I think, but little doubt that in man the pathology of the morbid condition is precisely similar. Cases of albuminuria in connexion with spinal paraplegia, hemiplegia, apoplexy of the base of the brain, etc., have been so frequently reported, that nothing further need be said upon the subject, but we may at once pass on to the consideration of that form which is least understood—viz., the albuminuria of pregnancy.

Albuminuria of Pregnancy.—Many years ago, when House-Surgeon to the Edinburgh Royal Maternity Hospital, I was led, at the suggestion of Professor Simpson, to examine the urine of every patient that entered the charity during three

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—ED. *Med. Times and Gaz.*

months. The urine of those who came in after the pains of labour had already begun was immediately drawn off by the catheter, so that even in their cases all risk of error, from the accidental admixture of vaginal secretions, was avoided, and I was surprised to find how much less frequent the presence of albumen in the urine of pregnancy is than I had been led to expect from the opinions expressed by previous observers. It did not amount to 4 per cent, which is actually less than a third the percentage of the cases of temporary albuminaria found to exist among female patients admitted into a general Hospital.(b) As regards the frequency of puerperal convulsions, an almost similar conclusion was arrived at—namely, that they are not so exceedingly common as generally supposed, for although I have since seen them both in private and public practice, not one case of the kind occurred among the 450 women who were at that time delivered under my superintendence, and at least ten of whom were passing albumen in the urine. Moreover, even in those cases where the albuminuria is most severe, accompanied by dropsy, and apparently entirely due to the pregnancy, there may still be no convulsions, as the following case will show:—On May 30, 1851, a servant-girl, aged 20, was sent into the Edinburgh Infirmary by a Medical man who thought her case one of Bright's disease. Her urine was highly albuminous, her face puffy, her legs swollen, and her abdomen greatly distended. On passing my hand over the abdomen I imagined that I felt an enlarged uterus, but on suggesting pregnancy, the girl indignantly denied its possibility. It was true that she had seen nothing for the last nine or ten months, but to that she attached no importance, as she had often before been irregular. She had never had morning sickness, never felt any movement, and besides, it was impossible she could be pregnant. Facts, however, are stubborn things, and fœtal hearts being not usually heard in cases of simple ascites, I quietly, but firmly, told her my opinion that the albuminuria was associated with, if not the direct result of, pregnancy; at the same time adding that she might remain in the Hospital a few days while we tried to relieve the dropsy. In four days she was taken in labour, and within an hour after I was called to her bedside she was delivered of a full-grown healthy child, without a single convulsion or any head symptom whatever. From this time the albumen began to diminish in the urine, the dropsy to disappear, and on June 16, twelve days after delivery, not a trace of matter coagulable by heat and nitric acid was to be found in the urine. On July 14 she was dismissed in apparently perfect health.

I have now to relate two other cases of what is called the albuminuria of pregnancy, but which, as shall afterwards be explained, have an entirely different pathology. The following is an abstract of a case which was published in Germany in 1854.(c) The analyses were made conjointly by the late Dr. Gegenbaur and myself; the clinical history was furnished us by Scanzoni:—

The woman, aged 36, began to menstruate in her fifteenth year, and conceived for the first time in her twenty-fourth year, which conception, pregnancy, and delivery were all perfectly normal. Menstruation recommenced eight weeks after delivery, and continued at regular intervals till February 27, 1853, when she again became pregnant. The patient continued well till July 24, 1853, when she was attacked with ascites and anasarca of the upper and lower extremities, the outer genituls, coats of the abdomen, and of the face. Being unable to work, she went to the Hospital in Schweinfurt, from whence she was discharged as cured in the course of six weeks. The patient attributed her illness to cold, which she said she had caught from being too lightly clad in damp, cold weather.

On September 18 she entered the Wurzburg Royal Lying-in Hospital, there to await her delivery. At the time of her entrance she was perfectly well, with the exception of an œdematous swelling of the lower extremities, which she ascribed to the long distance she had walked. After remaining fourteen days in the Institution, the patient again became dropsical, and the dropsy continued to increase so that on October 13 she presented the following appearance:—

Her pale face appeared swollen and puffy, particularly around the eyes; the upper extremities, especially the forearm and the hand on the left side, were very œdematous; the abdomen contained much fluid, and respiration was difficult, on account of the compression of the lungs; the heart's action was normal; the skin was extremely dry; the bowels torpid; and the scanty urine loaded with albumen. The fœtal heart was distinct. The patient was ordered a diuretic electuary, to remain quiet in bed, to take moderate nourishment, acidulated drinks, and the swollen extremities to be bound with a linen compress. During the next nine days both the œdema and ascites diminished, while the urine and perspirations increased. The amount of albumen passed was, however, much the same. From October 22, although the patient had ceased taking the medicine, the improvement still continued, and on November 5 2 ozs. of blood were withdrawn from the patient's arm, and the twenty-four hours' urine at the same time collected. The analyses of these fluids, as well as those subsequently made during the patient's illness, are given in the following table, in which, for the sake of more ready comparison, the constituents have been reckoned at so much per thousand:—

Blood.

In 1000 parts of blood were—	1st analysis on Nov. 5.	2nd analysis on Nov. 17.	3rd analysis on Dec. 7.	4th analysis on Dec. 15.
Water	825·96	829·404	789·220	768·782
Solid matter	174·04	170·596	210·780	231·218
Fibrin	2·30	2·855	2·489	2·858
Albumen	54·16	60·693	65·967	73·431
Blood corpuscles	103·51	95·902	131·219	141·751
Extractive matter	1·22	0·821	2·005	4·884
Inorganic salts	12·78	10·315	9·100	8·287
In 1000 parts of serum were—				
Water	927·32	917·614	911·091	906·000
Solid matter	72·68	82·386	88·909	94·000
Albumen	60·69	67·269	76·154	86·538
Extractive matter	2·91	3·752	4·505	2·462
Inorganic salts	9·08	11·365	8·249	5·000

Urine.

In 1000 parts of urine were—			
Water	963·1	971·1	967·3
Solid matter	36·9	28·9	32·7
Inorganic salts	22·9	15·9	17·5
Organic substances	12·88	12·8	15·3
Albumen	9·5	2·9	1·6
Urea	3·39	5·43	10·9

The first analysis was made during the thirty-third week of pregnancy, at which time, although there was not much ascites, there was considerable œdema of the lower extremities. The qualitative analysis of the blood showed that it contained, besides the above-named ingredients, a large quantity of sugar and traces of carbonate of ammonia. The urine collected at the same time had a strongly alkaline reaction and nauseous smell—facts which led to the conclusion that the transformation of some of the urea into carbonate of ammonia was taking place in the circulation. On microscopical examination, the urine was found to contain a number of pale tube-casts, as well as numerous epithelium cells.

By the time the second analyses were made—twelve days later—the condition of the patient had improved, her complexion was more natural, and the dropsical swelling had considerably diminished. The blood no longer contained carbonate of ammonia, and only a small quantity of sugar was present. The urine had now become almost normal. The quantity had increased from 1169 cubic centimetres (38 oz.) to 1668 cubic centimetres (54 oz.), and the specific gravity had at the same time fallen from 1043 to 1025. Besides this, there were no longer any tube-casts to be detected. The improvement in the condition of the patient went steadily on until December 1, when she was safely delivered of a full-grown healthy child, without the occurrence of any nervous complication. On December 7—that is, seven days after delivery—the condition of the blood and urine, as shown by the third series of analyses, was still more favourable. The total quantity of urine then passed was 1792 cubic centimetres (58 oz.), the specific gravity 1015, and the reaction decidedly acid. Ten days after the confinement, the health of the mother was considered so good that she was sent as wet nurse to a resident family. Five days later, at the request of Scanzoni, she returned to the lying-in Hospital, and had over 2 oz. of blood abstracted from her arm, the result of which is given in the fourth table. Now, if we compare the first analysis of the blood with the figures given by Scherer of normal blood, the increase of the watery, together with the de-

(b) Among the women admitted into the Medical wards of University College Hospital, Parkes found 12·03 per cent. had temporary albuminuria (*Medical Times and Gazette*, January 1, 1859). Drs. Elliott and Van Arsdale found only two cases of albuminuria in 112 pregnant women that they examined (*New York Journal of Medicine*, 1856).

(c) Harley and Gegenbaur: Researches on the Blood and Urine of Albuminuria of Pregnancy. Beit. zu Geburtskunde v. Scanzoni, Hf. II. 1854.

crease of the solid constituents is very remarkable. The albumen is decidedly under the average of that found in non-pregnant females. The quantity of blood corpuscles is likewise less, whereas the fibrin and salts are more abundant than in normal blood. The quantity of solid matter in the serum is also much less, but the difference is here caused by the smaller quantity of albumen present, since the amount of salts approaches that in normal blood. The result of the second analysis corresponds with the improvement of the patient: there being *a decided increase of the albumen*, and decrease of the salts in the blood. The third analysis of the blood, seven days after delivery, shows, in comparison with the two former analyses, a considerable diminution of the water, with a corresponding increase of solid matters; the fibrin is, however, less than in the second analysis. The great increase of albumen and blood corpuscles exactly correspond to the decrease of the albumen in the urine. In the fourth analysis, the water of the blood is seen to be still further diminished, and the solids at the same time as notably increased. The quantity of the salts is again less than in the previous analyses, so that all the analyses show a continuous decrease in these constituents.

The general conclusion to be drawn from the foregoing investigations is:—

1st. That in the albuminuria of Bright's disease there is less than the normal amount of albumen in the blood.

2nd. As the amount of the albumen in the urine increases, the quantity in the circulation proportionately diminishes; and as the albuminuria decreases, the amount in the circulation gradually reapproaches the normal standard.

3rdly. The quantity of albumen and urea in the urine are in inverse proportion to each other—that is to say, where there is much albumen there is little urea, and where there is much urea there is but little albumen.

Lastly. The condition of the urine affords us a pretty correct idea of the probable condition of that of the blood.

I have now to point out an error into which people are very liable to fall—namely, to look upon the albuminuria of pregnancy, and pregnancy with albuminuria, as one and the same thing, while, in reality, they are perfectly distinct. When we speak of the albuminuria of pregnancy, we mean that the pregnant state induced the albuminuria, as was the case in the example first cited; whereas when we speak of pregnancy with albuminuria we simply mean that a woman during the period of her pregnancy has been attacked with kidney disease, as in the case last cited.

I have now to call attention to a third form of albuminuria and pregnancy—namely, that in which a patient already the subject of kidney disease becomes pregnant. This is not only a graver complication than the "albuminuria of pregnancy," but, as a rule, even more dangerous, both to the life of mother and child, than a case of pregnancy complicated with kidney disease. The following case, of which I can only give a very brief abstract, will illustrate this remark:—

The subject was a lady, aged 30, who I saw in consultation with Dr. Magrath, of Teignmouth, and to whom I am indebted for the patient's history. Her mother died of diseased kidneys at the age of 45. The patient herself was healthy until she suffered from frequent attacks of intermittent fever whilst abroad. During her first pregnancy her legs were noticed to be œdematous, but, as albuminuria was not suspected, the urine remained unexamined. Her delivery was followed by a convulsion, for which she was bled to sixteen ounces. During the second pregnancy and confinement, nothing remarkable was observed, but after the third delivery she was again seized with convulsions, which were on this occasion arrested with chloroform. In the early part of 1863 she again conceived, and almost immediately before or afterwards, was, while recovering from a catarrhal fever, seized with hemiplegia. In the following month she was seen by Dr. Brown-Séquard, and, under the free administration of tonics, with change of air, she gradually regained the power of her arm and leg. In August of the same year, shortly before I saw her, her face and hands were for the first time observed to be œdematous. The urine was of a specific gravity of 1020, and was not noticed to contain albumen. About this time she suffered from headache, vomiting, with stertorous breathing, and muscular twitchings during sleep. At the end of August, when I examined the patient, the specific gravity of the urine was 1014, contained a large quantity of albumen, coagulating to one-third of its volume, and with the microscope both blood corpuscles and renal tube-casts were detected. As the symptoms of uræmic poisoning continued to increase until the breath had a urinous odour, the induction of premature labour was had recourse to, during which she had a convulsion, which was arrested with chloroform. After this the patient made a slow recovery until October 24, when she was considered convalescent. The urine at this time was abundant, of a specific gravity of 1014, contained very little albumen, and only a few hyaline tube-casts.

On November 25 the quantity of urine was forty ounces, and the specific gravity 1021. Waxy tube-casts were still detectable.(d)

In this case, as in the preceding, the union of pregnancy and kidney disease must be looked upon as accidental. In the former the albuminuria supervened during the course of the pregnancy; in the latter, the pregnancy in the course of the kidney disease,(e) each being quite independent of the other. The distinction to be drawn between these cases and that first cited—namely, the albuminuria of pregnancy—is of the utmost importance both as regards prognosis and treatment; for while in the albuminuria of pregnancy it is to the pregnancy, and not to the kidneys, that we must look for relief, in the case of the kidney disease associated with pregnancy, as well as in that of the pregnancy associated with kidney disease, it is to the condition of the kidneys that we must specially direct our attention. The reason of this is easily understood when we remember that in the albuminuria of pregnancy the albumen rapidly disappears from the urine after delivery, whereas in the others the mere circumstance of delivery influences the albuminuria only in a secondary degree. The patient must be as carefully treated for diseased kidneys after the expulsion of the child as during its sojourn in the uterus.

As regards puerperal convulsions in cases of albuminuria, as far as my own experience goes—and I have nothing else to guide me—they are far more frequently the result of diseased kidneys than of the simple albuminuria of pregnancy. Convulsions, as we well know, frequently occur without pregnancy, and we cannot be surprised at their occurrence when pregnancy is superadded to the albuminuria. In the latter case the convulsive attack may be delayed until the time of delivery, or it may occur at any period of the pregnancy. There can be no doubt that albuminuria, from whatever cause, predisposes to epileptic convulsions, just as any other disease which impoverishes the blood, and thereby leads to malnutrition of the nervous system; for malnutrition of the nervous system is of all things the most fruitful source of epilepsy. In the second case cited we had ample proof of the impoverishing influence exerted upon the blood by albuminuria; and the absence of convulsions in it might probably be attributed to the circumstance that the blood had almost entirely regained its normal condition at the time of delivery.

That epileptic convulsions may occur in uncomplicated albuminuria in the predisposed I see no reason to doubt; and a well-marked case of this kind, which is briefly as follows, fell under my notice in 1851:—

A dark-complexioned woman, of moderate development, who had been for nine years a strumpet,—she was then 28—was admitted on April 28 into one of the wards under the charge of Dr. Halliday Douglas. She had a dull, languid, and waxy appearance. Her urine was albuminous, of a specific gravity of 1008, and for several days after admission averaged 100 ounces per diem. She said her illness began with dyspeptic symptoms eight months before, and that shortly afterwards she had a fit, which had since recurred about once in every three or four weeks. On May 11—that is to say, thirteen days after her admission—she had a fit which lasted an hour, and from then until she died—seven days later—she had one, two, or more every day. She died immediately after coming out of one. From the 11th to the 18th she was in a state of stupor, and was not easily roused out of it; but when awake she answered questions correctly. The urine fell from 100 to 50 ounces a-day during the last fortnight of her life. On post-mortem examination, the kidneys were found enlarged; one weighed six, the other five ounces; they were in a state of waxy degeneration. The woman had had syphilis. The capsule came off with difficulty; the texture of the organ was exceedingly firm, and of a pale colour. The separation between cortical and medullary sub-

(d) In a letter I received on October 10, 1865, regarding another patient, Dr. Magrath incidentally alludes to the above case, and says Mrs. —— "keeps very well; the condition of the kidneys seems stationary."

(e) Although there is no data by which the exact period when the kidney disease commenced in this case can be determined, yet when we consider the history as a whole, it appears not improbable that the renal affection was first induced in the predisposed constitution by the repeated attacks of intermittent fever, from which the lady suffered at the commencement of her married life.

stance was ill-defined. In the pyramids were several opaque points, which yielded a puriform fluid on pressure. When examined with the microscope, similar opaque points in the cortical substance were found to contain renal epithelium in all stages of degeneration, and numerous oleo-albuminoid granules.

Supposing this woman had chanced to become pregnant a month before she took ill, she would have been delivered just about the time she died, and her death would in that case have been most probably attributed to puerperal convulsions from albuminuria, whereas, as we here see, the pregnancy might in reality have had nothing at all to do with it. I do not wish it for a moment to be supposed that I ignore the influence of pregnancy, and more especially of the effects of delivery, in inducing convulsions in those otherwise predisposed to them.

All I desire is, to utter a strong protest against the oft-repeated statement that puerperal convulsions are always the result of the albuminuria of pregnancy, while in reality they are much more frequently the concomitants of true kidney disease, assisted by the effects of the puerperal condition, the chief cause of the convulsions being the retention in the circulation of the excrementitious urinary products.

It is of vast importance to both mother and child to be able to diagnose these cases; for while in the albuminuria of pregnancy, unless the symptoms be severe, the case may almost be left to nature, in pregnancy, associated with true kidney disease, energetic treatment is demanded, even, as we have seen, to the induction of premature labour; for even when the pregnancy does not end in convulsions it never fails to act prejudicially on the renal affection.

I would even go further, and say that pregnancy, in many cases, is one of the exciting causes, not alone of albuminuria, but of true kidney disease; just in the same way as cardiac and hepatic affections are—by keeping up renal congestion.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ON THE

ANÆSTHETIC AND SEDATIVE PROPERTIES OF BICHLORIDE OF CARBON, OR CHLOROCARBON.

By J. Y. SIMPSON, M.D.,

Professor of Medicine and Midwifery in the University of Edinburgh.

At different times I have inhaled the vapours of various fluids besides Sulphuric Ether and Chloroform, with the view of ascertaining their anæsthetic or other therapeutic effects. Several years ago I published some notes on the results obtained from breathing Chloride of Hydrocarbon, Nitrate of Ethyl, Benzin, Aldehyde, and Bisulphuret of Carbon. (See the *Edinburgh Journal of Medical Science* for April, 1848.) All these five fluids give off anæsthetic vapours, but in their manageableness and effects—and more especially in their after consequences—they appeared to me to be very inferior to either Chloroform or Suiphuric Ether. The same remark applies to other vapours which I have since tried, as those of Kerosolene, etc.

Lately I have inhaled and used a liquid the vapour of which seems to me to approach nearer in its quality and effects to Chloroform than any other anæsthetic agent. The fluid I refer to is one of the Chlorides of Carbon.

In describing the products of the action of Chlorine on one of the anæsthetic fluids mentioned above—namely, Chloride of Hydrocarbon, or Dutch Liquid—Mr. Fownes states (see his "Manual of Chemistry," seventh edition, p. 445) that three or four Chlorides of Carbon can be artificially made from Dutch Liquid by the abstraction of successive portions of Hydrogen and its replacement by equivalent quantities of Chlorine. He enumerates as belonging to this series – 1, Sesquichloride or Perchloride of Carbon (C_4Cl_6); 2, Protochloride of Carbon (C_4Cl_4); 3, Subchloride of Carbon (C_4Cl_2); and 4, Bichloride of Carbon (C_2Cl_4).

The last of these compounds—the Bichloride of Carbon—is the new anæsthetic which forms the special subject of the present observations. It was first, I believe, discovered by M. Regnault, in 1839. It has already received various appellations from various chemists, as Perchloroformene, Perchlorinated Chloride of Methyl, Dichloride of Carbon, Carbonic Chloride, Tetrachloride of Carbon, Superchloride of Carbon, Perchloruretted Hydrochloric Ether, and Perchloruretted Formene (see Gmelin's "Handbook of Chemistry," vol. vii., p. 355, and Watts' "Dictionary of Chemistry," vol. i, p. 765).

If it becomes, as I believe it will, for some medicinal purposes, an article of the Materia Medica, it will require to have a pharmaceutical name appended to it, and perhaps the designation of Perchloroformene, or the shorter term Chlorocarbon, may prove sufficiently distinctive. In its chemical constitution, Bichloride of Carbon, or Chlorocarbon, is analogous to Chloroform; with this difference, that the single atom of Hydrogen existing in Chloroform is replaced in Chlorocarbon by an atom of Chlorine, for the relative chemical constitution of these two bodies may be stated as follows:—

Chloroform = C_2HCl_3
Chlorocarbon = C_2Cl_4.

The Chlorocarbon can be made from Chloroform by the action of Chlorine upon that liquid; and Geuther has shown that the process may be also reversed, and Chloroform produced from Chlorocarbon, by treating it in an appropriate vessel with Zinc and dilute Sulphuric Acid, and thus exposing it to the action of nascent Hydrogen. The most common way hitherto adopted of forming Bichloride of Carbon consists in passing the vapour of Bisulphide or Bisulphuret of Carbon together with Chlorine through a red-hot tube either made of porcelain or containing within it fragments of porcelain. There result from this process Chloride of Sulphur and Bichloride of Carbon, the latter being easily separated from the former by the action of Potash.

The Bichloride of Carbon, or Chlorocarbon, is a transparent, colourless fluid having an ethereal and sweetish odour, not unlike Chloroform. Its specific gravity is great, being as high as 1·56, whilst Chloroform is 1·49. It boils at 170° Fahrenheit, the boiling point of Chloroform being 141°. The density of its vapour is 5·33, that of Chloroform being 4·2.

Besides trying the anæsthetic effects of Bichloride of Carbon upon myself and others, I have used it in one or two cases of Midwifery and Surgery. Its primary effects are very analogous to those of Chloroform, but it takes a longer time to produce the same degree of anæsthesia, and generally a longer time to recover from it. Some experiments with it upon mice and rabbits have shown this—two corresponding animals in these experiments being simultaneously exposed, under exactly similar circumstances, to the same doses of Chloroform and Chlorocarbon. But the depressing influence of Chlorocarbon upon the heart is greater than that of Chloroform; and, consequently, I believe it to be far more dangerous to employ as a general anæsthetic agent. In a case of midwifery in which it was exhibited by my friend and assistant, Dr. Black, and myself, for above an hour, with the usual anæsthetic effects, the pulse latterly became extremely feeble and weak. In another case in which it was exhibited by Dr. Black, the patient, who had taken Chloroform several times before, was unaware that the new anæsthetic was different from the old; her pulse continued steady and firm, although she is the subject of valvular disease of the heart. The Surgical operations in which I have used Chlorocarbon have been, the closure of a vesico-vaginal fistula, the division of the cervix uteri, the enlargement of the orifice of the vagina, and the application of potassa fusa to a large flat nævus upon the chest of a young infant. In all of these cases it answered quite well as an anæsthetic. The child did not waken up for more than an hour and a half after the employment of the caustic, which was used so as to produce a large slough. Its pulse was rapid and weak during the greatest degree of anæsthetic sleep. One of the mice exposed to its influence, and which was removed from the tumbler where the experiment upon it was made as soon as the animal fell over, breathed imperfectly for some time after being laid on the table, and then died.

Chlorocarbon, when applied externally to the skin, acts much less as a stimulant and irritant than chloroform, and will hence, I believe, in all likelihood be found of use as a local anæsthetic in the composition of sedative liniments.

In two cases of severe hysteralgia I have injected air loaded with the vapours of chlorocarbon into the vagina. The simplest apparatus for this purpose consists of a common enema syringe, with the nozzle introduced into the vagina, and the other extremity of the apparatus placed an inch or more down into the interior of a four-ounce phial, containing a small quantity—as an ounce or so—of the fluid whose vapour it is wished to inject through the syringe. Both patients were

at once temporarily relieved from the pain. The first patient told me her relief at the first application of the anæsthetic vapour was so long that she slept during the following night far more soundly than she had done for weeks previously.

The injection of the vapour of Chlorocarbon into the rectum does not prove so irritating as the vapour of Chloroform. In one case it removed speedily pains in the abdomen and back.

Chloroform vapour applied by sprinkling a few drops on the hand, and held near the eye, is one of the very best and most sedative collyria in some forms of conjunctivitis, ulcerations of the cornea, with photophobia, etc. I have not yet tried the vapour of Chlorocarbon, but perhaps it may answer still better, as less irritant, and almost as strongly sedative.

I have found ten or twenty drops injected subcutaneously by Dr. Wood's syringe repeatedly relieve local pains of the walls of the chest, abdomen, etc., without being followed by the distressing nausea so frequently the result of the hypodermic injection of preparations of Opium and Morphia.

Internally I have only hitherto tried it in small doses in gastrodynia, where it has the same effect as swallowing a capsule of Chloroform.

The specimen of Chlorocarbon which I have used was made by Mr. Ransford, who sent it down to Messrs. Duncan, Flockhart, and Co., of Edinburgh, under the idea that, by a chemical substitution, it might be converted into Chloroform, and make a cheap medium for the manufacture of the latter drug. And perhaps I may be permitted here to remark that the quantity of Chloroform used is now becoming very great, and possibly might be rendered greater if it could be produced at a still cheaper rate. We have two or three manufactories for Chloroform in this city. The chief of these manufactories for it—that of Messrs. Duncan, Flockhart, and Company—now make upwards of 7000 doses of Chloroform every day, counting two drachms as a full dose; they thus send out nearly 2,500,000 doses a-year. Are every two million and a-half full doses which are used of Opium, Antimony, Aloes, Epsom Salts, etc., attended with as little danger and as few ultimate deaths as these annual 2,500,000 doses of Chloroform?

CASES OF OVARIOTOMY IN PRIVATE PRACTICE.

By T. SPENCER WELLS, F.R.C.S.,
Surgeon to Her Majesty's Household, and to the Samaritan Hospital.

(Continued from page 572.)

Case 7.—Ovarian Tumour and Ascites—Prolapse of Uterus—Tapping—Ovariotomy—Recovery.

Dr. BRESLAU, Professor of Midwifery in the University of Zurich, wrote to me on June 25, 1865, to ask if I could go to Zurich to perform ovariotomy upon a Swiss lady, whose case he described as one of ovarian tumour surrounded by ascitic fluid. He had removed twenty-four pints of highly albuminous fluid from the peritoneal cavity the day before he wrote to me. After this fluid had escaped, a large tumour could be felt through the abdominal wall, and a cyst towards the right side of this tumour was then tapped, but only a little viscid mucoid fluid was evacuated. The girth, which before the tapping was 45 inches, was reduced to 39 inches, and the distance between sternum and pubes was also reduced from 26 inches to 20. Dr. Breslau had first seen the patient on February 7, 1865. The tumour was then central, the size of a uterus at the full term of pregnancy, and evidently composed of numerous cysts of various size. At that time the signs of pressure on the digestive and respiratory organs were but slight, and Dr. Breslau proposed ovariotomy, but it was declined by the patient and her friends. In the spring the growth increased rapidly, and fluid was effused into the peritoneal cavity.

The lady was 45 years of age. She had been married in 1848, and had three children. The eldest was 16, and the youngest 10 years old. She had never miscarried. The perineum was ruptured at the birth of the first child. She, however, had enjoyed good health until the autumn of 1863, when she became very melancholy and suffered from palpitation. She went to the baths of Pfeffers, and some months after her return, in December, 1863, the first indications of ovarian enlargement were noticed on the left side, with some symptoms of localised peritonitis. Uterine prolapse came on in the summer of 1864, evidently due to the pressure of the increasing tumour, and favoured by the old perineal rupture. At that time the tumour was about the size of a man's head, and growing from the left towards the right side, and it continued to increase. Menstruation had ceased in January, 1864. Before marriage the menstrual discharge had been very irregular and scanty, but after marriage it had been normal until 1863. The blood was then "very black and thick" for a time, but after the tumour began to increase it assumed the usual appearance.

Dr. Breslau wrote again on July 3 to inform me that the ascitic fluid had reformed rapidly after the tapping,—that the lungs and heart were still free,—that the urine contained no albumen, or only traces; that the prolapsed uterus was certainly not adherent to the ovarian tumour; and that, after returning the uterus, which was easily done, no part of the tumour could be felt by the vagina.

The result of this correspondence was that I went to Zurich and performed ovariotomy there on July 11, assisted by Professors Breslau and Billroth, Dr. Hirzel, Dr. Meyer, and Dr. Ris, who administered chloroform. An incision was commenced two inches below the umbilicus. Several pints of ascitic fluid escaped, and the incision was then carried downwards to the extent of eight inches. A large multilocular tumour was seen. It adhered extensively to the abdominal wall; but the adhesions were recent, and yielded easily to the hand, as did a piece of adhering omentum. As the tumour was elastic, a large trocar was passed into it, but its contents were too viscid to pass through the canula. I therefore opened the tumour, put my hand into it, and broke it up internally, gradually withdrawing it as the contents escaped. A small pedicle, which extended between three and four inches from the left side of a healthy uterus, was secured in a small clamp and kept outside without traction. After cutting away the tumour, a good deal of ascitic fluid and some gelatinous lymph was pressed out of the peritoneal cavity, and more was removed by careful sponging. The right ovary was *quite healthy*. The wound was united by eight deep silk sutures.

The ascitic fluid removed weighed 15½ Swiss pounds (of 500 French grammes), about 17½ ounces; the cysts and contents weighed 17¾ Swiss pounds; so that the whole was 43¾ Swiss or 48 English pounds.

Little need be said of the progress of the operation, as it was one of uninterrupted recovery. There was neither pain nor vomiting. No opium was given. There was free perspiration and plenty of urine. I left Zurich forty-four hours after the operation, the patient being in a most satisfactory state. Dr. Breslau wrote on July 20,—"No alarming symptom ever appeared. No medicine of any kind was given. The wound healed without suppuration. On the 15th I took away three sutures; on the 16th three others, and on the 17th the last suture and the clamp. The granulating surface of the pedicle, hardly the size of a franc piece, is cicatrising at the lower angle of the wound. The general state is excellent. Since the 18th the bowels have acted regularly; the urine is normal; the œdema has totally disappeared, and the appetite is excellent."

I heard afterwards that health was soon completely re-established, and the catamenia, which had been suppressed for eighteen months, returned on September 9 without anything unusual.

It would be ungrateful on my part if I were to conclude the report of this case without expressing my deep sense of the great kindness shown me in Zurich, not only by Professor Breslau, who undertook the after treatment of the case, and by Professor Billroth and the other gentlemen who assisted me at the operation, but by the members of our Profession generally in the town. Nearly all of them attended a supper, at which the President of the Canton presided, and I trust that some of them may see by this report that I have not forgotten their courtesy. I may, perhaps, also be permitted to mention—as it is an interesting illustration of Swiss customs—that the husband of the patient preached a thanksgiving sermon in his church on the Sunday after the operation. This sermon has since been published in Zurich, and it contains a very interesting dissertation upon the course to be pursued in moments of danger and critical situations of life, to the effect that it is wrong to neglect any of the means of safety placed within our reach.

Case 8.—Multilocular Ovarian Cyst—One Tapping—Ovariotomy—Recovery.

In May, 1865, a lady, 46 years of age, came to London to

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consult Dr. Budd, on account of supposed disease of the liver, who detected ovarian disease. She afterwards consulted Dr. Arthur Farre and Dr. Jenner, and by their advice I saw her on June 21. I was told that she had married in 1838, and had six children. Her husband died in 1849, and the youngest child was born three months after his death. She had spent twenty years in the West Indies, but had always enjoyed tolerably good health until October, 1863, when she was suddenly attacked with spasmodic pain in the epigastrium. A week later she was jaundiced. Since then other violent spasms had supervened. They were supposed to be due to gall-stones, but none of these had been passed. In the summer of 1864 the patient noticed that she was increasing in size, but it was at first supposed that this increase was due to fat. As winter came on the size increased. The catamenia, which had been regular since the birth of the last child, ceased. After Christmas, the general health rather improved, but the abdomen was more distended. In March the catamenia returned, and for the next three months recurred regularly, although at somewhat shorter intervals and in less quantity than usual.

Quite agreeing in the diagnosis at which Drs. Budd, Farre, and Jenner had all arrived, the question of ovariotomy was fully discussed, and the patient took time to consider it, and returned to the country. I saw her again on August 18 in consultation with Dr. Farre. The upper part of the tumour was much more fluctuating than before, and it was agreed that I should tap. I did so next day, and evacuated fifteen pints of dark fluid, leaving a moveable multilocular cyst which filled all the abdomen before the umbilicus. There were evidently no pelvic attachments. The patient recovered well from the tapping, and went on September 5 to Tunbridge Wells. She was very ill there, and returned September 26.

She felt pretty well till October 8, when she had violent epigastric pain. I saw her October 10. There had been a uterine discharge ever since the tapping. The abdomen was not so large as it was before the operation; but the patient was suffering so much that I performed ovariotomy on October 12, Drs. Farre, Ritchie, and Wright assisting me. Mr. Clover gave chloroform.

A 5-inch incision was made midway between the umbilicus and the pubic symphisis. A few slight adhesions to the parietes and to the omentum were easily broken down by the hand. I tapped two or three large cysts, then pushed my hand into the inside of the tumour, broke down masses of small cysts, and extracted the tumour without enlarging the incision.

The pedicle was as broad as two fingers; it was three inches long and sprang from the right side of the uterus. It was secured in the smallest-sized clamp, and kept outside without traction. One ligature was needed to suppress superficial hæmorrhage. The ends of the ligature were cut off short. The left ovary seemed healthy, except that it contained one cyst as large as a walnut, which I emptied of some dark fluid. The wound was closed as usual.

During the first three hours after the operation great pain was complained of, so that 180 drops of laudanum were given in all. Even then the pain was still severe; but the pupils were beginning to contract. Three hours later the pulse was 90, the skin warm, and the urine abundant. Twenty drops more of laudanum had been given, and the pain was easier.

The patient passed a good night, and next day was pretty well. Towards evening uterine epistaxis came on. Next day this discharge continued; the patient was in every respect going on well. The serous discharge round the clamp had softened the slough, and caused it to sink a little. On the third day the clamp came away. The slough was half an inch below the level of the skin, but seemed fixed there. Towards evening the patient was low-spirited, and required wine. She got ten drops of laudanum, which, with what had been taken, amounted to half an ounce since the operation. On the fourth day the expression was sunken, the pulse 96. There was a good deal of fœtid discharge from the stump. It was dressed frequently with iodised lint. I removed one stitch. Next day I took away the rest of the stitches, except one next the stump, which possibly was assisting in keeping it from sinking. Beef-tea and sherry were freely taken. On the sixth day the uterine discharge began to cease, and the catheter was discontinued. On the seventh day the patient was carried into another room. On the eighth day there was still some slough at the bottom of the wound; the pulse was 88. Next day I removed the last stitch. A little pus welled out of its track, and also out of that immediately above it.

From the tenth to the thirteenth days there was slow but gradual improvement. On the thirteenth, quinine was ordered. On the eighteenth, some pain in the left thigh, which had been complained of for two or three days, was relieved by rubbing with laudanum. From this to the twenty-eighth day the leg gave trouble. It was not much swollen, and there was no induration of the veins or lymphatics, but it was moved with difficulty and was often painful. From this time up till the end of the fifth week improvement steadily went on with the aid of quinine. The patient then returned to the country.

Dr. Ritchie described the tumour removed as follows:—

"The tumour consisted of one loculus as large as a child's head at four months of age, and of a mass of similar size composed of smaller cysts. There was nothing whatever remarkable about the tumour, which was a good type of the ordinary multilocular ovarian cyst. The smaller compartments were filled with gelatinous fluid (so-called colloid). The cyst wall was not very vascular. The fimbriæ of the fallopian tube were left attached to the external surface of the tumour The pedicle had evidently not included the round ligament."

Case 9.—Multilocular Cyst—Never Tapped—Ovariotomy—Vessels in Pedicle alone Secured—Recovery.

In August, 1865, I was asked by Dr. Allen, of Guiseley, near Leeds, to give an opinion as to the advisability of ovariotomy in a case under his charge. The patient was 53 years of age. She married in 1851, and after two abortions bore a child in 1852. Since then she had not been pregnant. The catamenia ceased about a year after the child's birth. They had previously been regular. The patient had always been a very healthy woman, until 1863, when she discovered a tumour low down on the right side of the abdomen. A year later she suffered from weakness in the left leg—a symptom which had annoyed her during her pregnancy. She came to London, and I saw her on August 22, and found that the abdomen was filled with a semi-fluctuating tumour, which reached to within two or three inches of the sternum, and extended as far on one side as on the other, and it was freely moveable, evidently not adhering. The uterus was in its normal situation, and freely moveable; the urine was rather scanty and high coloured. The pulse was feeble, and usually about 60. I gave bicarbonate of potash after meals, and iron, and recommended that ovariotomy should be performed later in the year.

The patient went home, and returned to town on October 21. For the previous fortnight she had suffered a good deal of abdominal pain, which had prevented her getting about as before. On examination per vaginam the uterus felt pretty closely connected with the tumour, and I added to my diagnosis:—"Unattached multilocular cyst, probably a short pedicle, on left side, or a small fibroid outgrowth from uterus on that side."

I performed ovariotomy on October 23, Dr. Allen, of Guiseley, Dr. Ritchie, and Dr. Wright assisting me; Mr. Clover gave chloroform. A five-inch incision was made midway between the umbilicus and the pubes. There were no adhesions. One large cyst was tapped, then a second through the first, and the tumour was withdrawn. The pedicle was secured in a small clamp, but as there was too much tension on the right broad ligament, I transfixed below the clamp, and tied with silk. The clamp was removed, and the pedicle immediately slipped through the ligature. Probably the clamp had kept the tissues from yielding before the ligature. I secured the vessels separately with two silk ligatures, and cut them off short, having previously removed the first ligatures. I could not feel the opposite ovary; it was probably atrophied. The wound was closed as usual. The patient recovered without a check; she walked about the room within a fortnight, and left for Leeds on the twenty-fifth day after the operation.

Dr. Ritchie described the tumour as follows:—"Twenty-two and a-half pints of fluid were evacuated. The tumour consisted of two sacs, each capable of holding an infant's head; and a third sac as large as a Normandy pippin. The two large sacs communicated by a puncture, which had evidently been made during the operation. The septum between the sacs in no place exceeded one-sixth of an inch in thickness. In some places it was no thicker than tissue-paper, and in one spot it was eaten through, having an aperture not much larger than a pin-hole. The outer walls of the sacs nowhere exceeded half an inch in thickness. The internal surface of the sac which was superior was smoothed and lined with tesselated epithelium, except just at its inferior extremity, where the epithelium was columnar and the feel velvety. The internal surface of the wall of the inferior sac was velvety and lined with columnar stratified

epithelium. In the wall itself were many minute cysts filled with slimy fluid. The wall of the apple-sized cyst was also lined with columnar epithelium, and contained numerous secondary cysts, some of them as large as a bean. The external surface of the tumour was smooth and, although very vascular, was unmarked by any traces of inflammation. The fimbriæ of the Fallopian tube and a small piece of broad ligament containing a cyst as large as a pea were adherent."

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

CASE OF BROKEN NECK—DEATH IN FORTY-EIGHT HOURS—CLINICAL REMARKS ON THE PROPRIETY OF OPERATION.

(Under the care of Mr. HULKE.)

The symptoms in the following case pointed to an injury of the spinal cord below the first dorsal nerve. No irregularity of the spine suggestive of fracture was discoverable during life. From a consideration of the desperate nature of these cases, of the possibility of compression of the spinal cord by a displaced portion of the body of a vertebra, and of the evidence we already have that exposure of the sheath, and even of the cord itself, but little increases the danger, Mr. Hulke proposed, with the concurrence of most of his colleagues, to remove the arches of the seventh cervical and first dorsal vertebræ, in order to take off counter pressure from the back of the cord, and thus put the patient in a more favourable condition for recovery. This proposal was declined by the patient because its success could not be absolutely guaranteed.

A carman, aged 46, was admitted into Clayton Ward at 1 o'clock a.m., July 23, having shortly before fallen out of a cart on his head. He had a scalp wound at the vertex which did not expose the bone; was semi-conscious. Pressure on the nape of the neck and between his shoulders made him cry out. His legs were paralysed; his respiration was abdominal; his pupils were dilated, and his pulse was laboured. 10.30 a.m.—Anæsthesia and motor paralysis as high as the ensiform cartilage; priapism; catheter used. 1.25 p.m.—Complete paralysis, motor and sensory as high as level of sixth costo-sternal joint; no reflex movement excitable; retching; respiration abdominal, jerking, every twelfth inspiration deeper; pulse 94. 7½ o'clock p.m.—Pulse 72; respiration 28 to 30; bronchial râle; skin of arms pungent; 11.30 p.m.—Asleep; face sweating; urine dribbling; half a potful drawn off.

24th, 2 to 4 o'clock a.m.—Great restlessness and urgent dyspnœa; rectum unconsciously emptied. 10 a.m.—Slight motor paralysis of arms, especially of left. 10 p.m.—Pulse 84; incoherent, but answers rightly when spoken to; swallowing difficult; bladder empty.

25th, 2 o'clock a.m.—Death from apnœa.

Post-Mortem Examination.—Fracture through the laminæ of the seventh cervical vertebra, separating the spinous process; laceration of the disc between the seventh cervical and first dorsal vertebræ; no displacement; a transverse linear ecchymosis on the front of the spinal cord, corresponding to the line between the two vertebræ; pulpiness and hæmorrhagic infiltration of the substance of the cord at this point. The hæmorrhage extended upwards and downwards for some distance in the tissue.

From these appearances it was concluded that at the time of the accident the upper had slid forwards upon the lower vertebra, and that the spinal cord had been bruised by the sharp angle formed by the upper and the posterior surface of the body of the latter. Whether this displacement immediately ceased, or whether it continued and was subsequently rectified, could not be positively learned. In the face of the positive symptoms during life, the absence of distortion at the post-mortem examination should not be allowed to weigh unduly against the propriety of operating.

UNIVERSITY COLLEGE HOSPITAL.

DIPHTHERIA—TRACHEOTOMY—RECOVERY.

(Under the care of Dr. WILSON FOX.)

We are indebted to Mr. John Williams for the notes of this case:—

On August 19, a child, aged 2 years and 3 months, was admitted to the Hospital with much difficulty in breathing. The mother said the child had not suffered from the diseases of childhood, and that he had been well until August 12, when he became restless, did not take food well, and could not sleep. Next day he had running at the nose, and on the 18th the difficulty of breathing began.

The child is somewhat ricketty; breathes with effort; slight recession of soft parts of chest; inspiration over back weak; cough paroxysmal; swallows without apparent difficulty; glands at angle of jaw enlarged; no discharge from ears; the tonsils, posterior pillars of fauces, and uvula are swollen and red, and a yellowish exudation is seen on them. To take ℞. ferri sesquichlor., mxx.; aquæ, ʒss., every three hours; tannin, ʒij.; aquæ, Oij., for inhalation every three hours; to take beef tea strong, and ʒj. of brandy every hour. The inhalation was given three times, and with apparent benefit, the breathing becoming easier after it; but difficulty of breathing and recession of soft parts of chest gradually increased. The child's face became dusky pale. He occasionally struggled for breath about nine hours after admission; then Mr. Mason, one of the House Surgeons, performed tracheotomy. The child was much relieved at once the operation was performed. No membrane was coughed up at the time, but simply a little bloody mucus. Soon after, he vomited, and in the vomited matter were bits of membrane.

The child took food well after the operation; was ordered some R. ferri sesquichlor., but would not take it.

On the 22nd urine contained a trace of albumen.

On the 24th the membrane had disappeared from fauces, and the parts were red and somewhat swollen only.

On the 26th the urine contained a trace of albumen and some hyaline casts.

On the 28th the child had improved so far as to be able to take some solid food, and he was ordered chicken, eggs, with milk and beef tea.

On the 31st the urine contained no albumen.

From September 1 the tube was taken out for several hours every day, and replaced in the evening.

Patient grew stronger and looked better until September 7, when he had an attack of broncho-pneumonia. Had two fingers' breadth of dulness at right base posteriorly. Was ordered a little carbonate of ammonia.

Next day dulness had disappeared, but sonorous and orbitant rhonchi heard over whole of chest.

He continued for several days getting weaker, refusing food, and vomiting what he took.

On the 16th was ordered pul. rhei.; pulv. sodæ carb., aā gr. ij., ms., and an alkaline mixture. His diet was also reduced.

On the 18th the wound was completely closed.

From the 21st he began to improve; rhonchi had become less, and breathing less hurried; and on 27th no rhonchus was heard in chest.

On that day (27th) slight converging strabismus of right eye was observed, which increased till October 2, when it became less marked.

On October 2 was ordered some ol. morrhuæ and iron.

From October 6, to go out every day for a couple of hours. He gradually became stronger, and on the 26th was sent to the All Saints' Convalescent Hospital at Eastbourne.

THE LONDON HOSPITAL.

SEVEN CASES OF TRACHEOTOMY, THREE OF WHICH WERE SUCCESSFUL.

[Communicated by Mr. WALTER T. COLMAN, late House-Surgeon.]

Case 1.—Henry F., a labourer, residing at St. George's-in-the-East, was admitted into the Hospital on July 26, 1864, under the care of Dr. Parker, suffering from albuminuria. He was attacked with great dyspnœa early in the morning of August 6, and was reported as being nearly suffocated. On the introduction of the forefinger into the throat the œdematous glottis could be felt. I performed the operation of tracheotomy at

once, which was accompanied with no difficulty. There was a small amount of hæmorrhage, which soon stopped, and he seemed to be greatly relieved. He lived thirty-six hours. The inhalation of steam was not adopted in this case, and he remained in the ward where he had been since his entry into the Hospital.

Post-mortem Examination.—The kidneys were granular, and there was fatty degeneration of the heart. The following is a description of the larynx, which was examined by Dr. Morell Mackenzie, of 13, Weymouth-street, Portland-place, W.:—The mucous membrane of the larynx was irregularly congested, and in parts highly œdematous. The right half of the epiglottis was greatly swollen, and the left sodden and puckered. The ventricular bands (false vocal cords) were much swollen, and on the right one there was a large hyperæmic patch. The vocal cords were but little affected, with the exception of slight denudation of the mucous membrane near their anterior insertion. There was a perpendicular incision through the third and fourth rings of the trachea in the median line. The interior of the trachea presented no signs of disease.

Case 2.—Esther S., aged 30, was admitted into the Hospital on September 4 with severe dyspnœa. The following is the previous history of the case:—She states that about three months ago she suffered from a great shock, which was due to her finding a woman in her house whom she thought to be dead. From this time she continued to be very languid and weak, but did not perceive anything wrong about her throat until Tuesday week last, when she felt pain during deglutition, and, to use her own expression, she states that "there was a sensation as if something was swollen in the gullet." She was treated by some chemist, who ordered her a gargle and linseed poultices to be applied externally, which relieved her. Two days afterwards—viz., on the Thursday—dyspnœa came on, which gradually improved until the Saturday, when it returned and became very urgent. The dysphagia also increased. Her own Medical attendant saw her, and ordered her an emetic, which was followed by an anodyne draught. The former acted well, but after this she felt worse, and about six o'clock on the Sunday morning the dyspnœa increased suddenly, as she describes it, by a spasm. She was then brought to the Hospital. The Resident Medical Officer, Dr. Woodman, gave her an emetic, but she gradually got worse. When I saw her, which was at eight o'clock, an hour and a-half after her admission, she was gasping for breath, and her face and lips were extremely livid. I performed the operation at once. There was very little hæmorrhage, and most instantaneous relief was given, after using a little artificial respiration by drawing the hands and arms above the head. She gradually became conscious, and the lividity soon disappeared. Four hours after the operation she was removed to a room in the attic, in which was a fire and an apparatus for generating steam invented by the engineer of the Hospital. The room being previously filled with the vapour, the temperature was kept up as nearly as possible to 70° Fah. by a thermometer which was placed in some part of the apartment. It should be stated that she was four months gone in pregnancy.

From Sunday up to the present time (September 8) she has not had a bad symptom, with the exception of slight cough, which troubles her very little. The day after the operation she commenced spitting up a profuse quantity of white frothy expectoration, with an intermixture of a brownish viscid substance, streaked with blood. It was much darker at first than it is now. The tube was removed yesterday morning, and she has breathed almost entirely through her mouth without any material difficulty. To-day a bread poultice was applied to the wound, which is surrounded with a slight reddish areola, and discharging a small quantity of healthy-looking pus. She has had a nourishing diet all through her illness, such as eggs, beef-tea, and milk, wine, and at times the mist. vini gallici.

10th. — Doing well; no bad symptoms; expectorates very much of the white, frothy-looking secretion streaked with blood. The temperature is still kept up to 70°. She eats well; pulse natural; tongue clean and moist; complains of soreness during deglutition, and is therefore still taking the fluid diet. Voice has been gradually increasing, and is almost perfect.

15th. — Progressing favourably; wound almost healed; poultice omitted two or three days since, and replaced by zinc dressing. Is going to have a chop for the first time to-day. Bowels regular, and she rests well.

She left the Hospital on September 24 perfectly convalescent, and has since been delivered of a healthy and living child.

Case 3. — F. W., aged 12 years, was admitted into the Hospital suffering from extreme burns in various parts of the body and face, together with the mucous membrane of mouth and throat, which were produced by the ignition of some explosive materials at a fusee manufactory. Combined with these injuries he had also a severe laceration of right leg close to knee-joint.

On the following evening after admission he had symptoms of dyspnœa and asphyxia, accompanied by those of acute laryngitis. Seeing that these increased, and he was rapidly sinking, I thought I might as well give him the only chance of recovery—although a very hopeless one—by performing tracheotomy, which I did, but he sank before I had completed the operation. After the tube was introduced artificial respiration was had recourse to, but to no avail.

The post-mortem was refused by the parents.

Case 4.—Henry B., aged 37, Bethnal-green, horse-keeper. The previous history of the case is, that about a month since—viz., about the end of September,—he was seized with rigors and pain in his limbs, followed by free perspirations, and accompanied by soreness of his throat, which continued up to the present time. He was relieved, very much, of these symptoms three or four days after the attack, and remained much better for a fortnight, when the soreness of throat increased, causing him great pain during deglutition, so that he could drink nothing but liquids, and this was accompanied by pyrexia. He gradually became worse, and on Monday night last (October 24) he was seized suddenly with dyspnœa between six and seven o'clock, which increased during the night, and he was sent to the Hospital by his Medical attendant on Tuesday morning. His employment compels him to get his clothes very wet. He states that he has had sore-throat previously, but not severely, and that he has also been accustomed to drink a great deal of spirits and beer at times, and has had jaundice twelve months since. I cannot ascertain any history of syphilis. At the request of Dr. Davies, tracheotomy was performed immediately after his admittance, at which time he was gasping for breath and had stridulous croupy breathing, with lividity of the lips and face. There was also fulness on the right side of neck, commencing at angle of jaw and extending to supra clavicular region, which was tender to the touch, and rather red in appearance. The pulse of right radial artery was very much smaller than that of left—insomuch so, that there was a doubt about his having a thoracic aneurism on that side, but no symptoms of such could be revealed by the stethoscope. The general circulation was very quick, and the skin bedewed with perspiration. Heart sounds very indistinct, but could detect nothing further. The operation was performed in the usual manner, and with very little difficulty. The hæmorrhage soon stopped after introduction of tube, giving subcutaneous relief, and he soon revived. The steam apparatus was then placed in the room, and the temperature as nearly as possible kept up to 70° Fahr., the apartment filled with vapour. He was then ordered wine ʒviij., milk, beef-tea, and eggs, which he took freely of at times. He went on very well, merely taking a gentle aperient when requisite, and on November 1 eat a chop for the first time. The tube was cleaned out by the nurse by means of a feather, but still I was obliged to remove it at times to wash out the thick tenacious gummy material which blocked it up. In a week or ten days after the operation the instrument was removed, and the wound in the trachea gradually healed, so that on November 9 we were able to stop the steam.

November 12.—Complains of want of appetite. I therefore ordered him misturæ quinine (gr. ½) ʒj. ter die. I have noticed for the last few days that the sputa has been streaked with blood, but as he did not complain of pain of thorax I did not examine his chest; but on doing so to-day I found that there was almost universal dulness on percussion on both sides of posterior surface of thorax and crepitation of left lung behind, but not in front. The respiratory murmur at left side of chest was inaudible at parts. Dr Davies saw him, and ordered tinct. iodini to be painted over dorsal regions of chest every other day and to continue with the quinine. He complained little of anything with the exception of profuse perspirations at times.

24th.—Has a little cough and spits up a great deal of rusty coloured sputa. The wine was increased to ʒxij. and liq. morph ♏v. was added to each dose of the quinine.

26th.—Complains of faintness at times. The respiratory murmur of right side seems to get much clearer, but there is no difference in that of left. He seemed to be progressing

favourably, and got up at times during the day; but during my absence one evening soon after this, he was seized with a fit, which, from the nurse's description, I should think was epileptic. My colleague, Mr. R. T. Grubb, late House-Surgeon, who was in at the time, saw him, but unfortunately he was dead before he arrived.

The *post-mortem examination* was made on the next day. The body was well nourished and muscular. Rigor mortis slight. Superficial veins of neck distended In the centre of neck was the cicatrix after the operation of tracheotomy. On opening the thorax the pericardium occupied its centre, and extended to the cartilages of the fourth, fifth, and sixth ribs. On opening this sac a large quantity of thick fœtid pus escaped, apparently about six or eight ounces. Both surfaces of the membrane were lined by a thickish layer of vascular lymph, which had a honey-comb appearance. The right lung was pretty healthy. At the lower part of the left pleural cavity was a local empyæma about the size of an orange, which had pushed the heart to the right side, and forming a cavity containing some thick pyoid material, the result of local pleuritis. Both kidneys were rather soft and pale. The liver was adherent by old adhesions to the diaphragm. It was also nutmeggy and soft. Bladder distended with urine and healthy. Brain healthy. On opening the larynx a cicatrix was visible over the anterior wall of cricoid cartilage.

Case 5.—E. H., a female, aged about 18 months, was admitted three weeks ago for fractured femur. She was seized on December 1 with symptoms of dyspnœa, accompanied by a croupy cough. Leeches were applied over trachea and larynx, and she was treated by vinum ipecac. This treatment gave her temporary relief; but she had a relapse of the dyspnœa, and it was thought advisable to perform tracheotomy, which was done on the morning of December 3. This gave her relief for a time; but she soon after became worse, and died eight hours after the operation.

Post-mortem.—There was inflammation, thickening, and œdema of the glottis. No œdema or reddening below the vocal cords. Lungs slightly congested. The femur had united.

Case 6.—Thos. J., aged 3*5*, was admitted into the Hospital on December 6, 1864. His symptoms were cooing inspiration and dyspnœa, which increased during sleep. Expiration was performed without any difficulty. He states that the disease had been coming on eighteen months or two years, and previous to the attack—about five months—he had a fit of apoplexy, followed by incomplete hemiplegia on the left side. By the laryngoscope, the vocal cords were seen to flap together during inspiration, and completely closed the glottis.

On January 23 he was seized with great asphixia. I saw him soon after, at the request of the Medical officer. His lips and face were becoming very livid. He was a man of spare habit, having very little fat on his neck, and, as the crus-thyroid space could be felt so distinctly under the finger, I thought it would be the best spot to perform the operation; but after cutting through the membranes I found the hole was not large enough to admit the tube, and therefore I divided the cricoid cartilage, and the instrument was easily introduced. There was a great deal of hæmorrhage, and he spat some clots through the mouth, but after a time this ceased without any trouble. He was then removed to the room where the steam apparatus was kept, and had stimulants administered at times, and seemed to be doing very well when I saw him the last thing at night. However, the nurse came to me about two o'clock the next morning, stating that he was much worse, and thought to be dying; and unfortunately before I could get to him he was dead. I used every means to obtain reaction, by artificial respiration, etc., but to no avail.

There is no doubt that this man had been dying for some time from asphyxia, although not noticed by the nurse who was either absent from the room or asleep, as I found the tube almost entirely out of the trachea, and filled with viscid mucus. The man was extremely livid over face and lips.

As Dr. Hughlings Jackson, who took great interest in this case, intends publishing it in detail, I have merely given the outlines of it, and have omitted the post-mortem examination.

Case 7.— Operation Performed for Croup.—The previous history of this case was given to me by Dr. Gayton, who attended the child before she came to the Hospital.

Mary Anne G., aged 4 years 8 months, was brought to his Surgery on January 18, 186*5*, at 6 p.m. She was a well-nourished and healthy-looking child, and bore little appearance of having recently suffered from whooping cough, which for the last three or four days has been very severe. When I first saw her there was great lividity of neck, face, and upper extremities; frequent, loud, and croupy cough, terminated by expectoration of viscid mucus; no râles were heard over the chest, but at the extreme left base there was some crepitation. Small doses of ant. pot. tart. were given every quarter of an hour, and hot fomentation and linseed poultices applied to the throat.

January 18, 10 a.m.—Getting rapidly worse. Continue the antimony, and give hyd. chlorid gr. ½ every hour and apply a small empyl. lyttæ to throat. She coughs much louder. Resolved to send her to the Hospital to have tracheotomy performed.

On her arrival, which was between 2 and 3 o'clock on the same afternoon, she was gasping for breath, her lips and face were very livid and bedewed with perspiration. I saw that no time must be lost in relieving the asphyxia, and therefore had her removed to the operating theatre at once, and performed the operation, which was very inconvenient on account of the blister; but, however, the trachea was quickly opened. There was some venous hæmorrhage, but this as usual soon stopped after the introduction of the tube. She was then removed into a separate room in the attic, which was well filled with steam by means of the apparatus used in the former cases; and the temperature was accurately noticed by a thermometer, which was placed at one end of the room, and was kept as nearly as possible to 70° Fah. Small doses of brandy-and-water were then given at intervals, and tr. opii., ♏iij., at bedtime. A small bread-poultice was applied to the raw surface occasioned by the blister, which looked very sloughy. The child was allowed to drink all the milk she could. The next day the brandy was omitted, and a small quantity of wine given instead.

21st.—Doing very well. Bowels not relieved. She is to take hydrarg. c. cretâ, gr. j. They were opened on the next day after a repetition of the powder. The tube was removed on January 2*5*, after which she partook of some solid food, such as light pudding and boiled mutton. From this time she had not a bad symptom, and the wound of throat soon healed up, as also did the blister.

It would be as well to remark that, generally in the evening, when I went to see her, I found the tube, although attempted to be cleared by the nurse many times during the day, was blocked up, and the breathing became very quick, together with a certain amount of lividity of the lips. I therefore took the instrument out every night, well washed it with warm water, clearing it of large lumps of tenacious gummy mucus, which almost entirely occluded the passage. It was then introduced, after being oiled, with little or no difficulty, giving great relief to the patient, and causing no injurious effects afterwards.

She left the Hospital about the middle of March perfectly convalescent, and able to talk as well as ever.

RECOGNITION OF MEDICAL SERVICES IN THE BERMUDA EPIDEMIC.—The *Gazette* of Friday, December 8, contains the following "General Order:"—"Horse Guards, S.W., Dec. 1, 1865. His Royal Highness the Field-Marshal Commanding-in-Chief notifies to the Army that her Majesty has approved of the promotion of Assistant-Surgeon Benjamin Burland, M.B., Royal Artillery, to be a Staff Surgeon, in consideration of his highly meritorious services rendered during the epidemic of yellow fever in Bermuda.—By command of his Royal Highness the Field-Marshal Commanding-in-Chief, WILLIAM PAULET, Adjutant-General."

AN Assistant-Surgeon has printed and circulated a pungent appeal to the members of the House of Commons on the condition of the Army Medical Department. The facts and arguments adduced by the author, however, are weak, compared with the practical summary of the statistics of the Department, which he thus gives:—"*Army Surgeons.*—Return to an Address of the Honourable the House of Commons, dated May 22, 186*5*, for 'returns of number of Assistant-Surgeons at present in Her Majesty's Service, exclusive of the Indian Army; and of number of Assistant-Surgeons promoted to the rank of Surgeon during the last three years, specifying the number in each year.'—HARTINGTON, War Office, May 2*5*, 186*5*. Return showing number of Assistant-Surgeons at present in Her Majesty's Service, exclusive of Indian Army. (738.) Return showing number of Assistant-Surgeons promoted to the rank of Surgeon during the last three years:—Year ending March 31, 1863, 16; year ending March 31, 1864, 19; year ending March 31, 186*5*, 20. Forty years an Assistant-Surgeon!!!—(simply)—no promotion."

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Medical Times and Gazette.

SATURDAY, DECEMBER 16.

THE CATTLE PLAGUE AND DISEASED MEAT.

What is the price that a meat salesman or a butcher will give for a passable carcass of a plague-stricken cow? The public and the Profession are somewhat interested in this question, and a ray of light was thrown upon it at the last meeting of the Cattle Plague Commissioners, when the officers of the vestry of Islington were placed under examination. If consistency be not in itself a virtue, this rank cannot be denied to sincerity, of which consistency in action is the outward and visible sign; and, on hearing the evidence given last Thursday, we could not avoid comparing with it the lament of Dr. Letheby in a recent report to the Corporation of the City of London over the large number of diseased carcasses which find their way into the dead meat markets. It appears that for some time past the Corporation has set apart a special slaughter-house at the Metropolitan Cattle Market into which none but beasts suffering from cattle plague are received, and to all appearance the arrangements there are adapted for the slaughter of animals whose hides are to be disinfected and whose carcasses are destined to go straight off to the boilers. This slaughter-house is placed under the direction of Mr. Tegg, an officer of the Corporation, whose duty it is to prevent the sale of diseased beasts in the market, and who has also been empowered to act as an Inspector of Cattle under the orders in Council.

Some time ago, also, the Vestry of Islington, in which parish the cattle market is situated, appointed a Veterinary Surgeon as an inspector of cow-sheds and slaughter-houses, who was also armed with powers to carry out the Privy Council orders, but the principal charge of this officer was to guard the good people of Islington against the chance of eating sirloins from off the carcasses of the beasts at that time dying by hundreds in their cow-sheds. He very naturally considered that he had performed this part of his duty effectually when any diseased cow was sent to the Corporation slaughter-house, until at last it came out that the owners of two cows thus disposed of had received the one five pounds and the other six pounds ten for the carcasses. Now, everybody knows that the price given by a knacker would be just about the value of the hide, and hence arose a very plain inference, and one which a subsequent inquiry appears to have justified. Some one at the Corporation slaughter-house thought the meat good enough for the butcher, or not bad enough to warrant destruction. It was passable, and somebody passed it. And this is what Mr. Murray told the Commissioners. How many more diseased carcasses have been similarly passed no one but the persons engaged on the spot, we suppose, knows; but we have in these two transactions the data for a reply to our question. The carcass of a Dutch cow, "sinking the offal," weighs somewhere about 80 stones, or 640 lbs., and hence the selling price of a presentable carcass, killed because pestiferous, is somewhere about one penny three farthings or twopence per lb. We hear of "second-rate" beef selling in Newgate Market at fourpence per lb.; so now the public may learn, first, what the "second-rate" meat consists of, and next from what source some of it is derived.

This is as the matter stands at present. It remains for Mr. Tegg to explain or to deny the occurrence. We have heard of meat inspectors who habitually pass diseased meat so long as it exhibits no external evidence of its source, regarding tolerably good-looking meat, in any case, as fit for human consumption. Perhaps this is Mr. Tegg's view; or perhaps, after all, Mr. Tegg knew nothing about what was going on at his slaughter-house, and these indecencies (to use the mildest term) were committed in direct contravention of his orders. Perhaps Mr. Tegg is overworked, and was so at the outbreak of the disease in June. In the latter case the Corporation would do well to find him an extra staff of assistants whose notions about wholesome meat correspond a little more closely with those of their Medical Officer of Health and the public at large.

THE SCIENTIFIC INVESTIGATION OF DISEASE.

The Royal Commission on Contagious Diseases in the Army, or as it is shortly named, "the Venereal Commission," has recently completed its labours. It has, we believe, closed its sittings so far as the taking of evidence is concerned, and has now only to finish and settle its report. The Royal Commission on the Cattle Plague has done good work, and is still diligently continuing its inquiries. Government is, we trust, prepared to send able scientific and diplomatic representatives to the Cholera Congress of the Emperor of the French, and a Royal Commission of our own on cholera is spoken of, and will, we hope, be appointed. Such a Commission would not in the least interfere with, or be rendered superfluous by, the labours of the Cholera Congress, but, on the contrary, might be expected to give us a very valuable supplement and complement to its work.

No one will think that there is in all this one bit too much of Government aid to Medical inquiry, though there is so much more than is usual. A Government Commission may be thought to be a rather expensive means of collecting evidence; that on venereal diseases will, we believe, cost the country between two and three thousand pounds; but the money is well spent. Most valuable evidence can thus be most effectually obtained concerning the history of diseases, on their rise, march, and progress, on modes of communication, on the effects of measures of prevention and restriction, on morbid appearances, and, broadly, on their symptoms and the effects of remedies and systems of treatment; and the reports of such Commissions carry an authority and weight not to be equalled by any other method of investigation. Let us then, by all means, have Royal Commissions to help us in our investigations into disease; we shall gladly accept and avail ourselves of their aid. But is this all the assistance that Medicine has a right to expect from a wealthy and "enlightened" Government? We think not, and we have read with much pleasure and profit a valuable pamphlet just published on this subject by "A Fellow of the Royal Society and of the Royal College of Physicians."(a) This expression must not be taken to mean that the pamphlet mentioned is wholly or chiefly on the subject of Government aid in the investigation of disease, for this is only incidentally considered, while the chief purpose of the author has been to enlighten the public a little on the value and the need of scientific investigation of disease, to instruct them somewhat in the meaning of the phrase "scientific investigation," and

(a) "On the Scientific Investigation of Disease in Animals and Man." By a Fellow of the Royal Society and of the Royal College of Physicians. London: Harrison, Pall-mall. Pp. 15.

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to tell them what it implies. He has performed the task he set himself most ably, and the instruction was most woefully needed, for the ignorance on the subject is as widespread and general as it is dense; and more than that cannot be said. We shall not attempt to reproduce his arguments here, because we trust that the pamphlet itself will be generally read, and because members of our Profession are already well aware both of the inestimable value of real unbiassed scientific inquiry and of the difficulties that surround it. The writer we believe to be a well-known Physician, who has won for himself no little fame and reputation as an untiring and successful worker in the field of science, one who has thereby well earned the right to speak on the subjects of which he treats. We earnestly hope, therefore, that this little production of his will be generally read by the public. Would that the informing and guiding spirit of that wonderful journal—wonderful alike for its knowledge and its ignorance, its liberality and its narrow-mindedness—the so-called leading organ of public opinion, would that it could be inoculated with the "germinal matter" of the pamphlet! After explaining what a "scientific investigation of disease" really means, how difficult and laborious it is, and how it must often be carried on for a long time without any apparent success, the writer considers how such investigations can be best carried on, and how the fitting men are to be induced to undertake them; and he suggests that Government ought to make grants of money annually for the purpose, in the same spirit as the Royal Society and the British Association make yearly grants for scientific inquiries. "Grants would not only enable men to enter upon expensive inquiries which they could not otherwise undertake, but would excite a taste for purely scientific inquiry in younger men. I daresay that of a great many grants made, few would be productive of results; but it seems to me that if, out of twenty men set to work, only one produced anything of value, this would be sufficient to prove that the system was successful. In the case of guns and ships, how very much we are compelled to spend upon mere failures. I am only pleading for the expenditure of a very small annual sum upon the scientific investigation of disease of the utmost importance to the public—say £5000, in grants of from £50 to £200 to different individuals; and I think that if this sum, or as much of it as might be applied for, were voted annually, very satisfactory results would be apparent in the course of a few years." We think most of those who understand really anything about the matter will agree with the author, and will allow that it is but a small thing that is asked of Government. On one other point, too, we thoroughly agree with the writer—viz., in his lament that "there is not yet a Hospital in London in which there are efficient means for conducting scientific inquiries into the nature of disease." We believe with him that were there "well-arranged laboratories and workrooms in our public Hospitals, and qualified officers to do the work," in the course of time "the gain to Medicine, and indirectly to the public, would be enormous." The expense need not be great, and such Hospitals as St. Bartholomew's, Guy's, and St. Thomas's could not do better than devote, and could well spare, a portion of their magnificent incomes to such a purpose.

The work of "scientific investigation of disease" has been hitherto left to individuals, who have laboured on unaided for the sake of science and truth; and such men—among whom the writer of this pamphlet, we believe, holds a distinguished position—will no doubt still work on, though no helping hand should be held out to them; but that, and the fact of their having done the work nobly and right well, can be no excuse for a Government looking on with folded hands, leaving the work to be so done in these days.

THE *Gazette* of last week contained the resignations of two Assistant-Surgeons, one of whom possessed six years' service in the Army Medical Department.

DOCTRINES OF MODERN CHEMISTRY.

No. VII.

WE hope we have by this proved to our readers these points. Firstly, that the *atomic proportional weight* which the chemist attached to a body is the expression of the remarkable law, concerning its properties as compared with those of others, that in all the transformations into which it enters its quantity when estimated by the same standard throughout is of a constant weight, once or more multiplied; and, secondly, that in consequence of a greatly enlarged knowledge of facts, the atomic numbers for some time past in use require a certain modification, in order to make them true expressions of this fundamental law.

To render the old numbers for the atomic weights true expressions, the alteration required is very simple. *Double* every one of them, except those for the atomic weights of hydrogen, nitrogen, chlorine, bromine, iodine, phosphorus, boron, potassium, sodium, lithium, and silver, besides a few others to us of little importance. Bearing in mind that the atomic numbers serve to express proportions or *ratios*, our readers will at once perceive that if we were to *halve* those of the preceding eleven or more elements, instead of doubling all the others, our end would be accomplished by a much smaller number of alterations. It amounts to the same thing, but by the latter method our standard atomic number, that of hydrogen, becomes ½ instead of 1—a result which is undesirable. Having made this simple alteration in the old atomic numbers, we get a series which, *without exception*, so far as we know, expresses better the atomic relations of bodies. Imperfect, indeed, these numbers still are, even with this alteration, but less so in every case than they are without it.

The Physically-Related Proportions of Bodies.—The Identity of these with the Proportions Chemically-Related.—In a former article we have said that not only are bodies proportioned to each other by weight in the manifestation of their chemical properties, but also in that of their physical properties; that bodies, in fact, appear to be naturally proportioned to each other. It is only in a very summary manner that we can notice the proportional relations of bodies in physical properties.

Atomic Volumes.—Let us first notice the relation of the gaseous volumes of bodies. It is found, then, that the *elastic force* of all bodies which can be examined in the gaseous or vaporous state is such that equal measures, compared under similar conditions of temperature and pressure, contain quantities of them having proportions to each other which are either identical with those in which they react chemically, or which are some simple multiples or sub-multiples of them. Gerhardt asserted that with compound bodies these proportions are always actually identical. In other words, that the quantities of compound bodies which enter into reaction with each other all measure alike in the state of gas or vapour. There seem to be no real exceptions to this assertion.

We refrain, for the present at least, from noticing any of the plausible theories by which Gerhardt's law may be extended to the few elementary bodies known in the gaseous or vaporous state. However, whilst the volumetric relations of compound bodies are undeniably in favour of the new atomic weights, those of the elementary bodies are at least as much in favour of the new as of the old ones. If our readers were to name the different gases or vapours which they can remember, they would probably mention among them almost the only important instances of compound bodies which have, according to the old atomic weights, volumes only half those of others, —namely, water, sulphuretted hydrogen, and ether. The chemical analogy of sulphuretted hydrogen to water is universally admitted; and we have already shown that all arguments based on the chemical properties of water and ether go to show that the quantities of these bodies entering into reaction are double those represented by their old formulæ.

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Now double them, as is done in the new system, and these bodies no longer have half volumes, but fall into place along with thousands of bodies having all the same volumes.

Atomic Heats.—If we examine bodies as to their *specific heats*, we shall find that weights of the solid elements having the same capacity for heat are related to each other almost in the same proportions as those in which they combine. For instance, it takes the same amount of heating to raise the temperature of 56 lbs. of iron one degree as it does to raise that of 200 lbs. of mercury one degree, of 196·6 lbs. of gold, or of nearly 32 lbs. of sulphur. The numbers 56, 200, 196·6, 32, express, also, the proportions of the chemically-related weights of the respective bodies. A body in the gaseous state has not the same capacity for heat that it has in the solid state, so that solid and gaseous bodies are not comparable in regard to this property; but just as the solid elements are related among themselves, so do we find are the gaseous elements among themselves, in this respect. The "atomic heats" of compound bodies are not the same as those of the elements, but similarly constituted compounds have in many cases the same capacity as each other for heat, in their chemically-related quantities.

With nearly all the elements the capacity-for-heat proportions are to a small extent wanting in coincidence with the chemically-related proportions, and in a few cases to a great extent. It is important, however, to remember that the capacities of the elementary bodies for heat indicate, without exception, the new chemical atomic weights rather than the old. For instance, the quantity of oxygen having the same capacity for heat as a given quantity of hydrogen, weighs *sixteen*—not *eight*—times as much.

Space forbids our dwelling on the somewhat complex relation of bodies known as *isomorphism*. As our readers are aware, isomorphism is the identity in crystalline structure of bodies having similar chemical properties. Let us refer, for the sake of illustration, to the familiar fact of the similar crystalline structure of *Epsom salt* and *white vitriol*, through which has often resulted the use of the one in mistake for the other. These two bodies are formed of the same elements in the same proportions, only that instead of twenty-four parts of magnesium in the one body we have sixty-five of zinc in the other. Now, twenty-four and sixty-four (twelve and thirty-two and a-half in the old system) are the chemically related weights of these bodies; so that in the same proportions zinc and magnesium are related both by their chemical properties and by their properties of producing with other bodies like geometrical figures. But we must leave this subject.

We have only now to remark concerning the change of the old atomic weights into the new, that not only do the relations of the chemical properties of bodies require it, but also those of their physical properties, elastic force, capacity for heat, geometrical figure, and others not here dwelt upon.

Before leaving for good the subject of atomic weights, it will probably interest our readers if we say a few words concerning the atomic weights of mercury and the formula of its oxides and chlorides. The composition of these bodies by weight is as follows:—

	Mercury.	Oxygen.
Red oxide of mercury	400	16 in 416 parts.
Black oxide of mercury	200	16 in 216 ,,
	Mercury.	Chlorine.
Corrosive sublimate	200	71 in 271 parts.
Calomel	200	35·5 in 235·5 ,,

They have been formulated in three ways:—

	I. In accordance with Ph. Lond.	II. In accordance with Brit. Ph.	III. According to the New Views.
Red oxide	HgO_2	Hg O	Hg O
Black oxide	HgO	Hg_2O	Hg_2O
Cor. sublimate	$HgCl_2$	Hg Cl	Hg Cl_2
Calomel	HgCl	Hg_2Cl	Hg Cl or Hg_2Cl_2

The result of the study of the combinations of most of the metals with oxygen indicates the correctness of the proportions which the majority of chemists of the old school have long held to exist between their atomic weights. These views have been adopted in the British Pharmacopœia. The views adopted in the last London Pharmacopœia, that red oxide of mercury is differently constituted to the oxide of lead (litharge), black oxide of copper, lime, etc., are probably held now by scarcely any chemist, so that we may say that all chemists agree that HgO (as in way III.) is the best symbolic representation of the chemical properties of red oxide of mercury, and their relations to those of its elements. The formula Hg_2O for the black oxide follows almost necessarily from this for the red oxide.

With regard to corrosive sublimate, there is much reason, in the opinion of chemists, for regarding the chlorine in it to be in two portions instead of in one, so that, taking the atomic weight of chlorine to be thirty-five and a-half standard parts, there are two atoms of chlorine to one atom of mercury of two hundred parts; rather than one atom of chlorine to one atom of mercury of only one hundred parts. The substance *mercuric methide*, which has obtained some notoriety in the scientific world, as having somewhat recently been unhappily the cause of the death of two chemists in London, is one that may be adduced as furnishing evidence by analogy as to the chemical constitution of corrosive sublimate. This virulent mercurial poison—a combination of methyl with mercury, is of analogous constitution to corrosive sublimate, and its chemical relations point unmistakably to the fact of its containing two atoms of methyl to one of mercury. By analogy, therefore, corrosive sublimate ought to contain two atoms of chlorine to one of mercury. To enter into details would lead us too far into the domain of facts which we may safely assume are unknown to most of our readers. However, independently of this, the formula $HgCl_2$ is required on all the strong grounds which, as we have endeavoured to show, exist for doubling the atomic weights of oxygen and most of the metals while leaving those of hydrogen, chlorine, etc., unchanged. The formula of calomel depends upon that of corrosive sublimate. Whether it is HgCl or Hg_2Cl_2, either of which it may be, it is difficult to decide.

For further information on the subject of atomic weights we refer our readers to the articles on them in Watts' "Dictionary of Chemistry," by Dr. Odling, of St. Bartholomew's Hospital,—articles to which we ourselves are greatly indebted. As philosophical essays, they are hardly to be surpassed.

THE WEEK.

ON "BUNKUM" AND THE NEW METHOD OF CURING DISEASE BY "THE PREVENTION OF THE CONTAGION OF IT."

THE *British Medical Journal* has published a rather angry and amusing article upon the letter of a "Hospital Surgeon," on the subject of the cattle plague, which appeared in the *Times*. Our contemporary seems singularly incensed against the "Hospital Surgeon" because he has recommended that we should study "the natural history of the disease," and then try the effects of some "single therapeutic agent—say *alcohol*." This latter word always seems to excite the ire of the *British Medical Journal*. Does the *Journal* disapprove of the use of alcohol as a medicine, or as a beverage? or does it regard it as too good a thing to waste on cattle? "Humble inquiry into natural phenomena" is surely a very harmless, inoffensive expression, but it is denounced as a piece of "Bunkum." And, after much more in no friendly strain, which charity leads us to ascribe to irritability resulting from a severe attack of gout or some other unpleasant source of constitutional irritation, the writer of the article concentrates its diffused wisdom in the following marvellous and comprehensive passage:—"*The only cure of the disease is the prevention*

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of the contagion of it." This great truth, says the *Journal*, is proclaimed by science and experience "as plainly as they can speak"!!

THE COMMISSION AT THE ADMIRALTY.

In our article of last week we should have said that as many Army Medical officers had been examined as was deemed necessary, for the examination of the Naval Surgeons has been going on very actively, we understand. We quite agree with our various correspondents that it will be a great pity if the main points be lost sight of by being enveloped in questions about rank. The members of the Medical Departments ought to possess independent control and authority in their Hospitals, and they must occupy a position due to officers and gentlemen in military and naval mess-rooms. But this is far from being all. 1. The Assistant-Surgeons of the British Army must be placed on the same footing as those of the Indian Army—viz., promotion to the rank and pay of Surgeon after twelve years. 2. An increased pecuniary remuneration for the upper ranks. We think an Assistant-Surgeon, after twelve years' service, at least is entitled to the rank of Surgeon, and the pay of 1*l.* per diem. 3. An optional retirement at twenty years upon some terms fair to the Medical officer and the public. A young man upon entering is fairly remunerated at 10s. a day, and it would be a cause of dissatisfaction to the seniors, and a remote cause of grumbling among the junior officers themselves, if they discovered that they had been tempted by a pecuniary bait at the onset into a service which failed to offer a progressive increase.

While we recognise the principle of rewarding Medical officers for meritorious services as right and good, we must say that we think it unjust to do this at the expense of other equally good, perhaps, but less fortunate, men of longer service. So that the reward for merit really comes from the Government, it is a capital thing; but if a man be passed over the heads of hundreds to fill a vacancy which should fall in due course to his senior, it is only robbing Peter to pay Paul. There are some 150 Assistant-Surgeons of over ten years' service, some of whom have been through the Crimean campaign; and if the vacancies be only twenty per annum, and these vacancies be filled up by their juniors for meritorious services, patient merit can have but little chance. Let there be a supernumerary list for Medical officers promoted for distinguished services. If the Commission be really in earnest, a post in our public services will be as much sought after by Medical men as the other branches are; but then the Naval and Military Departments must be placed on a parallel, and a better footing than heretofore.

VOTING BY PROXY.

The following information, compiled with some considerable amount of labour, will, no doubt, be found of great interest to the Fellows of the Royal College of Surgeons, particularly to those gentlemen who have obtained the honourable distinction after severe examinations. There is no doubt but that the Fellows by examination are those who take the deepest interest in the affairs of the College. They show this by their attendance at the annual elections. One journey *per annum* to look especially after the affairs of their own College is not too great a tax upon them. It is out of this body that the Surgeons of the future must come—the Hospital Surgeons and Lecturers of the coming generation. They now fear that the attempt made to give the power of voting by proxy to all Fellows may lead to mischief. They fear that the men who show little or no zeal, and who do not come up to give their influence in person, may, under the proxy system, delegate their power to mere canvassers for the return of a favourite candidate. We are not saying one word against the system of making Fellows by election. The Fellowship so obtained is a sign of *good* fellowship, of character and repute; and we will say, let a senior Practitioner have it without the bore of an examination. But in all justice do not let us ignore the younger men, who *must* pass the examination as a passport to Surgical office. It is well known that the agitation for voting by proxy emanates from the British Medical Association, a body consisting of 2394 members. Of this number 375 are Fellows of the College of Surgeons, 95 having obtained the honour by examination, and 279 being honorary and elective. Of the former who voted at the last election there were 58—more than half; of the latter only 77—little more than a fourth. Consequently there were 241 who did not attend—viz., only 39 of the F.R.C.S. by *examition*, and as many as 202 of the F.R.C.S. by *election*. This will show, as already stated, how little interest the Fellows by election take in the affairs of the College. The following table will explain itself, and will be found useful as a work of reference;—

Return relating to Election of Fellows into the Council of the Royal College of Surgeons of England.

Counties.	Members of the Brit. Med. Assoc.	Fellows of the R. Coll. Surgeons.	Fellows by Examination.	Fellows by Election.	Fellows by Exam. voting.	Fellows, Hon., voting.	Fellows by Exam. not voting.	Fellows, Hon., not voting.
Bedfordshire	21	2	1	1	1	—	—	1
Berkshire	23	4	1	3	—	—	1	3
Bucks.	26	1	—	1	—	—	—	1
Cambs.	37	7	2	5	1	—	1	5
Cheshire	49	6	—	6	1	—	1	5
Cornwall	22	2	—	2	—	—	—	2
Cumberland	6	1	—	1	—	—	—	1
Derbyshire	42	8	1	7	—	1	1	6
Devonshire	68	7	1	6	—	1	1	5
Dorsetshire	14	1	—	1	—	—	—	1
Durham	38	7	—	7	—	1	—	6
Essex	23	—	—	—	—	—	—	—
Gloucestershire	107	18	4	13	—	3	4	11
Hants	39	7	2	5	1	1	1	4
Herefordshire	8	1	—	1	—	1	—	—
Herts	20	4	1	3	1	1	—	2
Huntingdonshire	13	2	1	1	—	1	1	—
Kent	129	18	3	15	1	6	2	9
Lancashire	214	32	3	29	2	3	1	26
Leicestershire	34	3	—	3	—	3	—	—
Lincolnshire	46	5	1	4	1	—	—	4
Middlesex	316	104	45	59	38	35	7	24
Monmouthshire	7	1	—	1	—	—	—	1
Norfolk	29	6	3	3	1	—	2	3
Northamptonshire	44	9	1	8	1	1	—	7
Northumberland	17	2	—	2	—	—	—	2
Notts.	25	1	—	1	—	—	—	1
Oxfordshire	7	—	—	—	—	—	—	—
Rutland	1	—	—	—	—	—	—	—
Shropshire	78	11	2	9	1	1	1	8
Somersetshire	101	12	6	6	1	—	5	6
Staffordshire	37	3	1	2	—	—	1	2
Suffolk	52	7	2	5	—	—	2	5
Surrey	70	14	4	10	3	7	1	3
Sussex	52	11	—	—	2	2	2	5
Warwickshire	141	15	—	15	—	4	—	11
Westmoreland	1	—	—	—	—	—	—	—
Wiltshire	22	2	1	1	—	1	1	—
Worcestershire	45	6	—	6	—	1	—	5
Yorkshire	152	25	5	18	2	2	3	16
Anglesey	2	—	—	—	—	—	—	—
Brecknockshire	3	1	—	1	—	—	—	1
Carmarthenshire	6	2	—	2	—	—	—	2
Carnarvonshire	2	1	—	1	—	—	—	1
Denbighshire	18	2	—	2	—	1	—	1
Flintshire	14	1	—	1	—	—	—	1
Glamorganshire	20	1	—	1	—	—	—	1
Montgomeryshire	11	1	—	1	—	—	—	1
Pembrokeshire	1	—	—	—	—	—	—	—
Radnorshire	2	—	—	—	—	—	—	—
Islands	5	1	—	1	—	—	—	1

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Counties.	Members of the Brit. Med. Assoc.	Fellows of the R. Coll. Surgeons.	Fellows by Examination.	Fellows by Election.	Fellows by Exam., voting.	Fellows, Hon., voting.	Fellows by Exam. not voting.	Fellows, Hon., not voting.
Aberdeenshire	5	—	—	—	—	—	—	—
Argyleshire	1	—	—	—	—	—	—	—
Ayrshire	1	—	—	—	—	—	—	—
Banffshire	1	—	—	—	—	—	—	—
Dumfrieshire	3	—	—	—	—	—	—	—
Edinburghshire	21	1	—	1	—	—	—	1
Fifeshire	5	—	—	—	—	—	—	—
Forfarshire	3	—	—	—	—	—	—	—
Kincardineshire	1	—	—	—	—	—	—	—
Lanarkshire	15	1	—	1	—	—	—	1
Morayshire	2	—	—	—	—	—	—	—
Perthshire.	2	—	—	—	—	—	—	—
Ross-shire.	1	—	—	—	—	—	—	—
Ireland	23	—	—	—	—	—	—	—
Foreign countries	37	—	—	—	—	—	—	—
	2394	375	91	272	58	77	39	202

Since the foregoing was written, we understand that at a meeting of the Council of the College yesterday evening, the whole affair was again discussed, and after a lengthened and mature consideration the memorial from the British Medical Association was rejected. This decision will, of course, give considerable annoyance to two of our contemporaries; but to all taking a proper interest in the affairs of the College, the result will be hailed with considerable satisfaction. There is no doubt that a memorial which had only been two days ago prepared and signed by both provincial and metropolitan Fellows by examination considerably influenced the Council in the decision at which they arrived. Warren, in his "Ten Thousand a Year," speaks of the "Association for Giving Everybody Everything"—a remarkable simplification of political economy, if we could but learn how to pay Peter without robbing Paul.

FROM ABROAD.—ANIMAL VACCINATION—INOCULATION OF THE MATTER OF TUBERCLE.—FRACTURE DURING REDUCTION OF A DISLOCATION.

M. Depaul has the duty consigned him of making the annual report to the Academy of Medicine on the progress in vaccination which has been made under the auspices of that body; and at the same time to give an account of any memoirs upon the subject that may have been presented. Last year he well nigh startled the Academy out of its propriety by a kind of sensational report on vaccinal syphilis, in which he stated that the communication of syphilis through vaccination was a matter of constant occurrence, and wished the Academy to call the attention of the Government to the fact, in order that the necessary cautions might be issued to the public vaccinators. This that body, convinced that gross exaggeration prevailed in the statements made, after a warm discussion declined to do, and the report was shelved. This year M. Depaul does not revert to the topic directly, but his warm approval of animal vaccination is but a natural sequel to his former report, as offering the best security against the dangers set forth in that. He reviews at length the memoirs of M. Lanoix who has taken great pains to transport from Naples to Paris, Rouen, Lyons, and other towns, the plan of vaccinating from the cow. He puts three questions. 1. Does animal vaccination preserve better from the danger of inoculating another virus than vaccinating from arm to arm? This M. Depaul considers as proved in the affirmative. 2. Is it more energetic and more constant in its results? This is doubtful. 3. Should special establishments be organised to favour more and more this mode of propagation? M. Depaul thinks that they should, superseding to some extent those which exist; but the Academy, probably believing that the proposition is at least premature, passed to the order of the day. M. Guérin, while approving of experiments being continued on a large scale, and under official supervision, recommends the greatest caution in reference to a mode of procedure which may have its own particular dangers, while the guarantee it offers may be obtained by careful, but occasional recurrence to the cow. It is by no means certain that in the more constant inoculation from the cow some of the diseases of that animal may not be transmitted; while it is highly probable that the virus transmitted from arm to arm may acquire valuable properties which it is destitute of at first. At all events, there are plenty of points for investigation and no encouragements for hasty changes.

M. Villemin, one of the *agrégés* at the Val de Grâce, has presented a preliminary note of certain experiments he has been some time carrying on with respect to the inoculation of the matter of softened tubercle. He asserts that in six weeks or two months after he has inserted this matter under the skin of a rabbit, by the side of the ear, tubercles visible to the naked eye are found in the lungs, mesentery, intestines, etc. These experiments have been repeated many times, inoculating one half a brood, and leaving the other half inoculated, and exposing each lot to similar conditions of captivity, liberty, etc. The results were always the same. Within two months the inoculated animals became tuberculous, while the inoculated remained free.

M. Verneuil related the other day at the Surgical Society the particulars of an unfortunate case which had occurred in his practice. A man, aged 81 years of age, run over by a carriage, presented all the signs of supra-pubic dislocation of the femur, the head of the bone forming an unusually large swelling, which was excessively sensitive to the touch. After various unsuccessful attempts at reduction, with and without the aid of chloroform, M. Verneuil endeavoured to effect this by excessive flexion of the thigh combined with rotation inwards, but while engaged in this operation, unaided, and employing only moderate force, he broke the neck of the femur at, as he believed, the anatomical neck of the bone. He attributed the occurrence of the accident to the fact of one of the bony vegetations which are so frequently met with around the margins of the head of the femur in the aged becoming engaged, during the attempts at reduction, with the border of the pubis, and thus preventing the displaced head from yielding to the efforts made. After the fracture the head still remained fixed in the spot. Similar accidents have occurred to such eminent Surgeons as Cooper, Lisfranc, and Malgaigne.—M. Larrey, during the discussion which ensued, suggested that in this case an incomplete fracture, co-existing with the dislocation, might have been rendered complete during the attempts at reduction; but M. Verneuil hardly regarded this view as tenable, as the bone had already resisted many attempts at reduction.—M. Dolbeau regarded the procedure of flexion combined with internal rotation as a bad one, and likely to give rise to the accident in question, the power acting upon a very long arm of a lever compared to that of the arm of the lever of resistance, and therefore likely to cause fracture when any considerable resistance is offered. It is infinitely preferable to make the traction in a direct, horizontal direction. M. Chassaignac could not entertain a doubt of the reality of this dislocation in a man 81 years of age after the precise affirmatien of its existence by M. Verneuil, although he had always believed that after 70 we met with fractures of the neck, and not dislocations. The employment of chloroform in the reduction of dislocations had convinced him that obstacles to reduction said to be due to other causes than muscular contraction were chimerical. Thanks to its aid, he has never met with any insurmountable obstacles.—M. Hervez de Chégoin referred to a case of dislocation complicated with fracture of the neck in which the fracture was consolidated and the movements of the limb regained with-

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out any treatment having been adopted.—M. Velpeau remarked that this case was by no means unique. Many years ago he had been much struck with the unexpected results which had attended several cases of dislocation of the shoulder left to themselves. No inconveniences had resulted, and with respect to the functions and movements of the limb, there was little difference between it and the sound one. He had since then met with so many analogous examples, that, whenever a dislocation has become somewhat old—several months, for example,—and would require attempts at reduction that might prove dangerous, he advises abstaining from intervention. Pathological anatomy, indeed, proves to us that by reason of the various modifications which the parts have undergone, reductions of old dislocations must often prove useless, even when not dangerous.—M. Richet regarded the point touched upon by M. Velpeau as one of great importance, for we have only to examine the preparations contained in anatomical museums to become convinced that the reduction of old dislocations must be always difficult, is often dangerous and useless, and is opposed by much more powerful obstacles than mere muscular contraction, as indicated by M. Chassaignac—obstacles far beyond the power of chloroform. M. Richet, however, was not able to join in the optimism of M. Velpeau with respect to the slight inconveniences attendant upon unreduced dislocations, having too often observed the uselessness of the paralysed and atrophied limb after old unreduced dislocation to regard it as a matter of slight importance to the patient. To reduce such a dislocation is to render him a great service, but this should always be attempted only by moderate and mild manœuvres.—M. Chassaignac explained that when he stated that muscular contraction was the principal, and often the chief, obstacle to the reduction, he had in view relatively recent dislocations—those of two months at the utmost—when the articular cavity has not yet become obliterated, and the head of the bone has not yet contracted adhesions which retain it in its new position. M. Chassaignac also commented upon the erroneous nature of the views of Pravaz, who supposed that he could reduce congenital dislocations by forming, so to say, new articulations. Pravaz was, in fact, a mere ingenious mechanician, ignorant of the laws of physiology, and really never reduced a congenital dislocation. The production of a new articulation must be entirely due to the spontaneous efforts of the economy, by means of which plastic exudations are cast around the displaced bone and gradually transformed into another cavity for its reception.—M. Velpeau protested against it being supposed that he laid down that the Surgeon should abstain from attempts at reduction as a general rule. Quite the contrary; he should always attempt this when it is possible; but with regard to dislocations of more than four or five months' standing, he considered that there was often most serious danger in making the attempt—a danger by no means compensated by the results obtained—the changes which have by this time taken place having, in fact, rendered the reduction impossible or illusory.—In this view M. Richet agreed, believing also that after the fourth or fifth month nothing should be attempted, as nothing can be effected by reason of the organic modifications which have taken place in and around the displaced bone. He could not, however, understand how M. Chassaignac can believe that he has only muscular resistance to deal with in dislocations of two months' standing; for adhesions capable of offering great obstacles to reduction take place long before this period.

CHOLERA IN SPAIN AND PORTUGAL.

(*From a Correspondent.*)

The latest news from Portugal (November 30) informs us that the cholera has in all appearances ceased its ravages at Elvas. The general expectation that it would cross the Guadivena into the province of Algarve, from Andalusia and Spanish Estremadura, has not been justified by the event. These parts of Spain, though last attacked, appear, indeed, to have suffered most. Notwithstanding the close proximity of Ayamonte to Villa Real de Santo Antonio, towns which are separated only by the river, no propagation of the disorder has occurred. The cholera has turned northward, along the Spanish bank, checked on the side of Portugal either by the military arrangements, or influenced by some natural impediment. The following instance of contagion, vouched for by administrative documents, across a vast extent of country, from Elvas to Oporto, has fully awakened society to the dangers of material contact:—A young married woman of Oporto, on a visit to her sister at Elvas, left the latter city on October 14, on occasion of her nephew being attacked with cholera. She reached Oporto on the 17th, and on her arrival bore an appearance of malaise. Being speedily attacked with cholera, she died on the 24th of the month. The woman who was her nurse, a young and robust female, immediately returned to her lodging in another ward of the city, and this person was violently attacked on the day following—viz., October 25. She still survived, but in a dangerous condition, on November 4 last. This nurse's landlord, a small tradesman, was seized with cholera and died during the course of her illness. While these occurrences happened, two braziers' apprentices, in the house of the first-named female, were attacked with cholera and died in the Hospital, whither they had been removed. A younger brother of the same young woman is said also to have suffered from a minor form of the disease. In these cases cramps do not appear to have been a leading symptom. Subsequently to the date of October 28 no fresh case had shown itself in Oporto. Cholera is now prevalent in the Portuguese possessions of the Indian peninsula, but it is restricted to the Mussulman and Hindoo population, sparing the Europeans. Since the year 1859, up to a recent period, it had been absent; whereas in British India cholera seems now permanently endemic. Such, at least, are the assertions of the Portuguese authorities.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF LEAMINGTON.

(Continued from page 637.)

MEDICAL CHARITIES OF LEAMINGTON.

THE WARNFORD AND GENERAL BATHING INSTITUTION.

HISTORY AND ADMINISTRATION.

The Hospital at Leamington is situated at a little distance from the town, and is a quiet, modest building, giving accommodation to sixty in-patients. The Hospital was founded by the late Rev. Dr. Warneford in 1832, in recognition of benefits he and his relatives derived from the use of the spa waters. The charity was originally intended to enable the poor of the town and surrounding villages to get the benefits of the baths (saline), in conjunction with other Medical treatment; and thus there exists up to this time an arrangement with the Baths and Pump-room Committees, whereby patients (both in and out) get warm saline baths free of cost. The Hospital authorities pay 1s. each to the Baths Committee for all baths supplied (above—*i.e.*, in excess of—1100 per annum). This special feature is not so prominent as it was some years ago, the novelty of saline baths possibly having worn off, and the Hospital is gradually assuming the form of a general Hospital like that of any other town. There are from 200 to 250 out-patients per week, who are attended by their respective Physicians and Surgeons, and the Medical officers are expected to see their own out-patients, but the House Surgeon frequently acts by courtesy. The bulk of the cases are of a Medical nature. During the current year the numbers of in-patients have increased, and will be nearly 100 in excess of any previous year. The number of beds in each ward have lately been diminished, and two new wards, with addi-

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tional nurses, have been fitted up. There is, moreover, a detached building capable of accommodating sixteen patients, and which is kept in reserve for any epidemic or contagious outbreak occurring within the walls of the Hospital. As there has been neither small-pox nor fever in the Hospital during the past two years, the Medical staff has had no occasion to use the detached ward for its original purpose, but occasionally burns and other offensive cases are treated in it.

NUMBER OF PATIENTS TREATED.

The following details of the number of patients treated in the years 1863-64 will give a fair idea of the work performed at the Institution:—

	1863. Patients. Out.	In.	1864. Patients. Out.	In.	Total.
Remaining on the books	285	40	204	36	240
Admitted during the year	1178	266	1145	300	1445
	1463	306	1349(a)	336(b)	1685
Patients in 1863				306	
Increase in 1864				30	

Table of Results in 1864.

	Out-patients.	In-patients.	Total.
Cured	407	74	481
Relieved	685	198	884
Died	3	16	19
Instruments supplied	50	12	62
Remaining on the books	204	36	240
	1349	336	1685

Bathing Institution in 1864.

Patients who have had baths, comprising cases of	Males.	Females.	Total.
Rheumatic affections	24	15(c)	39
Skin diseases	6	4	10
Strumous and glandular affections	1	1	2
Hepatic affections	1	1	2
Dyspepsia	0	13	13
Various other diseases	3	6	9
			75

RULES FOR ADMISSION OF PATIENTS.

Every subscriber of £1 1s. per annum, or benefactor to the Hospital of £10 10s., is entitled to recommend four out-patients in every year, and the clergy are entitled, for collections which they make after sermons in their respective parishes, to recommend not exceeding one out-patient for every pound, and one in-patient for every twenty pounds so collected; such tickets are limited to the poor of the parish in which the collection is made. Every subscriber of £2 2s. per annum, or benefactor to the Hospital of £21, is entitled to recommend one in-patient and two out-patients in every year, and so on in the same proportion. Permanent public bodies becoming benefactors in like manner possess the same privileges, but only for ten years.

A benefactor of £21 or upwards, at one time, becomes a governor for life.

Co-partners in trade, subscribing £2 2s. or upwards annually, are in all respects considered as one individual subscriber, and are entitled to the same privileges.

The chief of any body corporate, the presiding chairman of Poor-law Unions, the overseers of any parish, or the person presiding over any society, subscribing an annual sum, have the same right of recommending patients as other annual subscribers of the like sum; but no recommendation is received from any parish unless the subscription has been paid three months before the time of such recommendation.

Every person who is both a donor (for general purposes) and subscriber, is entitled to the privileges of the Hospital to the amount of his donation and subscription, namely:—A donor of £10 10s. and subscriber of £1 1s. is considered in all respects as a subscriber of £2 2s., and so on in proportion.

No patient is admitted (except in cases of accident) without a recommendation signed by a subscriber. No patient can be continued on the list longer than eight weeks without a fresh recommendation, or, in cases of accident, without a recommendation, and then only in cases affording a reasonable prospect of relief.

No persons are admitted to the Hospital who are able to procure Medical or Surgical advice for themselves.

All in-patients who in eight weeks receive no benefit are discharged, except such as are reported by the Physicians or Surgeons to the weekly Board as likely to receive a cure or considerable relief by a longer continuance in the Hospital; such continuance must be on a renewed recommendation.

No woman far advanced in pregnancy; no person disordered in their senses; no child under 7 years of age (unless for the performance of some Surgical operation); no person in confirmed consumption; no person afflicted with typhus or scarlet fever, small-pox, itch, or other contagious or infectious disorder; nor with epilepsy, fits, the venereal disease, or scrofula of long standing (except patients sent by the Radcliffe Infirmary, for whom a weekly payment is made of six shillings for adults and four shillings for those younger) are admitted into the Hospital on any pretence whatever, and should discovery be made after admission of any of such cases, they are immediately discharged.

Every in-patient must be sent to the Hospital in decent clothing, and free from vermin, and with a proper change of linen.

When there is a scarcity of beds in the Hospital, the most urgent cases are first admitted; secondly, those who live at the greatest distance; and the rest according to priority of application.

Every person recommending an in-patient not belonging to the parish of Leamington Priors is required to deposit with the Secretary one guinea, as a security for defraying the expenses of such patient's removal, or the funeral expenses in case of death; such guinea is returned in all cases where no expense for either of these purposes is incurred.

For all patients who are brought in from accidents, occasioned by the improper or furious driving of public carriages or vehicles of any description, or caused through culpable negligence by private parties or public bodies, the following charges are made, namely:—For board and lodging, seven shillings and sixpence per week; to the nurse, two shillings and sixpence per week; and the Surgeon in attendance is allowed to make his own charge, and to demand the same from the party or parties liable at law.

Soldiers and persons relieved by any parish, as well as members of societies entitled to weekly pay, must pay one-third of what is allowed for subsistence-money, or from any club box, as long as they remain in-patients, except in case of accidents.

Servants of subscribers and others, whilst in service, are to be charged: males, seven shillings per week; females, five shillings per week, subject in particular cases to the discretion of the Committee.

No patient may sit up after half-past eight o'clock in winter, nor after half-past nine in summer; and every patient, who is judged able by his or her Physician or Surgeon, must rise by seven o'clock in the morning in the summer, and by eight o'clock in the morning in the winter.

The rules of the Leamington Hospital seem to me to be drawn up with much judgment and common sense. Two of the rules especially call for notice: I refer, firstly, to the rule which allows the Medical man to charge his own ordinary fees for attendance on persons who are carried into the Hospital after accident and injury, and secondly to the rule which enforces early rising on the part of all patients who are able to rise. It is not to be controverted that as a rule Hospital patients are confined to bed without any sufficient reference to the necessity of the act, and, indeed, Hospitals are not constructed, ordinarily, with a view to any process on the part of the patient, except lying in bed. It is refreshing, therefore, to find one Hospital, at least, where there is more discrimination and some departure from a method of practice which of all others is the last that should be stereotyped in an advancing age.

The House-Surgeon is allowed to have a resident pupil; and as it may be of service to some aspirant to Medical honours to know the conditions of such pupilage, I subjoin the official rules:—

The pupil or apprentice of the House-Surgeon is denominated the house-pupil, and assists, at the discretion of the House-Surgeon, to dress the patients, under the superintendence of the Surgeons or House-Surgeon. He has also to assist in the dispensing of medicines.

The house-pupil must be in readiness to attend the Medical officers, and to go round the wards with them, upon being required to do so, if the House-Surgeon shall be otherwise engaged.

The house-pupil must never absent himself from the Hospital without permission from the House-Surgeon; and such

(a) Admitted as accidents or urgent cases without tickets, 215.
(b) Ditto in-patients, 33.
(c) Including Turkish baths.

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permission is not to be granted so as to leave the patients at any time without sufficient Medical attendance.

In case of the dismissal of any pupil for misbehaviour, his fees become forfeited.

The premium or fee to be paid to the Hospital by a house pupil is two hundred guineas, of which sum, one-fourth is the perquisite of the House-Surgeon for the time being, who receives the same by equal annual instalments.

The term of pupilage is for not less than five years, according to the recent Act.

The Medical Staff.

The Medical staff consists of three Physicians and three Surgeons, and their attendance is given gratuitously. A special provision is made that no person shall be eligible to the office of Physician who practises Surgery, Pharmacy, Midwifery, Hydropathy, or Homœopathy, or who is connected in business with any person practising therein; nor that any Physician hereafter elected shall continue in office who practises any of the above systems. The same rule extends to the Surgeons.

The following are the present members of the Medical staff:—*Physicians*. Dr. Henry Homer, Dr. Jeaffreson, Dr. Carter. *Surgeons:* Mr. Jones, Mr. Hitchman, Mr. Male. *House-Surgeon:* Mr. Jos. Morris.

Table of Diets.

A loaf of bread, weighing 12 oz., is served to each patient daily.

Breakfast.—Each patient 1 pint of milk.

Dinner.—Full diet for men 6 oz., for women 4 oz., of meat, in the following order:—Roast or boiled beef on Sunday, Tuesday, Thursday, and Saturday; roast mutton on Monday, Wednesday, and Friday, with 8 oz. of potatoes or other vegetables.

House diet for men 4 oz., for women 3 oz., of roast or boiled meat, as in full diet, with 8 oz. of potatoes or other vegetables.

Mutton diet for men 4 oz., for women 3 oz., of mutton, either roast or boiled, or as a chop, with 8 oz. of potatoes or other vegetables.

Low diet for men and women consists of 8 oz. of pudding: Rice on Sunday, Wednesday, and Friday; sago on Monday and Thursday; tapioca on Tuesday and Saturday. One pint of broth, thickened with rice, oatmeal, or pearl barley, for lunch.

Supper.—Each patient 1 pint of gruel or broth.

Extra.—Light pudding, chicken, fish, eggs, milk, arrowroot, beef-tea, beer, ale, porter, wines, spirits, tea, and coffee.

An exception to this diet is made occasionally in respect to vegetables. As there is a large garden attached to the Hospital, fresh green vegetables are often substituted for potatoes.

Receipts and Expenditure.

Dr. Buckle, in his admirable work on the vital and economical statistics of the Hospitals and Infirmaries of England and Wales—to which work I would specially direct the attention of the reader—places the annual proportion of the in to the out-patients of the Leamington Hospital as 306 of the former in 1863 to 1463 of the latter, or at the rate of 1 to 4·78. The average cost of each patient is placed by the same author as follows:—

Average cost per in-patient . . £3 3 11— 31
,, out-patient . . 0 6 0—659

The following is the official table of the receipts and expenditure for the years 1863 and 1864:—

Receipts.

	1863. £ s. d.	1864. £ s. d.	Increase. £ s. d.	Decrease. £ s. d.
Donations under £10 10s.	35 4 3	43 9 3	8 5 0	—
Subscriptions	685 12 0	739 13 0	54 1 0	—
Ball	150 9 6	139 8 2	—	11 1 4
Collections after sermons	115 17 4	94 1 9	—	21 15 7
Interest	216 6 11	233 9 10	15 2 11	—
	£1205 10 0	1250 2 0	77 8 11	32 16 11

Expenditure.

	1863. £ s. d.	1864. £ s. d.	Increase. £ s. d.	Decrease. £ s. d.
House expenses	697 15 2	600 10 2	—	97 5 0
Dispensary	283 8 9	273 8 11	—	9 19 10
Salaries and wages ..	306 9 2	332 1 9	25 12 7	—
Miscellaneous expenses..	103 18 10	125 3 2	21 4 4	—
	£1391 11 11	1331 4 3	46 16 11	107 4 10

Practice of the Hospital.

The practice of the Hospital is principally Medical, and Surgical operations are usually performed for cases of chronic disease. I am indebted to the House-Surgeon, Mr. Joseph Morris, for the following notes of operations performed during the past two years:—

Operation.	Cases.	Recoveries.	Deaths.
Amputation of leg	6	5	1
Amputation of thigh for disease of knee	1	1	0
Lithotomy	3	2	1
Strangulated femoral hernia . . .	2	2	0
Removal of testicle for medullary sarcoma	1	1	0
Suicidal wound of throat	1	0	1
Suicidal drowning	1	1	0

In the cases of lithotomy the two recoveries were in children; the fatal case was in a man, 75 years of age.

During the same time there have been five cases of compound fracture of the leg, four of which have done well, but one of them, occurring in a man of 78 years, ended fatally. The majority of the cases treated in the Hospital are cases of rheumatism, phthisis, chronic bronchitis, ulceration of the legs, necrosis, and allied forms of disease. The causes of death for the year 1864 were:—Malignant stricture of œsophagus, 1; dysentery, 1; burn 1; phthisis, 3; compound fracture of leg, 1; chronic bronchitis, 1; acute meningitis, 1; carcinoma, 1; uteri, 1; chronic desquamative nephritis, 1; suicidal wound of throat, 1; calculus vesicæ, 1; valvular disease of heart, 1; pleuropneumonia, 1. Total, 16.

Chloroform.

Chloroform is employed in all the major and in many of the minor operations performed in the Hospital, It has probaby been administered in two hundred and fifty or from that to three hundred cases since its first introduction. No death has resulted from its administration.

I have to express my best thanks to Mr. Morris for his kindness in supplying me with every information I desired.

PAROCHIAL MEDICAL PRACTICE.

Leamington is a sub-district of the district of Warwick. The population is 21,073, and the average of the sub-district 12,449. E. Nason, Esq., is the Medical officer. The salary is £105 per annum.

THE SANITARY CONDITION OF LEAMINGTON.

The sanitary condition of Leamington leaves little to be desired. The town itself is very favourably placed for the carrying out of all sanitary measures; but the choicest conditions may exist without proper advantage being taken of them, and the position of a town ought not to be considered as telling everything for the credit of its inhabitants in cases where the public health is well and ably tended. Leamington is fortunate in being locally governed by intelligent persons, whe have discovered a practical fact which I once ventured to condense in a proverb,—viz., that—

National health is national wealth,

and have acted on their discovery. The town is now under the management of an active local board of health, presided over by Mr. Hitchman, a well-known Surgeon. It is possessed of the power derived from the Local Government Act, and is reaping all the gains naturally resulting from the adoption of this important recognition of the true method of advancement.

The sewage of Leamington is conveyed away by the river Leam, and the very perfect system of drainage ensures that none shall be left behind. Virtually there are no cesspools, and the soil is nowhere charged, to any extent, with sewage matter. The sewage, before it passes into the river, is subject to a process for its deodorisation; but as yet it is not utilised, a step in advance which must, one would suppose, from all that has gone before, soon be accomplished. The money that has been laid out by the local board of health for securing a perfect system of sewerage has amounted to over £49,000.

The water supply is good, and is derived at a point a considerable distance from the town, and the reservoir is on an eminence of sufficient height to ensure a perfect distribution to every house, with a high pressure supply where it is required. The quantity obtained is so copious that the drains and sewers are at all times efficiently flushed.

The value of life in Leamington will be best understood by a reference to the following figures, now for the first time published distinct from the official record. The figures are derived in part from the recently-published supplement of the twenty-fifth annual report of the Registrar-General of births, deaths, and marriages of England—a work little known, but one so valuable that every Medical man should possess it—and partly from an unpublished return which

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Dr. Farr, with his accustomed liberality, has been good enough to place before me for perusal.

In order that these tables should be correctly read and understood, I should premise that the first, the second, and the third include the whole district known as the Warwick district, of which Leamington is a sub-district. These tables, therefore, including as they do more than Leamington, are rather unfavourable to it. They are, however, corrected by the condensed table, number four, which applies to Leamington only.

Table 1.—*Totals of Causes of Death in the Ten Years* 1851-61. —*Warwick District.*

	Males.	Females.
Mean population, 1851-61	19,786	23,205
Total deaths	4,389	4,503
Causes of Deaths:—		
Small-pox	83	60
Measles	58	56
Scarlatina	127	128
Diphtheria	7	14
Whooping-cough	55	60
Typhus	198	260
Cholera, diarrhœa, dysentery	188	187
Other zymotic diseases	162	149
Cancer	44	115
Scrofula, tabes mesenterica	86	91
Phthisis	551	601
Hydrocephalus	73	58
Diseases of brain	557	447
Heart disease and dropsy	260	332
Disease of lungs	619	524
,, of stomach and liver	256	283
,, of kidneys	78	41
,, of generative organs	—	37
Diseases of the joints	19	14
,, of the skin	7	10
Childbirth and metria	—	54
Violent deaths	171	68
Other causes	790	914

Table 2.—*Average Annual Rate of Mortality from All Causes at Different Ages to* 100 *Living, during the Ten Years* 1851-60.

	Males.	Females.
All ages	2·218	1·941
Under five years	6·353	5·345
Five to ten years	·776	·832
Ten to fifteen years	·421	·507
Fifteen to twenty years	·676	·713
Twenty to twenty-five years	·872	·817
Twenty-five to thirty-five years	1·169	·986
Thirty-five to forty-five years	1·201	1·067
Forty-five to fifty-five years	1·980	1·421
Fifty-five to sixty-five years	2·885	2·454
Sixty-five to seventy-five years	6·694	5·434
Seventy-five to eighty-five	12·368	14·347
Eighty-five and upwards	44·000	28·431

Table 3.—*Average Annual Rate of Mortality from different Causes, to* 100 *Living, during the Ten Years* 1851-60.

	Males.	Females.
All causes	2·218	1·941
Typhus	·100	·112
Cholera, diarrhœa, and dysentery	·095	·081
Other zymotic diseases	·249	·201
Cancer	·022	·050
Phthisis	·278	·259
Scrofula, tabes mesenterica, and hydrocephalus	·080	·064
Disease of brain	·282	·193
Disease of heart and dropsy	·131	·143
Disease of lungs	·213	·226
Diseases of stomach and liver	·129	·122
Diseases of kidneys	·039	·018
Violent deaths	·086	·029
Other causes	·414	·443

Table 4.—*Deaths Registered in the Sub-District of Leamington.*

Years.	Deaths.	Years.	Deaths.	Years.	Deaths.
1851	382	1856	268	1861	354
1852	349	1857	346	1862	356
1853	311	1858	332	1863	457
1854	324	1859	347	1864	429
1855	381	1860	331		

Population enumerated:—1851, 16,785; 1861, 18,768.

Average annual rate of mortality to 1000 persons living in the eleven years 1851 to 1861, 19.

The Arboretum.

Before leaving the flourishing town on the Leam, I cannot, in justice, fail to notice an institution situated a little distance from the town, and called the Arboretum. The proprietor of this house is Mr. Hitchman, a gentleman already referred to as one of the Surgeons to the Warneford Hospital, and as Chairman of the Local Board of Health. Mr. Hitchman has always, as a townsman, aided every good and useful work, and has originated many good works. The Arboretum is fitted up with most excellent taste, and at great outlay, as a sanatorium. The institution labours under the Professional disadvantage of being conducted on what is called the hydropathic system; and I, who most heartily hate "paths" of every kind, except the narrow and difficult path of true scientific Medical research, have no disposition to defend hydropathy. But this I must say, that I visited the Arboretum to learn two or three very useful practical lessons, and to regret only that such lessons were lost to the mass of my brethren simply because they were too refinedly specialised. I went with a doubt, and left to feel more strongly the power of the immortal expression that—

> "There is a soul of goodness in things evil,
> Would men observingly distil it out,"

and that hydropathy, which, as a dogmatic assertion, is an unquestionable evil, because it claims more than is possibly true, has connected with it certain hygienic practices, to ignore which would be a process equally as false as to accept the whole dogma to which, up to this time, those practices are unhappily, and almost indissolubly, united. I venture to thank Mr. Hitchman as heartily as publicly for the candid and useful information he was good enough to convey to me, and for some new light unexpectedly and unaffectedly exposed. If he would become eclectic, and teach of water as he would teach of quinine,—viz., that it is *a* remedy rather than *the* remedy, he would find, in the ranks of Physic, few, I think, who would not listen to him, and accept the results of his experience with profit and with thanks.

REVIEWS.

The Optical Defects of the Eye, and their Consequences—Asthenopia and Strabismus. By John Zachariah Laurence, F.R.C.S., M.B. Univ. Lond.; Surgeon to the Ophthalmic Hospital, Southwark; Editor of the *Ophthalmic Review;* Member of the Heidelberg Ophthalmological Society; of the Society of Practical Medicine of Paris; of the Pathological and Harveian Societies of London, etc., etc. London: Hardwicke.

Mr. Laurence's book is a republication, with numerous and valuable additions, of a series of lectures which appeared last year in the pages of this Journal. The subject is one of great importance, for, as every one knows, optical defects of the eye are of extremely common occurrence. They have been carefully and scientifically investigated by eminent English authorities, among whom we may mention Young, Porterfield, Brewster, Mackenzie, etc.; and yet, until a comparatively recent period, most ophthalmic Surgeons were content to commit the treatment of such cases to "the Honourable Company of Spectacle Makers." Of late years, however, the progress made by various Continental ophthalmologists has attracted attention in this country, and the optics of the eye "has again become a matter of careful and elaborate study." To it, Mr. Laurence has long paid diligent attention, and he has, moreover, had the advantage of studying it under the immediate superintendence of Professor Donders, of Utrecht, its most eminent exponent. In the book under review, he endeavours to condense the results of extensive reading and much original investigation into a form which will be available to any one of ordinary education who will devote a little careful study to it; at the same time it will form a good introduction to those who are disposed to enter upon more elaborate investigations.

The first two chapters deserve careful study, as, unless they are mastered, the remainder of the book will be unintelligible. The first, "Optical Considerations," treats of certain of the elementary laws of the propagation of light through space, and of the manner in which its rays are acted upon by lenses of various forms. The second gives an exceedingly

clear description of the phenomena of "Accommodation" and "Binocular Vision." With regard to the power of accommodation, Mr. Laurence adopts the view which is now almost universally received, that the ciliary muscle is the chief, if not sole agent; the iris he regards as simply "an auxiliary organ for distinct vision." On this head we would observe that, since the publication of this book, a paper by Dr. Mackenzie has appeared in the seventh number of the *Ophthalmic Review*, (of which Mr. Laurence is one of the editors), containing a very remarkable case, in which, after the removal of the lens by extraction, an amount of accommodation power remained, which would lead to the suspicion that the iris plays a more important part in this function than the generality of modern physiologists are disposed to assign to it.

Mr. Laurence now proceeds to the study of pathological optics, or the various deviations from the healthy standard in the powers of refraction and accommodation. Under the first head are included myopia, hypermetropia, and astigmatism. Under the second, presbyopia, paralysis of accommodation, and asthenopia. The concluding chapter is on "the connection between convergent strabismus and hypermetropia." To give any adequate analysis of these valuable chapters would require far more space than our limits will permit. But we would refer, with pleasure, to Mr. Laurence's denunciation of the unscientific and inconvenient system on which English opticians number their concave glasses. We would record the very simple remedy which he has discovered for the disagreeable sensation of "dazzling," often complained of by those who wear very deep concave glasses, which consists simply in tinting the glass; and we would call especial attention to a very important remark in the chapter on strabismus, "that the deviation of the squint has a powerful influence in diminishing the patient's vision;" and, therefore, "that a squint is not an affection to be temporised with; it must be cured as early as possible, whether by operation or otherwise."

We consider Mr. Laurence's book as a very valuable addition to ophthalmic literature, and we strongly recommend its careful perusal to every one who is liable to be consulted on the defects of which it treats.

Discovery of the Cause of the Action of the Heart. History of the Discoveries of the Circulation of the Blood, of the Ganglia and Nerves, and of the Action of the Heart. By Robert Lee, M.D., F.R.S. Pp. 40, with five plates from the *Phil. Trans.*, 1849. London: Bentley.

Dr. Robert Lee seems still to mistake the point at issue between other anatomists and himself. The question is not "Are there nerves and ganglia in connexion with the heart, uterus, etc.?" but "Are the fibres and swellings which Dr. Lee has isolated by the process of dissection nerves and ganglia?" We are not aware that this point has yet been decided either by Dr. Lee or by any of those observers who have seen his specimens.

Any one who takes the pains to examine the preparations preserved in the museum at St. George's Hospital will notice much difference between Dr. Lee's earlier preparations and those more recently dissected. The fibres represented by him as nerve fibres in his earlier dissections of the uterus are so much thicker than nerves as displayed by the same process of dissection in other tissues, that probably no anatomist besides himself would regard them as nerves at all. It is possible that fine nerves may be embedded in the thick bands represented as nerves, but we should say that the nervous tissue of the uterus did not amount to one-tenth of the texture stated by Dr. Lee to be nerve fibre.

In Plate II. of this work Dr. Lee repeats Plate II. from the *Phil. Trans.* for 1849, in which nine nerve trunks are seen to cross obliquely in front of an artery. Of these, six have *oval ganglia*, and five of these ganglionic swellings are situated just at the point where the nerve *crosses over the artery*. It is at least curious that ganglia should be so placed as to be influenced by every beat of the artery lying beneath them, while it is impossible to avoid the suspicion that the enlargements delineated were portions of connective tissue dissected from the external coat of the artery. And we must remark that if the nerve fibres on the surface of the left ventricle of the heifer's heart were really as large as they are represented by Dr. Lee, there could not long be any difference of opinion about the matter, for every fair dissector in existence could readily expose nerves of less than half the diameter of those represented in the drawing.

Dr. Lee is certainly the only living anatomist who would venture to state thus positively that, by the process of dissection followed by him, "it can be clearly *demonstrated* that *every artery* distributed throughout the walls of the uterus and heart, and *every muscular fasciculus* of these organs, is supplied with nerves upon which ganglia are formed, and which are the *sources of all their contractile powers.*" (The italics in this and other extracts are our own.) Now, every assertion in this paragraph *may* be true, but it is quite certain that Dr. Lee's observations do not demonstrate the truth of any one of these positions. The latter statement as to the source of the contractile power of arterial walls and muscular fasciculi is a mere assertion, in support of which not a single argument is advanced in this or any other paper of Dr. Lee's. It is really a most painful duty to call direct attention to this memoir at all, but we cannot allow even Dr. Lee to make use of such expressions as the following without condemnation: "The *illegal (!)* award of the royal medal to a *person (!)* who had *mutilated* the structures in two preparations, by the *clandestine* removal of one of the constituent tissues of the ganglia and nerves, the neurilemma, contributed powerfully," etc.

Perhaps the most curious portion of this memoir is the letter of Dr. Robert James Lee, dated September 8, 1865, and addressed to his father. Minute anatomists will be not a little astonished to learn from Dr. R. J. Lee that no idea can be formed "of the extent of the complete system of the ciliary nerves" by the aid of the microscope, and that the method employed by Dr. Lee, senior, in his dissections "is the only one which succeeds in attempting to trace the nerves throughout the iris between its muscular fibres, and in displaying the ganglia to the naked eye." The "method" employed by Dr. Lee is neither very new nor very original. It consists in using "small forceps and needles, and this dissecting lens magnifying six diameters." Dr. Lee has yet to prove that his "nerves" are really nerves, and this, we beg to say, is a question which can in these days be determined most positively. Dr. Lee thinks all anatomists are prejudiced against him, and that he and his son are the only persons qualified to determine whether or not a piece of tissue is nerve. They do not examine the intimate structure of the tissue, but merely affirm it to be nerve.

We must conclude with the closing extract from the preface, and print it with pain and regret, but from a sense of duty. Indeed, we simply think that upon the whole it is more respectful to Dr. Lee to criticise his work seriously than to comment upon it in any other style. We are serious and earnest, and believe Dr. Lee to be the same; but we think he has formed too high an estimation of his own work as well as the method of work pursued by him, and, we think, far too low an estimate of the value of lenses which magnify rather more than six diameters, in pursuing minute anatomical inquiries:—

"The movements of the *heart and blood* were discovered by Harvey, as the movements of the *planets* were discovered by Kepler; but the discovery of the law or doctrine of universal gravitation, by Newton, was required, to render our knowledge of the world complete. In like manner, the discovery of the circulation of the blood remained imperfect until the *cause (!)* of the heart's action had been demonstrated"!!

The Ulster Medical Society.—The anniversary dinner of this Society took place on Thursday evening, at Thompson's Rooms, Donegall-place, Belfast. The chair was occupied by Dr. James Moore, the President of the Society, and the vice-chair by Dr. Thomas Reade. The usual loyal toasts having been given, those in immediate connection with the Society's objects followed; of which were, "The Medical School of the Queen's College, Belfast, and the Queen's University in Ireland," which was responded to by Dr. John Moore, who referred to a meeting of the graduates of the Queen's University lately held in the Ulster Hall, and the very decided and unmistakable expression of feeling which was then manifested against any change being made, as appeared to be contemplated, in the original constitution of the Queen's University, and which, if carried into effect, would be detrimental to its best interests. "The Ulster Medical Society and Dr. Stevenson" was replied to by that gentleman. His remarks were received with much applause, especially his suggestion that the Society should seek to be made a chartered one. "The Medical Benevolent Fund Society of Ireland," "The memories of Professor J. C. Fergusson and Surgeon Aickin" (drank in silence), "The Belfast Medical Charities," and other toasts followed, with appropriate responses.

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GENERAL CORRESPONDENCE.

ACUPRESSURE.—LETTER OF MR. SYME ON THE SUBJECT AND ANSWER BY DR. SIMPSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—You will oblige me by allowing the insertion in your pages of the two following letters referring to acupressure; and by permitting me to express my sincere regret—for Mr. Syme's own sake—that he should again have thought fit to stir up the question. I am, &c.

Edinburgh, December 8. J. Y. SIMPSON.

Letter from Mr. Syme to the Editor of the "British Medical Journal."

"Sir,—In noticing a groundless statement of my intention to try some nonsensical contrivance for the suppression of hæmorrhage [by Mr. Churchill] you express disapproval of newspapers as vehicles of Professional instruction, and yet no longer than a week ago you quoted an expiring puff from this source to show that acupressure was fully established in Scotland. Should any Edinburgh or Glasgow student happen to stumble on so remarkable a piece of information, he would certainly rub his eyes in astonishment at the credulity of its author. The truth is, that in a few operations, and more especially amputations, it is sometimes possible to arrest the bleeding by means of needles instead of ligatures, although without any advantage, and not without the risk of very serious bad consequences. But when an obscure Practitioner cuts off a leg or an arm in the ordinary way, he has no pretext for sounding his little trumpet; while, if he deviate from established usage and run counter to sound Surgical principle, he may send the result to a learned Society, or even have the happiness of seeing his name fairly printed in the newspapers.

"I am, &c. "(Signed)

"Edinburgh, November 29. "JAMES SYME."

Letter from Professor Simpson to the Editor of the "British Medical Journal," in reply to the foregoing letter from Professor Syme.

"Sir,—In the last number of your Journal (December 2, p. 595) you have inserted from my colleague, Professor Syme, a letter animadverting upon acupressure. As his remarks on this subject are only calculated to mislead both you and your readers, you must kindly grant me adequate space to reply to them.

"Let me begin by observing that Mr. Syme has no knowledge whatsoever of the subject of acupressure practically, for he has never once yet, I believe, tried it himself, nor ever once, as far as I have been able to learn, seen it employed by others. All the objections which he has ever yet adduced against it are hypothetical, and not real; and his late semi-statistical observations on it in your journal, brief though they be, are, like his first observations on the same subject, grievously inexact in several ways, as, for example, in relation to—

"A. *The late Progress of Acupressure in Scotland.*—Mr. Syme speaks of the practice as 'expiring' in this northern division of the island. It is extending steadily, instead of 'expiring.' How painfully devoid of correctness Mr. Syme's testimony on this point is, let your readers judge for themselves by, for instance, such a criterion as the following:—

"'In such a small kingdom as Scotland, we have, of course, very few public Professors and Lecturers on Systematic Surgery or Clinical Surgery. You might count them up easily upon your fingers.' Three of the number are, it is well known here, bound to Mr. Syme in ties of family relationship and of practice, and no one could well expect them to try, much less adopt, acupressure, as long as Mr. Syme himself strenuously holds out against it. Of the very few Scottish Surgical Professors and Lecturers that remain after this deduction, THREE have of late publicly declared their strong and decided opinion of the general superiority of acupressure over the ligature. But lest any member of the Association may deem it impossible that Mr. Syme should have so misrepresented to them the existing state of matters among us on this question, let me cite the published opinions of the three Scottish teachers to whom I allude:—

"1. In the *Medical Times and Gazette* for July 1 and 8 of this year (1865) that eminent and esteemed teacher, Dr. Pirrie, Professor of Surgery in the University of Aberdeen, has published a variety of 'major operations,' in which he arrested the hæmorrhage in amputation and other wounds by acupressure, besides employing it in many minor wounds. 'In many cases (he observes) in Hospital and private practice in which I have employed acupressure, its use has been most satisfactory.' He points out that besides being 'perfectly reliable' as a hæmostatic, it is '*the quickest, the easiest of application, and the safest means* yet devised for arresting bleeding;' and

"2. Besides Mr. Syme himself, the only other University lecturer on Clinical Surgery in Scotland is Dr. Keith, of Aberdeen—a gentleman who has, I believe, performed lithotomy more frequently and successfully than any other living British Surgeon. In the *Medical Times and Gazette* for September 9, 1865, Dr. Keith has given a detailed account of his successful employment of acupressure in various operations. Among his appended remarks, he observes—'We desire to suppress hæmorrhage promptly, effectually, permanently, after every Surgical operation. Acupressure (he adds) is equal to *all* this, and in *every* emergency.' After stating his 'unqualified approval of it (acupressure) as quite safe and quite sufficient for arresting arterial hæmorrhage, having fewer after-drawbacks than the mode by silk ligature,' Dr. Keith quaintly adds—'We do not much need to condemn the use of silk thread more than do people condemn stage coaches when other conveyances cannot be had; but wherever a locomotive is available I suppose most people nowadays would prefer it; and so with silk thread and acupressure.

"3. In the Edinburgh Infirmary a colleague of Mr. Syme's—Dr. Watson, the able Lecturer on Surgery in our extra-academical Medical school—has described in the *Edinburgh Medical Journal* for July, 1865, a series of operations in which he used the acupressure of arteries instead of their delegation. In the last number of the same journal (December, p. 569) you will find his more matured opinions on the subject in a clear, candid, and excellent speech before the Edinburgh Medico-Chirurgical Society. The entire speech is too long to quote here in full; but among other observations he remarks that 'at one time he had thought that acupressure did not possess any special advantages, and that it was open to certain theoretical disadvantages.' Now, 'the only question with him came to be, whether it should be employed in *all* cases, or only in some. . . Dr. Gillespie and others said that though acupressure might be suitable in certain cases, it was not so advantageous in others. It might be so; but Dr. Watson had not found anything in its employment in recent wounds to make him doubt its easy adaptation to *any* case. Some thought that acupressure was not adapted for such large vessels as the femoral artery. His friend, Mr. Brown, of Carlisle, had lately told him, as the result of his extensive experience, that of all vessels the femoral artery was the one to which acupressure would be most easily and successfully applied. . . Since he had begun to employ acupressure, so well satisfied was he with its effects and the general facility of its application, that he had only resorted to the ligature in two cases, and in both the bleeding came from an already suppurating surface.' After various details, he closed by observing 'that he would desire to express his firm conviction that acupressure should be adopted; and he would recommend those who at present spoke against it on merely theoretical grounds to make themselves practically acquainted with it.'

"Other Scottish teachers of Surgery besides the three named are trying, or beginning to try, acupressure. Last week, for instance, I was told by my friend and colleague Professor Spence that he had successfully employed it to compress the facial artery before proceeding to remove the upper jaw. But for my present purpose, in opposition to Mr Syme's observation that acupressure was 'expiring' in Scotland, I am quite content to show that it is extending, being already adopted as their general rule of practice by three of our very best and most successful Scottish teachers of Surgery, and taught by them to three large classes of students as the proper practice for them to follow in the course of their future Professional lives.

"It is not six years since acupressure was publicly suggested, yet during that brief period it has spread more than the ligature did during the first hundred years of its existence. Can Mr. Syme name any Surgical procedure that has ever spread more swiftly and steadily than acupressure? And rarely has a Surgical proceeding been ever proposed that was more revolutionary and extensive in its character. For it involves a change of practice not in *one* operation or disease, but in *all* operations and all diseases in which the Surgeon requires to lay open bleeding vessels with his knife.

"B. *The Cases and Operations fitted for Acupressure.*—In his first public attack upon acupressure, Mr. Syme declared the idea of arresting Surgical hæmorrhage by needles instead of threads to be 'the merest nonsense,' and averred that at best 'it could only be adopted where the vessel lay in the integuments or textures adhering to them.'(a) At that time, by these and other similar remarks, he openly showed that he totally and stoutly misunderstood the whole subject alike in both its principles and practice. Since that time his knowledge on acupressure has advanced a little, though wonderfully little. He seems in regard to it to have been for some years living like our old American friend Rip Van Winkle, in an entranced state of strange and mysterious unconsciousness of passing events. As proof of this, look at one of his remarks in that late letter of his. 'The *truth* is (says he) that in a few operations, and more especially amputations, it is *sometimes* possible to arrest the bleeding' by acupressure. Why does he use the word 'sometimes?' In what operation is it *not* 'possible to arrest the bleeding' by it? Drs. Pirrie, Keith, Watson, and others have latterly used it solely and entirely in all their operations, as amputations, excisions of the mammæ, removal of tumours, hernia, castration, cuts of the wrist and other parts—in short, in *all* wounds, artificial and accidental, where there are open arterial mouths and where it is an object to heal the wounds by primary union. Some amount and length of practice may be required to use either the needle or ligature readily in all cases. But during the last five years the needle has repeatedly succeeded where the ligature has failed—more frequently, perhaps, than the reverse. I have cited various striking instances of this fact in my essay on 'Acupressure' (see Chapter XVI., '*Instances of Acupressure succeeding where the Ligature has failed*'). Dr. Mackinlay, Surgeon to the Paisley Hospital, a most accomplished operator, gave, two or three weeks ago, the details of ten cases of amputation by acupressure to the Medico-Chirurgical Society of Edinburgh, and stated that the first circumstance which induced him to try the needle was meeting with a case of amputation below the knee, where the interosseous artery retracted so far that all attempts to secure it by the ligature entirely failed. In his despair he made acupressure of the vessel with a common darning needle, and at once succeeded in stopping the flow of blood. This success led him to resort to the practice in other operations, and now he uses acupressure alone. 'He now had recourse to acupressure instead of the ligature in all the Surgical wounds he met with, besides amputation; and, after much experience with this new method of arresting hæmorrhage, he had been forced to the conclusion that it was simpler, safer, and better than deligation. In his Surgical pocket-case he carried now the means of using acupressure, instead of the old means of applying ligatures.' (*Edinburgh Medical Journal*, December, 1865, p. 569.)

"For arriving at this result, and being bold enough to state the result itself to the Medico-Chirurgical Society of Edinburgh, Mr. Syme indirectly denounces Dr. Mackinlay in your columns as 'an obscure Practitioner,' seeking notoriety by venturing to 'deviate from established usage, and run counter to sound Surgical principle.' Such vituperative language cannot of course affect in the least degree Dr. Mackinlay's very high character and standing. Nor will it, I believe, alter the general opinion of the Profession regarding Mr. Syme's character; but perhaps it is derogatory to the character of a Professional journal to open its columns to such censurable and wanton observations.

"C. *The Advantages of Acupressure.*—Mr. Syme states in his letter that acupressure when used in amputations and other operations has not '*any* advantage' over the ligature. He makes this averment without, as I have already stated, any practical or personal knowledge whatsoever of the subject. He is in this respect, perhaps, the last of all our Surgeons entitled to offer to the Profession any exact opinion upon the matter.

"As a practical Surgeon perhaps he may comprehend the problem of its 'advantages' in the following way:—Like every other British Surgeon, I take it for granted that Mr. Syme holds that wounds should be healed as much as possible, and *entirely if possible*, by the first intention rather than by the second – in days rather than in weeks—at once, without any further Surgical interference, rather than by a long and wretched series of painful dressings and suppurations. Now, up to within the last five years when acupressure was first introduced, there existed in the whole past records of Surgery few, or indeed no, cases of amputation of the limbs where *entire* union of the wound had taken place by the first intention. The presence of the ligatures at the ligatured points and along their tracks inevitably prevented primary union at these parts at least of the wound. To quote the words of one of the living patriarchs of European Surgery, Professor Chelius—'Healing of the wound after amputation (says he) *never* takes place by *complete* agglutination in the strict sense of the word.' (b) But in one chapter of my work on Acupressure, I last year adduced seven cases of amputation, in which acupressure was used, and where that 'complete agglutination' took place which, as Chelius states, 'never takes place' under the ligature. Others have been recorded since that time. Professor Pirrie holds, and has always held, that no wound should be said to heal by the first intention where *one single drop* of pus can be seen. Yet in his thirteen cases of large wounds treated by acupressure, and published by him in the paper already referred to, he states that *three* healed entirely by the first intention. As containing enormous bare surfaces of both bone and flesh, the largest and most difficult wound, perhaps, to heal by the first intention is the 'vast solution of continuity left by excision of the knee-joint. In a case of this operation which I saw performed by Dr. Watson, and where the vessels were closed by acupressure, complete primary union occurred, —in as far, at least, that a few globules of pus were traceable by the microscope in the discharge during the ninth, tenth, and eleventhdays, but none were ever visible to the naked eye. After two cases of castration treated by acupressure, Dr. Watson has seen complete primary union; and also in some other cases. In the very first amputation case—one of the forearm—in which he employed the needles, 'if (he says) union by the first intention was not absolutely obtained, there was as close an approach to it as possible.' And yet Mr. Syme and the opponents of acupressure have anxiously gainsaid these results. In reference to this last *instance*, for example, of amputation of the forearm, Mr. Syme—without even asking the leave or consent of his colleague, Dr. Watson, or without ever seeing the case—published it briefly as 'Amputation of forearm. My House-Surgeon was called up on the following night on account of hæmorrhage."(c) But Mr. Syme's House-Surgeon was never called up to see the case for secondary hæmorrhage, for there never was any such hæmorrhage in the case.(d)

"Acupressure has the aforesaid 'advantages' over deligation in the healing of divided parts because the needle is different from the ligature in being always early withdrawn, and hence leaving no foreign body whatever between the raw flaps or sides of the wound intended to unite together; and because the needle does not, like the ligature, lacerate and strangulate the mouth of each bleeding artery; nor leave, like it in every wound, *as many* points of sloughing, ulceration, and suppuration as there are arteries tied. A late critic rather criticises me for bringing forward an array of the 'opinions (to quote his own words) of Surgeons whose authority is unquestionable' to show merely what he says 'is known and admitted by every body,' namely, 'that the small part of the artery below the situation of the ligature *must die* in almost every case, and be cast off as a slough, and that, at any rate, in every case the ligature itself must be loosened from the tissues embraced in it by a process of ulceration and suppuration.'(e)

"With three, four, or more suchse parate centres or points—however small—of sloughing, suppuration, and ulceration going on under the use of deligation within the cavity of any amputation or other wound, is not the chance or, indeed, the possibility of primary union systematically set at defiance and deliberately prevented?

"When we consider the injuries and lesions which the ligature thus inevitably produces, and which, on the contrary, the needle avoids, need we wonder to find the writer just cited declare, like Chelius, that (up to this time at least) 'it is the unanimous confession of Surgeons in every part of the world that the primary union of the stump of an amputation is an event which they have never witnessed.'

"A few years ago, Mr. Syme, following the opinion which

(a) *Lancet* for May 5, 1860, p. 446.

(b) See his "System of Surgery," translated by Mr. South, vol. ii., p. 904.

(c) *Lancet* for April 1, 1865, p. 333.

(d) See Dr. Watson's full account of the case in the *Edinburgh Medical Journal* for July, 1865, p. 47.

(e) *Medico-Chirurgical Review* for October, 1865, p. 348.

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this recent Surgical author correctly describes as the pathological opinion 'known and admitted by everybody,' stated that the ligature, when applied to an artery, '*at once* deprives the part embraced within its noose of vitality.' Of course, this devitalised portion of every individual tied artery is of necessity separated and extruded from the living tissues by those inflammatory processes of suppuration and ulceration by which all dead matters are detached and ejected from the system. Yet, by some strange clerical or reporter's error, as I am inclined to hold, you, in your Journal, have represented Mr. Syme as having stated, last August, in his Address at Leamington, when adverting to the needle and ligature in hæmorrhage, that 'the ligature occasions *no* irritation, inflammation, or gangrene'—an allegation quite contrary, of course, to the most simple and elementary doctrines in the pathology of Surgery. Further, even the body of the ligature, in its course through the lips of the wound, is a source of irritation and inflammation to the textures in contact with it; for, since the time of Hippocrates downwards, organic threads, when drawn through living tissues, have been always known and acknowledged as speedily producing inflammatory irritation and suppuration along their tracks; in other words, they quickly act as setons or issues; and that whether the strand consists of one thread or of twenty. The strange statement, however, of Mr. Syme still stands in your pages—that 'the *truth* is, the ligature occasions no irritation, inflammation, or gangrene;' and in relation to it, I am disposed to feel sure, to use the expressive words of Mr. Syme himself, that 'should any Edinburgh or Glasgow student happen to stumble on so remarkable a piece of information, he would certainly rub his eyes in astonishment.' (See his late letter to you.) Supposing a student at the College of Surgeons or at the Army or Navy Boards boldly maintained that if a cut were made in the human body, and small pieces of flesh on the sides of the cut were then left strangulated by loops of silk thread, no gangrene, inflammation, or irritation would follow, would or would not the young candidate be considered as having a proper knowledge of the elementary principles of Surgical pathology?

"I am, &c.

"Edinburgh, December 8. "J. Y. Simpson."

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, November 21.

Dr. Peacock, President.

(Continued from page 617.)

Dr. Crisp exhibited

SPECIMENS, DRAWINGS, AND WAX PREPARATIONS OF SHEEP PLAGUE,

by way of contrast with the same disease in the ox. He said he had examined, in October last, in Norfolk and Suffolk, twenty-eight sheep affected with this disease. He had seen healthy sheep that had been affected when turned amongst diseased sheep, and had examined the viscera of a sheep that died after inoculation from the ox; and there could be no question about the identity of the affection. The chief points of difference in the morbid appearances were the absence of the dry state of the food in the first and third stomachs of the sheep, the less definite character of the spots, the absence of the swelling and redness of the ileocæcal valve, the general absence of spots on the lips, cheeks, tongue, and palate, and the greater detachment of the epithelial coats of the stomachs. Most of the sheep examined had soft and granular livers; but this lesion probably existed before the attack. The blood in all these sheep was so fluid that after death the uppermost eye was bloodless, whilst that nearest to the ground was very vascular; and so with many other parts. The stellate appearance of the blood-corpuscles, depicted by Dr. Smart, of Edinburgh, had never been seen by Dr. Crisp in this disease, either in sheep or oxen. He had named the plague the "Malignant Spotted Fever of Ruminants," as, judging from the many animals of this class he has examined, there was no other disease attended with a like eruption, and he had reason to believe that all ruminants might be affected. He spoke of the inconsistency of the recommendation of the Commissioners, which advised the stoppage of cattle and allowed sheep free movement.

Mr. J. Z. Laurence exhibited a

MELANOTIC TUMOUR OF THE EYEBALL.

The tumour had been progressing two years before the patient, a woman, aged 56, consulted Mr. Laurence at the Ophthalmic Hospital, Southwark. Below the cornea was a greyish, hard tumour; the iris was in contact with the cornea; the pupil was blocked up by a calcareous lens; the mobility of the globe was normal. Mr. Laurence removed the eyeball, the pain in it having become extreme. The eyeball was filled with a tumour, partly melanotic, partly encephaloid, with all the usual microscopic characters of cancer. The optic nerve, where divided in the operation, was neither discoloured, nor swollen.

Mr. J. Z. Laurence also exhibited an

ENCEPHALOID TUMOUR OF THE EYEBALL.

The patient, a woman, aged 34, first consulted Mr. Laurence in June, 1864, for amblyopia, of two months' duration, of the right eye. This, examined by the ophthalmoscope, presented all the appearances of retinitis, with partial separation of the retina. In six months the patient returned quite blind, the pupil being occupied by a grey folded membrane—detached retina—over which ran some exceedingly atrophied vessels. The patient subsequently got ophthalmitis, for which she consulted another Surgeon, who performed iridectomy. In October, 1865, she again consulted Mr. Laurence. The right eyeball was then universally inflamed. The left eye was irritable and amblyopic, its power of vision being reduced to one-tenth the normal standard; its fundus cloudy; the optic papilla hyperæmic. Mr. Laurence removed the right eyeball on account of the sympathetic inflammation of the left one. To his great astonishment, he found the removed globe the seat of intra-ocular cancer. In the anterior and lower part of the globe was a mass of ordinary encephaloid cancer; in the upper and posterior part was a spherical cavity filled with an aqueous fluid; around the lower part of the encephaloid part was a layer of a fibro-plastic tissue. Mr. Laurence considered the case interesting, in consequence of the failure of diagnosis and of the rarity of white cancer of the eyeball in adults. This was the second case he had met with in eleven years.

Mr. Hulke thought the diagnosis might have been made, had the tension of the globe been taken into account. According to v. Gräfe, this was increased in separations of the retina from encephaloid cancer.

Mr. Laurence's notes of the case, immediately before the operation, described the globe as "very soft." This, he thought, was explicable from the cavity of fluid behind the tumour, and showed that v. Gräfe's rule was not universal.

Dr. Andrew exhibited a specimen from a case of

EMBOLISM OF THE PULMONARY ARTERY.

A woman, 40 years of age. Her toes had been crushed by the wheels of an omnibus which had passed over them. Mr. Paget removed them October 15. She went on well until October 24, when she had pain in the epigastrium and faintness. Brandy was given, and she fell to sleep again. Next day she felt as usual; but her skin was cold and clammy. At night she had a return of the violent symptoms. She became pale, cold, her pulse could not be felt, and she died in three hours. The pulmonary artery was found to be obstructed by a dark red clot built over smaller white masses. No old clots and no pus were found in any of the veins of the injured limb. But on looking into distant veins, such as the mesenteric and the cerebral sinuses, small similar white masses were seen which had not the ordinary characters of blood clot, but consisted of aggregations of white blood cells. Dr. Andrew suggested that this case gave some grounds for the supposition that emboli might be derived from the corpuscular as well as from the fibrinous constituents of the blood.

Dr. Tilbury Fox exhibited several

COLOURED PHOTOGRAPHS OF PATIENTS SUFFERING FROM SKIN DISEASE.

Dr. Fox said: The half-dozen illustrations, nearly life-size, of photographs of skin diseases are kindly placed at my disposal for exhibition to the Society by Mr. Erasmus Wilson. I think it will be allowed that they are most truthful representations of actual facts, exhibit no contradiction between the colouring and the magnitude of parts; whilst they pourtray the finer and more delicate expressions of disease; and I would leave them to speak for themselves rather than spoil them by further comment. The first is a case of scrofulo-

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derma; the second, lupus non exedens; the third, epithelial cancer of the parotid region and ear; the fourth, a case of cure of lupus exedens; the fifth, syphilitic melasma—a charming illustration of the peculiar wasting of muscles, the earthy hue of the skin, and the pigment staining; the sixth represents another view of case number one. They illustrate admirably the use of photography in securing a correct outline and adjustment in the proportion of parts.

Mr. Barwell showed a photograph of a

CASE OF EXFOLIATION, AND OF A CASE OF EXCISION OF THE METACARPAL BONE OF THE THUMB.

The photograph showed the same appearance in excision and in what might be called artificial excision by disease. Mr. Barwell described the steps of the operation in his patient's case; the result was satisfactory.

Mr. Barwell also exhibited a specimen of

CARTILAGINOUS TUMOUR FROM THE TENDON OF THE RING FINGER.

In the operation, Mr. Barwell tried to remove the growth by a subcutaneous incision, but was obliged to open the sheath and dissect it from the tendon. The result was good. Mr. Barwell remarked that M. Malgaigne had said the sheath of these tendons should never be opened, but Mr. Paget had shown that cases in which they had been thus interfered with did well.

Mr. Balmanno Squire showed a

COLOURED PHOTOGRAPH OF KELOID.

In this instance the tumour had formed in a scar left by syphilitic rupia. Mr. Squire entered into a description of the difference between spontaneous keloid and keloid of cicatrices.

Mr. Nunn showed a cast from a case of

UNUSUAL INJURY OF THE ELBOW-JOINT.

The ulna had been dislocated on to the internal condyle. The patient was examined fourteen days after the accident, but then it was impossible to reduce the displacement. Mr. Nunn remarked on the extreme rarity of the accident. Mr. Arnott, who saw the case with Mr. Nunn, had never before seen such an accident. The injury did not seem to impede the action of the joint. Perhaps there was some fracture of the trochlea.

Mr. Barwell showed a specimen from a case of

STRANGULATED HERNIA IN A TUMOUR OF THE INGUINAL CANAL.

The patient had been under the care of Mr. Chaldecott, of Dorking, for strangulated hernia. He had constipation and stercoraceous vomiting, and yet he refused an operation until he was moribund. At the operation it was found that on one side of the ring was a tumour. The gut was all apparently returned, but the symptoms continued. At the autopsy, the stomach was found to be displaced. There was no omentum, and a piece of gut was found to be strangulated though the ring into the tumour. Mr. Barwell then related a case of umbilical hernia, in which there was a similar state of things.

Mr. Holmes remarked that the specimen was a very rare one, and suggested that a report should be made.

Mr. Barwell, Mr. Hulke, and Mr. Holmes were appointed to report on it.

LEGAL INTELLIGENCE.

WELLS *v.* CLAY.—ARBITRATION CASE.

In the early part of this year Dr. Clay, of Manchester, published in the *Lancet* a series of criticisms upon Mr. Spencer Wells's work on "Diseases of the Ovaries." To some of the scientific or statistical questions raised by Dr. Clay, Mr. Wells replied in the *Lancet;* but he considered one statement so personally offensive and so utterly destitute of foundation, that he called upon Dr. Clay for an ample retractation and apology; and as this was refused, the matter was referred to the lawyers. The result was, that Dr. Barnes, who had been named by Dr. Clay, and Dr. Jenner, who had been named by Mr. Wells, were appointed by Judge's order to draw up such an apology as, in their opinion, Dr. Clay ought to sign. The following is their report:—

(Copy.)

"We, the undersigned, being the arbitrators nominated respectively by Mr. T. Spencer Wells and Dr. Clay, and appointed under Judge's order dated June 29, 1865, have, in consultation, examined and considered the publications complained of by Mr. Wells as being libellous against him, and the documents bearing on the matter.

"Before entering upon this investigation, we, in compliance with the terms of the Judge's order, obtained the assent of James Paget, Esq., F.R.C.S., to act as umpire in the event of our differing in judgment.

"Having fully considered the matter referred to us, we are of opinion that the defendant, Dr. Clay, has exceeded the bounds of fair criticism in the publications complained of, and that he ought to make an apology to Mr. Wells in the following terms:—

"I, Charles Clay, M.D., defendant in the case Wells *v.* Clay, acknowledge that in the statement and inferences contained in an article published by me in the *Lancet* of February 25, 1865, I exceeded the bounds of fair criticism. I especially admit that I was not justified in putting forth the following paragraph, which contains the passages complained of by Mr. Wells:—

"'In this case Mr. Wells did not misrepresent my diagnosis, *but did worse:* he knew it, as well as those that were with him, but *he omitted it altogether.* My opinion was this: '*On no account seek any operation. If ever I saw malignant disease, this is a case, and if operated upon must terminate speedily in death.*' I was earnestly pressed to operate, but, though a splendid fee would have resulted, I persevered in my refusal, and the fee went into Mr. Wells's pocket. I never regretted my portion of the transaction. I never will operate on a case decidedly hopeless. I will have a prospect of success before I begin, and no fee shall ever tempt me without such prospect in view. In this case Mr. Wells held out hopes from an operation. It was done, and she died in a few hours after.'

"I am now satisfied that Mr. Wells did not know my opinion respecting the case, nor that I had refused to operate, and that, therefore, the imputation that he had improperly suppressed my opinion is groundless. I freely admit that Mr. Wells was induced to operate believing that there was a reasonable prospect of success, and that he was quite justified in forming that opinion. Further, if the words I used seem to imply that Mr. Wells's object in operating was to obtain a fee, I assure him that they were not intended to bear that meaning, and I am very sorry that I used language which could be so interpreted. Finally, I hereby express my conviction that Mr. Wells behaved throughout in an honourable manner to the patient, her family, and Medical attendants, and in all respects in accordance with the rules of Professional etiquette and right conduct; and I now make this statement intending it to be a full retractation of the matter complained of, and trusting that Mr. Wells will accept it as an ample apology for my error.

"Robert Barnes, M.D.

"November 22, 1865. "William Jenner, M.D."

Dr. Clay has signed this apology, and so ends a very unpleasant business. The only feeling we think it necessary to express is one of regret that when his error was pointed out, he did not do at once and voluntarily what he has now done on the decision of Drs. Barnes and Jenner.

University of Dublin.—At the winter commencement, held on Wednesday, the 13th inst., in the Examination Hall of Trinity College, the following Degrees and License in Medicine and Surgery were conferred by the Right Hon. the Earl of Rosse, Chancellor of the University. *Licentiatus in Medicina:* Fredericus Guilielmus Higginson. *Baccalaurei in Medicina:* Jacobus Shaw M'Cutchan, Joh. H. Benson, Thomas Armetriding Compton, Joh. Ludovicus Corbett, Edvardus Kough, Franciscus Guilielmus Greene, Henricus R. Swanzy, Guilielmus F. Stevenson, Christopherus M'Cready. *Magistri in Chirurgia:* Guilielmus F. Stevenson, Johannes Ludovicus Corbett. *Doctores in Medicina:* Arthur Wynne Foot (*stip. cond.*), Carolus Cameron, Johannes Holmes Joy, Dionysius Fr. Keegan, Guilielmus Pierce.

Isle of Wight Medical Book Society.—The twentieth anniversary meeting of this Society was held at the York Hotel, Ryde, December 6, after which the members dined together, and as a means of carrying into effect at this period of the year the second object of the Society—namely, "the cultivation of friendly intercourse between members of the Medical Profession," gentlemen of the Profession throughout the Island were invited to join. The Society is in a very prosperous state, having a good balance in hand. The library in connection with the Society contains upwards of 250 volumes. Officers elected for the ensuing year: D. Beaton, Esq., M.D., Treasurer; Alexander E. Davey, Esq., M.D., Hon. Sec.

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BOOKS RECEIVED.

Our Domestic Fireplaces: a Treatise on the Economical Use of Fuel and the Prevention of Smoke. By T. Edwards, jun. Second Edition, many plates. London: R Hardwicke.

*** We purpose to notice this work in full.

Clinical Memoranda. By W. Hinds, M.D. No. 1.—Pericarditis. Birmingham: A. P. Matthews. 1865. Pamphlet.

*** Very practical and good.

On Some of the Causes and Effects of Valvular Disease of the Heart. By T. B. Peacock, M.D.

*** Will be reviewed as early as possible. In the mean time, we may say that anything written by so eminent and accurate an observer deserves to be read attentively.

Report on the Sanitary Condition of the City of Edinburgh. By Henry D. Littlejohn, M.D. Edinburgh: Colston and Son.

*** A very complete and extended report, containing much valuable information.

Observations in Medicine; or, the Art of Case-taking. By John Southay Warter, M.D. London: Longman and Co.

*** Will be reviewed. It contains some useful hints to the Hospital student.

The Principles and Practice of Medical Jurisprudence. By A. S. Taylor, M.D. London: John Churchill and Sons.

A Dictionary of Chemistry. Part XXXI. and XXXII. Phenyl—Phosphorus. London: Longman and Co.

The Malformations, Diseases, and Injuries of the Fingers and Toes. By Thomas Annandale, F.R.C.S. Pp. 290. Edinburgh: Edmonston and Douglas.

London Hospital Reports. Volume II. London: John Churchill and Sons.

Address Delivered at St. Mary's Hospital Medical School, October, 1865. By C. Handfield Jones, M.B. London: Hatchard.

Moral Freedom Reconciled with Causation. By Henry Travis, M.D. London: Longman and Co.

The Sixth Annual Report of the Convalescent Society for Newcastle-on-Tyne.

The Cattle Plague: its History, Treatment, and Prevention. By A. J. Murray. Pamphlet. London: Taylor and Francis.

Contributions to Dermatology. No. 3.—On Psoriasis and Lepra. By T. McCall Anderson, M.D. London: John Churchill and Sons.

History of a Successful Case of Amputation of the Hip-joint. By J. S. Gamgee. London: John Churchill and Sons.

San Remo as a Winter Residence. By an Invalid. 1862-65. London: John Churchill and Sons.

The Dental Licentiates' Directory and Local List. By A. Hill, L.D.S. London: John Churchill and Sons.

Overcrowding and Typhus. By Conway Evans, M.D. London: Bradbury and Evans.

Winter in the South of Europe. By J. Henry Bennet, M.D. Third Edition. London: John Churchill and Sons.

Medizinische Zahrbucher Jahrgang, 1865. IV. und V. Heft. Wien.

Statistical Report of the Health of the Navy for the Year 1862.

Narrative of an Expedition to the Zambesi and its Tributaries. 1858-64. By David and Charles Livingstone. London: John Murray, Albemarle-street.

A Practical Treatise on Urinary and Renal Diseases. By W. Roberts, M.D. London: Walton and Maberly. Pp. 523.

A System of Instruction in Quantitative Chemical Analysis. By Dr. C. R. Fresenius Fourth Edition. Edited by J. Lloyd Bullock, F.C.S., and Arthur Vacher, F.C.S.

Manual of Materia Medica and Therapeutics. By F. J. Farre, M.D., assisted by R. Bentley, M.R.C.S., and by R. Warington, F.R.S. London: Longmans, Green, and Co.

Ellis's Illustrations of Dissections. Part 15. London: Walton and Maberly.

The Restorative Treatment of Pneumonia. By J. Hughes Bennett, M.D. Pamphlet. Edinburgh: A. and C. Black.

The Franklin Expedition, from First to Last. By Dr. King, M.D. Lond. 1860.

Notes on the Recent Epidemic in St. Petersburgh. By John Millar, M.D. Edinburgh: Oliver and Boyd.

Cullen and Gregory upon Change of Type in Inflammation. By G. W. Balfour, M.D. Edinburgh: Oliver and Boyd.

Electrotherapie. Von Dr. Carl Frommhold. Pest: Gustav Heckenart. 1865. Pp. 420.

Discovery of the Cause of the Action of the Heart. By Dr. Lee. London: R. Bentley.

The Health Resorts of the South of France. By Edwin Lee, M.D. Second Edition: London: W. J. Adams.

Nice and its Climate. Second Edition. By Edwin Lee, M.D. London: W. J. Adams.

The Climate of Malaga in the Treatment of Chronic Pulmonary Disease. By T M. Madden. Dublin: J. Falconer, 53, Upper Sackville-street. Pamphlet.

On the Treatment of Diseases of the Throat and Lungs. Second Edition. By Dr. W. Abbotts Smith. London: R. Hardwicke. 1865.

St. Bartholomew's Hospital Reports. Volume I. London: Longmans and Co.

The Ophthalmic Review. October. London: R. Hardwicke.

First Annual Report of the Inverness District Lunatic Asylum. 1865.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary Examinations for the Fellowship on the 21st and 23rd ult., were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and, at a recent meeting of the Council were admitted Fellows of the College:—

John James, L.S.A., Princes-street, Leicester-square, diploma of Membership dated July 26, 1847; Robert Mason, L.S.A., Thomas-street, Woolwich, February 11, 1848; Henry Sacheverel Edward Schroeder, Army, July 26, 1852; James Earl Moreton, Tarvin, near Chester, April 11, 1853; Joseph Williams, L.S.A., Brentford, February 27, 1857: Alexander Mason MacDougal, L.R.C.P., Bernard-street, Russell-square. April 29, 1857; James Vincent Bell, M.D. St. Andrews, and L.R.C.P., High-street, Rochester, April 11, 1861; Henry Thomas Lanchester, M.D. Lond., George-street, Croydon, April 16, 1861; Ebenezer Ludlow, M.B. Lond., Royal Infirmary, Bristol, May 7, 1862; William Johnson Smith, L.S.A., Wisbeach, May 9, 1862.

The next examination for the Fellowship will take place in May, 1866.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, December 7, 1865:—

Alexander McIvor Tindall, Falsgrave, Scarborough; John Davies, Wrexham; John Prince, Staines; Reginald Palgrave Simpson, 3, Torrington-street; Henry Dennie, Sandwich, Kent.

The following gentlemen, also on the same day, passed their First Examination:—

Edgcumbe Cornish, University College; Samuel Hignett Smith, King's College; Edmund Cuthbert Ring, St George's Hospital: Robert Anderson, St. George's Hospital; William Edwin Williams, St. Bartholomew's Hospital; Alfred Courtnay B. Melhado, St. Bartholomew's Hospital; Edward Matthew Owens, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to and new Appointments that take place.

CLAYWORTH, Mr. C., has been appointed House-Surgeon to the Lincoln General Dispensary.

HALLOWES, PRICE B, F.R.C.S. Eng., has been elected Consulting-Surgeon and Honorary Life Governor of the Kent and Canterbury Hospital.

SMART, ANDREW, F.R.C.P.E., has been appointed Physician to the Edinburgh Magdalene Asylum.

WYBER, J., M.D., has been appointed Assistant Resident Medical Officer to the London Fever Hospital.

DEATHS.

EASTWOOD, WILLIAM S., Surgeon, at Newbold, Derbyshire, on December 4, aged 73.

EVERSHED, THOMAS E., M.R.C.S. Eng., at Belgrave, Leicestershire, on November 21, aged 36, late of Billingshurst, Sussex.

GRAY, JAMES, J., M.R.C.S. Eng, at Dinsdale, late of Bishopwearmouth, on December 3.

HANDYSIDE, HUGH R., M.D. Edin., 28th Madras Native Infantry, at Kurnool, India, on October 31.

LAURIE, JOSEPH, M.D., at 12, Lower Berkeley-street, Portman-square, on December 10.

MORRIS, RICHARD, M.R.C.S. Eng., of Aberystwith, Cardiganshire, in London, on November 18, aged 29.

NUTTALL, JAMES, M.D. St. And., at Kirkdale, Liverpool, on December 3, aged 45.

RAMSAY, ALEXANDER, M.D., at Kurrachee, India, on November 6.

ROSCOW, PETER, M.R.C.S. Eng., at Folkestone, Kent, on November 28, aged 41.

SMITH, HENRY, L.R.C.S. Edin., at Heriot-hill House, Edinburgh, on December 3, aged 55.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Clifton Union.—The Second District is vacant; area, 725; population, 31,753; salary, £70 per annum.

Congleton Union.—Dr Gray has resigned the Church Hulme District; area, 12,225; population, 2514; salary, £52 10s. per annum.

Freebridge Lynn Union.—Mr. Walter S. Black has resigned the First North-Western District; area, 6666; population, 2130; salary, £33 per annum.

Ross Union.—Dr. Cocks has resigned the Fourth District; area, 15,110; population, 3208; salary, £75 per annum.

Weardale Union.—Mr. J. P. Snowdon has resigned the Derwent District; area, 15,260; population, 1233; salary, £10 per annum.

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APPOINTMENTS.

St. Columb Major Union.—Thomas Boyle, M.R.C.S.E., L.S.A., to the Fifth District.

West Derby Union.—John William Irvine, M.D. St. And., L.R.C.S. Edin., L.S.A., as Assistant Medical Officer of the Workhouse.

THE ROYAL ACADEMY.—Professor Partridge, F.R.S., will bring his course of lectures on Anatomy, which he has been delivering at the above institution, to a close on Monday next. The chair has been filled on each occasion by Sir Edwin Landseer, and the class has been a very full and attentive one.

MR. WALTER RIVINGTON, F.R.C.S. Eng, etc., has just been presented, by several students at the London Hospital, with a handsome clock, "in grateful appreciation and remembrance of his services as Demonstrator of Anatomy during the winter session of 1864-5."

SYPHILISATION.—Professor Boeck is about to return home after a stay of four months in London, during which he has practised inoculation as a method of cure on a series of syphilitic patients under the care of Mr. James Lane, at the Lock Hospital. At the meeting of the Medical Society of London, George-street, Hanover-square, on Monday next, at 8 o'clock, Mr. James Lane will read a paper descriptive of the results obtained up to the present time, and Professor Boëck will be present on the occasion.

THE RIBERI PRIZE.—Although more than sixty memoirs and works published during 1862-64 competed for the first Riberi prize, the Committee of the Turin Academy of Medicine has come to the decision that no one of them was of sufficient value and importance to call for its award. The seven authors whose works approach nearest the desired goal are arranged in order of merit as follows :—1. Polli, of Milan. 2. Desormeaux, of Paris, and Sperino, of Turin, *ex æquo*. 3. Simpson, of Edinburgh. 4. Borelli and Cortese, of Turin, and Marey, of Paris, *ex æquo*.

THE CHOLERA IN PARIS.—The total number of deaths officially returned from October 1 to December 3 inclusive amounts to 6011. Of these 4602 occurred in October, 1365 in November, and 44 in December. Of the 6011 deaths 3845 occurred in prisons and Hospitals, and 1835 *à domicile*—the whereabouts of 331 not being stated.—*Gaz. Hebdom.*, Dec. 8.

RINDERPEST IN THE FRENCH ZOOLOGICAL GARDENS.—The *Echo Agricole* states that the cattle plague is spreading among the animals in the Zoological Gardens of the Bois de Boulogne. It has attacked the goats, four of which were killed on Tuesday, making eighteen deaths among the animals since the arrival of some gazelles from London. Fortunately, the disease has not been observed outside that establishment, and the greatest precautions are taken to prevent it from spreading. All animals suspected of being infected are immediately killed.—*Times*, *Dec.* 9.

MEDICAL SOCIETY OF LONDON.—PRESIDENT'S SOIREE.—This *soirée* was held at the Hanover-square Rooms, on Tuesday evening, December 12. Those invited, who were urbanely received by the President and Mrs. Baker Brown, were so many that before 10 o'clock the rooms were crowded. Dr. Boeck, Dr. Grant, Mr. Solly, Dr. Radcliffe, Mr. Henry Thompson, and numerous other distinguished members of our Profession were present. In addition to objects of the usual kind, the tables and walls were furnished with many articles of *vertu* and fine art, which added much to the interest of the evening. Thus, decorating the walls, etc., were—oil pictures by A. Solomon, Millais, R.A., Lee Bridell, Calderon, A.R.A., A. Moore, and Johnston; drawings by Topham, S. Solomon, and E. W. Cooke, R.A.—all lent by the Secretary; oil pictures by E. Frère, F. Walton, and W. Gale; water colours by David Cox, Laurence, Duncan, W. Hough, and J. C. Reed, lent by Mr. Crofts, of Old Bond-street; a number of choice lithographs, lent by Messrs. Day and Co.; the life-size photograph of Chang, etc.; also on the tables were numbers of photographs from the London Stereoscopic Company, by Mr. Smallcombe and others. Mr. H. Swan exhibited a number of very pretty and striking crystal cube miniatures. There were also a number of Medical portraits, lent by Mr. Fitt, of Old Bond-street, and an interesting collection of portrait-medals of Medical men and philosophers. Two exquisitely-carved marble heads by Leonardo di Vinci, and a terra-cotta bust of Michael Angelo (1520), were exhibited by Mr. Joseph, of New Bond-street; Egyptian, Byzantine, and Etruscan ornaments, bronzes, and sculpture, exhibited by Messrs. Watherston and Sons; specimens of sculpture, exhibited by Messrs. W. H. Burke and Co., Regent-street; specimens of rare china, parian, and glass, lent by Messrs. Sharpus and Cullum; a collection of antique watches, lent by Mr. Benson, were also exceedingly interesting. Mr. Harry Emanuel exhibited an immense opal "the Idol's Eye" and other articles of jewellery which attracted much attention. Microscopes were exhibited by various makers, those with binocular arrangement largely predominating. On Mr. Collins' table we noticed a binocular dissecting microscope (Dr. Lawson's) of a simple and novel structure—namely, one in which the plan of the refracting stereoscope, as regards the lenses, is reversed. Some excellent specimens of trichina spiralis were lent for exhibition by Dr. Thudicum. A great variety of Surgical instruments were displayed, and at the head of the staircase leading from the refreshment-room the spring-bed, invented by Mr. Hamilton, of East-street, Manchester-square. Messrs. Savory and Moore made a pretty display of crystallised and rare pharmaceutical products, among which were conspicuous crystals of chloride of chromium and boro-tartrate of potassa. Mr. Piesse exhibited a number of perfumes in bottles, each labelled with a note of the musical scale, according to his fanciful conception of their position in a gamut of odours. Cramer and Co. lent a large piano-mécanique, on which the march from "Faust" and other pieces were performed by merely turning a handle, and thus causing a music board of raised brass pegs to move over a suitable arrangement for striking the notes. Rarely, we believe, has any *conversazione* gone off so successfully. The Medical Society owes its cordial thanks to the President, who had evidently spared no pains to make the evening pass with pleasure and interest to all invited, for the admirable manner in which everything was arranged.

ANALYSIS OF A QUACK IMPOSTURE.—BY DR. ATTFIELD.—I desire to bring before the members of the Pharmaceutical Society, chemists and druggists generally, and the public, an analysis of a substance which is stated to be cod-liver oil, in an agreeable saccharine powder, but which does not contain a trace of that Medicine. This substance is sold *in small flat* boxes of two sizes, containing respectively about four and two ounces of a white powder, and having labels in French, the translation of which is as follows :—"Oleo-Morrhuine, or saccharide of cod-liver oil: six francs or five shillings the box: three and a-half francs or three shillings the half-box. This saccharine powder, by reason of the extreme division of the oil, is, in a very small bulk, more efficacious than all the cod-liver oils of commerce, as already proved by long experience. General depôt, Roberts and Co. Pharmaciens, 23, Place Vendôme, Paris; and Wilcox and Co. Chemists, 336, Oxford-street, London." Around the box is a label, also in French: —"Easy to take and more efficacious than the cod-liver oil of commerce, which often becomes prejudicial on account of the nausea which it inspires." On the inside of the lid of each box is another label :—"Saccharide of Cod-liver oil. This powder has the great advantage of being supported by all stomachs, and of easily assimilating itself in the organism. This precious result is obtained by the extreme division of the oil, whose elements (chlorine, iodine, bromine, phosphorus, and sulphur, etc.) are absorbed without repugnance, whilst the oil of commerce is rejected, and often becomes prejudicial by the nausea which it inspires." The obvious intention of the writer of these labels is to induce persons ignorant of the properties of oils to believe that the well-known Medicine cod-liver oil has been brought into a state of minute division by being mixed with a saccharine powder; that in this state it is so much more active, that a small dose will have as great an effect as a much larger dose of the oil itself; and that the natural tendency of cod-liver oil to become rancid and nauseating is prevented by the influence of the saccharine matter added. Any one, however, conversant with the characters of oil, must at once see that this nostrum cannot be what it is stated to be. For oil, minutely divided by the agency of a powder, presents so much surface to the air that it becomes rancid in a far shorter time than when in bulk; such a mixture would soon be so offensive to the nose and palate as to be utterly unsaleable. If to this be added the facts that the action of cod-liver oil on the system is not materially influenced by its state of division, and that the amount of oil which can be added to powdered sugar without the latter losing its pulverulent form is so small, that a teaspoonful of the mixture would have no appreciable effect when swallowed, it must be evident that this so-called saccharide of cod-liver oil contains no cod-liver oil at all. But if not cod-liver oil, what is it? It is nothing but powdered milk-sugar. A considerable amount of this sugar is now extracted from

milk, chiefly for use in the manufacture of homœopathic globules and certain varieties of infants' food; it can therefore be obtained readily and cheaply. A quantity costing a few pence is placed in a box, labelled so as to induce the public to believe that it is cod-liver oil in a concentrated, convenient, and palatable form, and forthwith sold for five shillings. Surely this is obtaining money under false pretences. The method by which the analysis of this quack imposture was effected was simply the application of the ordinary chemical tests for saccharine bodies, the presence of one of which was indicated by the labels. That it was wholly milk-sugar was proved by ascertaining that a given quantity of it, dissolved in water, produced the same kind and degree of effect on a ray of plane polarised light as was exerted by a similar quantity of milk-sugar of known purity. "Chlorine, bromine, iodine, phosphorus, and sulphur," etc., were of course absent.—*Pharmaceutical Journal, Dec.* 1865.

THE following are the last week's Cattle Plague Returns. By comparison with those of the previous week, it will be seen that there have been 7485 attacked, 4577 deaths, 767 slaughtered, and 862 recoveries, since December 2:—

Census Divisions.	1. Attacked. Week ending December 9.	Week ending December 2.	Week ending November 25.	2. Result of reported Cases from the Commencement of the disease. Attacked.	Killed.	Died.	Recovered.	Remaining.
1. Metropolitan Police District	129	44	78	6962	3046	3073	268	575
2. South Eastern Co.	55	104	71	3919	1404	1971	329	215
3. South Midland Co.	627	510	392	3879	1136	2094	167	482
4. Eastern Counties	245	180	106	5286	1894	2599	339	454
5. South Western Co.	71	23	18	377	98	204	10	65
6. West Midland Co.	84	102	78	1242	356	622	96	168
7. North Midland Co.	171	78	95	767	282	355	59	80
8. North Western Co.	673	423	216	2137	274	1074	175	614
9. Yorkshire	1037	938	726	5178	414	2931	487	1346
10. Northern Counties	138	119	63	1064	411	460	81	112
11. Monmouthshire and Wales	245	110	185	1111	82	741	99	189
12. Scotland	1881	1191	1582	15277	2157	8389	1670	3061
	5356	3828	3610	47199	11554	24513	3771	7361

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

The letter from Professors Langmore, Parkes, and Maclean arrived too late to be referred this week to the writer of the article referred to. It shall appear next week.

B. W. S., Jessore.—We shall be very glad to receive our correspondent's communications. The paper sent shall appear.

A Guardian, Brighton.—There will be a Preliminary Examination in Arts at the College of Surgeons next week. If your pupil passed this examination, he could enter on his Professional studies in January, and thus save half a session.

The Recent Alleged Murder in the Neighbourhood of Scarborough.—We should be glad to receive from Dr. A. Allison the particulars of the case, and an account of the evidence given at the inquest. The information contained in the newspaper sent is too scanty to enable us to form an opinion as to the propriety of exhumation.

Cupar.—Dr. Bonnar's pamphlet on superfœtation is a valuable contribution to Obstetric and Medico-legal science. The quotations given by Dr. Alfred Taylor in his recent work on "Medical Jurisprudence" will introduce it to the notice of many readers whose attention it may have hitherto escaped.

GRIFFIN TESTIMONIAL FUND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscription has been further received on behalf of the above fund:—Jas. Crisp, Esq., Chippenham, per Dr. W. H. Colborne, 5s. Amount previously announced, £129 18s. 3d.; received at the *Lancet* office, £9 9s. I am, &c.

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate Without, December 13.

DR. HIRSCHFELD.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Allow me kindly a little space in your paper to inform the charitable and the Profession that I have some time ago procured the means for Dr. Hirschfeld to return home, as he had been introduced to me by a highly-respectable Physician. I am, &c.

Artillery-place, December 7. AUGUSTUS HESS, M.D.

THE PUBLIC SERVICES AND THE PROFESSION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Some doubts existing as to the benefit which will result from the Commission now sitting on the deficiency of applicants for the Naval Medical Service, some of the committee having their own interests to work out—and to the President great credit was not given for much good feeling towards Medical officers when he was at the Board of Admiralty—it may be useful to inquire for what reasons the public services are so disliked by the younger members of the Medical Profession.

The objections and grievances may be divided into the fundamental, departmental, and administrative. Of the fundamental,—1. A gentleman who has undergone the laborious study of obtaining a diploma with the attendant expenses, if he takes a commission as a Medical Officer in the Navy, discovers that he is in a lower position than if he had never undertaken a day's study of the healing art, nor spent one shilling. 2. At an age between 21 and 26 years, the average being above 23, he is asked to pass a period of 25 years in a state of exile in unhealthy climates, bound by certain rules of servitude, many of which convey a want of respect to the Medical officer, and confined on board of a ship amongst persons between whom and himself there is not much according sympathy.

3. There is often a moral degeneration leading to idleness, drunkenness, sin, or folly, of those whose highest hopes and aspirations in this world are set upon the termination of those dreary non-continuous twenty-five years.

The departmental grievances are less in the Army Medical Department than in the Naval. In the latter there are no fixed rules or principles by which appointments and promotions are governed. At one period, Medical officers are sent from one unhealthy climate to another, until their health fails; at another time, young Surgeons or Assistant-Surgeons hold all the last appointments. If any complaints are made, the process of "tickling" and mystification is resorted to, and they are told it is going to lead to something which is seldom realised.

By the administrative objections may be comprehended rank, pay, position, and subserviency as an officer, leave of absence, etc. It is in these last that some change may be expected from the present Commission. They are generally disposed to give "extra padding to the saddle," at the same time reserving to themselves the power of placing an increase of weight on the back. Promotions should be in proportion to the executive class, and full pay ought to be continuous, with proportional leave for every year of service. The obtaining leave to go on shore should be modified in the instructions, that a Medical gentleman should not lose his self respect by being compelled to ask leave from a midshipman or a boatswain; and the amount of respect paid to a Medical officer should not depend entirely upon the captain of a ship.

But all alterations will be of no avail unless there be a change in the fundamental grievances, and the period of service be shortened. Chaplains and naval instructors are allowed to retire after fifteen years' service. That time should not be prolonged for the voluntary retirement of the Medical officer, and with the executive class voluntary retirement virtually commences on promotion to the rank of commander, at an average age of 31 or 32. The period of twenty-five years with non-continuous service is little less than the whole average of human life; and death makes sad havoc amongst Naval Medical Officers.

It would be to the interest of the public service, as also of the Medical officers, if a small retiring allowance were permitted after seven years' service, with subsequent increase after ten, thirteen, and sixteen years' of service, with full pay of retirement after twenty years' service, rewards being increased according to the length of service. I am, &c,

MEDICUS.

THE ADMINISTRATION OF ERGOT OF RYE IN SMALL DOSES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your number for November 4 last, Dr. Dyce Brown has communicated some very interesting observations on the use of small doses of the ergot of rye in tedious labours. The excessive and continuous action of half-drachm doses, often dangerous to both mother and child, led him to think of giving the ergot, he tells us, in absent or inefficient labour pains, in small doses of five or six grains of the powder, and this with the view of "trying to get a mild action" of the uterus, or, in other words, to excite that organ to contractions "not to be distinguished from natural pains in their strength and period of intermission." Given in the dose of five grains, Dr. Brown found that, in the majority of instances this single dose sufficed to awaken the desired form of uterine action, "in fact, what might be called excellent, laudable pains and no more," in from five to twenty minutes. If this result do not ensue in the time named, Dr. Brown repeats the dose a second time, in a quarter of an hour or twenty minutes; and he says he has rarely found it necessary to exhibit a third dose; after which, if no result follow, he believes the constitution to be unsusceptible of the action of ergot. This plan of administering ergot in small doses he brings before the Profession because it is recommended in no book he has seen, and because, from what he can learn from personal inquiry, he finds is next to unknown.

That Dr. Brown has been guided by his own observations and reflections to the very excellent practical views which he lays before the Profession. I do not for one moment doubt, and I am sure it will gratify him much to learn that he is supported in them by some of the most eminent living obstetricians on the continent of Europe. Scanzoni, for example, evidently contemplates its exhibition in the cases to which Dr. Brown refers, and this in small doses; since he refers to the injurious effects which even they may exercise, unless certain precautions are observed, on the fœtus ("Lehrbuch der Geburtshilfe." Wein: 1853. P. 477). He evidently forgets to give the exact dose he prefers; but from the strength of the infusion ʒj. to ʒviij. of water he prescribes, being nearly the same as that adopted by Braun, and who speaks more specifically on the subject, one is fairly warranted in concluding that the quantity of the drug exhibited by him at a dose is a very small one, compared with what is generally given in this country. Braun leaves us in no doubt of the dose he uses. "The ergot of rye," he says, "is most effective when it is fresh, and is given in powder, five grains every five minutes; more than a scruple should not be given. A drachm gives rise in many to symptoms of poisoning. If after fifteen to thirty minutes no active contraction of the uterus supervene, no further result is to be expected. After an hour its influence commonly ceases," ("Lehrbuch der Geburtshilfe," etc. wien: 1857. Pp. 367-68). The confirmation of Dr. Brown's practice here is specific. It is only justice to him, however, to state that both Scanzoni and Braun do not use the ergot unless the head be well down in the pelvis, and the os uteri well dilated, there being at the same time everything to induce the belief that if the action of the uterus come to be stimulated under the influence of the drug, the fœtus will speedily be born. Dr. Brown differs from them here,

and on good grounds. If no particular reason to the contrary existed, were the os uteri only dilatable, he would give the ergot at the commencement of labour, even although the presenting part were high, and that not the head, provided it were "not the shoulder, arm, funis, or placenta." In slight disproportion between the fœtal head and the pelvis, and in primaparæ, Dr. Brown would have no hesitation in exhibiting the ergot in such a way as to obtain its "mild action." Now, although our German authors would certainly shrink in fear from the use of the ergot under such circumstances, Dr. Brown's views are very fully corroborated in a letter addressed to the late celebrated Dr. Dewes, by Dr. George Holcombe, New Jersey. "I regard ergot," he writes, "when cautiously administered, as a most interesting and valuable adjuvant in the practice of midwifery. I have used it constantly since Dr. Stearns first called the attention of Physicians to it. For some time I used the scruple doses, or corresponding doses of the decoction which I am afraid are everywhere yet too common, but soon abandoned this practice in consequence of several demonstrations of its impropriety. Since then, I have administered it in very small doses, say from one to three grains, which I repeat as often as may be necessary; and in this manner I am generally able to effect my object, and always without injury to the mother or child. In fact, I have never known a child perish from ergot administered in this cautious manner. I prescribe it now unhesitatingly in first labours, and even in contracted pelvis, and such is the extraordinary energy imparted to the uterus, by the slow but persevering mode of exhibition which I have adopted, that I have very rarely found it necessary, for several seasons past, to resort to the use of forceps, ('A Compendious System of Midwifery,' etc. Tenth edition. Philadelphia: 1843. Pp. 598-99)" The Dr. Stearns here referred to, also gave it in very small doses—latterly, indeed, very much smaller than those recommended by Dr. Brown, and in combination with opium. French obstetricians also recommend comparatively small doses, and very much under the limitations, and in the circumstances in which Scanzoni and Braun would have recourse to its use. I sincerely trust Dr. Brown will prosecute his interesting observations on the subject. Although for many years the peculiarities of his practice have been quite familiar to me, I believed the authors to whom I have referred so well and so widely known, both in this country and abroad, that it never occurred to me to draw the attention of the Profession to them as anything novel. Still Dr. Brown is right; they are much too little known, I now see, and I hope he will soon be able to furnish a series of observations on the subject, which shall recall the attention of obstetricians to a most valuable modification of the use of ergot of rye in tedious labours.

I am, &c.,
Aberdeen, November 29. OBSTETRICUS.

The Premonitory Stage of Cholera.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I am aware of your desire to advance our knowledge of pathology, I trust, therefore, that the following facts will find a place in the *Medical Times and Gazette*:—

You are aware that when cholera first attracted attention that it was stated to be a disease, "*sui generis*," attacking persons in perfect health suddenly with vomiting, severe purging, spasms, etc., and destroying life in a few hours. You are also aware that the General Board of Health published, on November 8, 1853, in the *Times*: "That, indeed, the very worst cases of this formidable disease (cholera) were those where these symptoms (vomiting and purging) are wholly or partially absent, the powers of life being at once struck down by the poison." And further, the Royal College of Physicians of England never went to the bedside, and there interrogate nature. You are aware that their Report on Cholera, published in 1854, is a mere copy of Messrs. James Jameson and William Scot's reports, with all the errors of these gentlemen as to the pathology and Medical treatment of this disease, put forward under the authority of the College. Thus, therefore, it was a received dogma by all the Medical authorities in this empire in 1854, that cholera is a disease of sudden invasion, attacking persons in perfect health suddenly with vomiting, severe purging, spasms, etc., and destroying life in a few hours. I believe it is known to some of the Medical Profession that I have done that which no constituted Medical authority or private Medical Practitioner in any country has done for the benefit of the public; that I have travelled above five thousand miles to London; that I have spared neither time, labour, nor expense to go to the bedside to ascertain and to demonstrate the fact that cholera is not a disease of sudden invasion; that every individual has a warning by a diarrhœa for a few hours, or for a few days, or for a few weeks, that he is about to be attacked with vomiting, etc., with the developed stage of cholera, and that if this diarrhœa is promptly cured the developed stage—that is, vomiting, etc.—is prevented, and life is safe. The accuracy of these results have been established on the Continent, in Germany, and especially in France. In the Academie des Sciences, Dr. Guerin read a Report on Cholera on the 25th September last, in which he named me as being the first, in any country, who demonstrated by accurate pathological facts that cholera is not a disease of sudden invasion. And on the 18th of October last, the French Government published in the *Moniteur* instructions to the public relative to cholera, based almost entirely on the result of my researches. Thus the Government inform the public "that it is a great error to suppose that cholera is a disease of sudden invasion; that, on the contrary, it gives warning of its approach by a diarrhœa for two days or for a week, and if this diarrhœa is promptly cured, the developed stage, that of vomiting, etc., is prevented, and life is safe."

In the interest of the public, I entertain the hope that the above facts will find a place in the *Medical Times and Gazette*, and, under Divine Providence, that they will be a safety to millions of our fellow-creatures.

I am, &c. DAVID M'CLOUGHLIN, M.D.,
Member of the Legion of Honour.
36, Bruton-street, Berkeley-square, London, December 4.

Water from a Maniacal Point of View.

TO THE EDITOR OF THE CHEMICAL NEWS.

SIR,—Although the madmen here who have got me and a number of other perfectly sane individuals under their charge will not allow me the use of chemicals and apparatus, my brain works as actively and as clearly as if I had the Royal Institution laboratory at my disposal. I have just made a most important discovery, which I lose no time in communicating to you.

I have discovered that water is a member of the already large tribe of ammonias. If we take the compound atom

$$N''' \begin{cases} H' \\ H' \\ H' \end{cases}$$

as a typical basis, nothing is easier than to replace the triatomic atom N''' by the monatomic atom H' and the diatomic atom O''; we then replace one of the H's by the monatomic radicle HO, and the thing is done. Water must, therefore, henceforth be formulated thus:—

$$\begin{matrix} H' \\ O'' \end{matrix} \begin{cases} HO' \\ H' \\ H' \end{cases}$$

and must be called *dihydrohydrylhydroxamine*. Hydrate of potash will be

$$\begin{matrix} H' \\ O'' \end{matrix} \begin{cases} HO' \\ K' \\ K' \end{cases}$$

dipotashydrylhydroxamine. Of course the H' and O'' on the left side the bracket exist in a state of combined separation, or separate combination, which allows them to perform triatomic functions.

I am now hard at work on marsh-gas, which, I have no doubt, I shall also shortly be able to prove to be an ammonia.

Hanwell. Yours ammoniamaniacally, N. H. THREE.
—*Chemical News*, October 27, 1865.

COMMUNICATIONS have been received from—

Professor SIMPSON; Mr. F. D. FLETCHER; Mr. T. C. SHAW; HARVEIAN SOCIETY; PHARMACEUTICAL SOCIETY; Mr. G. GASKOIN; Dr. W. GALLOWAY; Dr. A. HESS; APOTHECARIES' SOCIETY; Dr. J. C. L. CARSON; Dr. W. OGLE; THE VETERINARY DEPARTMENT OF THE PRIVY COUNCIL; Mr. W. F. CLARKE; MEDICAL SOCIETY OF LONDON; Mr. F. M. MACKENZIE; OBSTETRICAL SOCIETY OF LONDON; Dr. R. FOWLER; Dr. E. HAMILTON; Dr. A. SMART; ULSTER MEDICAL SOCIETY; Dr. A. DAVEY; ACADEMICUS; ARMY MEDICAL SCHOOL; Mr. URQUHART; Mr. W. PROWSE; Mr. W. D. NAPIER; Mr. SPENCER WELLS; Dr. HARLEY; Dr. HUGHLINGS JACKSON; Mr. E. BELLAMY; Mr. J. CHATTO; "WESTERN DAILY MERCURY."

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 9, 1865.

BIRTHS.

Births of Boys, 1074; Girls, 1088; Total, 2162.
Average of 10 corresponding weeks, 1855-64, 1756·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	700	733	1433
Average of the ten years 1855-64	680·3	673·1	1353·4
Average corrected to increased population..	..	..	1488
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	1	20	7	2	14	8	2
North ..	618,210	8	9	16	3	7	34	6
Central ..	378,058	1	7	10	2	5	4	2
East ..	571,158	6	3	17	1	16	18	1
South ..	773,175	..	10	13	4	16	21	6
Total ..	2,803,989	16	49	63	12	58	85	17

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·832 in.
Mean temperature	46·5
Highest point of thermometer	52·7
Lowest point of thermometer	37·3
Mean dew-point temperature	44·2
General direction of wind	S.W., S.E., S.
Whole amount of rain in the week	0·22 in.

APPOINTMENTS FOR THE WEEK

December 16. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m.; Royal Free Hospital, 1½ p.m.

18. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Mr. James Lane, "A Clinical Account of the Patients Treated by Inoculation by Professor Boeck at the Lock Hospital."

19. *Tuesday*.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

20. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

21. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

HARVEIAN SOCIETY OF LONDON, 8 p.m. Mr. Sedgwick, "On the Influence of Age in Hereditary Disease."

22. *Friday*.

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

ON GENERAL AND LOCAL CHEMICAL DISORDERS ARISING FROM PEROXIDATION,

AND ON THE MECHANICAL DERANGEMENTS THEY PRODUCE.

By H. BENCE JONES, M.D., F.R.S.

PART III.—LECTURE VIII.

ON GENERAL AND LOCAL INFLAMMATION.

(Continued from page 648.)

In the cortical part of the kidney, as elsewhere, the structure of the various textures determines the effect of the chemical and mechanical actions that take place within them. Shortly, omitting the tubes of Henle, it may be said that the kidney consists of cell tubes united by connective tissue covered outside with capillaries, with an arterial tuft inside the closed end of the tubes. Hence it may be said that the cortical structure is composed of three different textures—first, bloodvessels with malpighian tufts; secondly, connective tissue, including the capsule of the kidney; and, thirdly, tubes with epithelium and basement membrane.

Professor Ludwig has called the kidney a hydraulic press, formed to produce that amount of pressure which is required to cause a flow of urine to take place. Before we enter on the effect produced by altered oxidation and nutrition in the different components of the cortical structure, it is very desirable that the effect produced by altering the pressure in the veins and arteries should be clearly set forth. Multitudes of experiments have been made by different observers on ligatures of the renal vein and artery. When the renal vein is tied, the kidney swells in every part with blood to twice or thrice its ordinary size. In an hour or two blood is poured out between the renal capsule and the cortical structure. Afterwards the tufts break and blood escapes into the tubes. The urine is albuminous from the commencement, with blood globules and excess of epithelium, and if the animal does not die before changes of nutrition occur, the epithelium of the tubes is seen to be thickened, and fatty deposit takes place.

When the renal artery is tied, the circulation is partly kept up by the smaller arteries; but the pressure is not sufficient to drive the blood through the capillaries. Hence stoppage takes place in the veins. In a few minutes the medullary substance seems full of blood, whilst the malpighian tufts are collapsed. In two or three hours, from venous congestion, the kidney attains its former size. After twenty-four hours it begins again to decrease, and the longer life lasts the smaller it becomes. In two or three days the renal capsule becomes thickened and adherent. The urine is scanty, with albumen, epithelium and blood globules and fibrinous cylinders. In from seven to more hours the epithelium in the tubes is seen to be thickened, and in twenty-four hours there is fatty matter present in excess, and this increases until the epithelium cells are entirely destroyed. The renal vein may get stopped with coagulated blood, and abscesses may form in the cortical structure and pus cells may be seen in the tubes. In from one to three weeks there are still more marked errors of oxidation and nutrition. Very thickened renal capsule. Larger abscesses. Indistinct tufts. Tubes full of fatty matter and connective tissue thickened.

Attempts have been made to study the effects of pressure when, after removing one kidney, the abdominal aorta has been tied below the renal artery of the other kidney, so as to throw the greatest pressure of the blood on this kidney, but the operation is too severe to allow of any dependable deductions. Far more may be learnt as to the effect on the urine by studying the alterations of pressure caused by different diseases.

Thus, whatever increases the action of the left ventricle, producing increased tension of the pulse, increases the arterial pressure on the tufts, and if sufficiently strong, produces a congestion, giving rise to albumen or even blood globules in the urine.

The same result may follow from causes that excessively depress the action of the left ventricle, or so diminish the tension in the artery that stoppage in the vein takes place. Thus pericarditis, with much exudation, extreme thickening of the aortic valves, or thickening and insufficiency of the mitral valve when no compensation for the weakened circulation is caused by hypertrophy and dilatation; aneurism or disease of aorta. All these diseases may produce an effect resembling in kind that produced by tying the renal artery. Diseases of the heart with insufficiency of the tricuspid valves; diseases of the lungs, with great difficulty of breathing, as pneumonia, pleurisy, emphysema, tubercles in excess, and all diseases that so depress the energy of the heart that the blood stops in the veins, as at the end of typhus fever, carcinoma, tubercle, these all produce effects resembling those produced by tying the renal vein.

A certain pressure of blood in the tufts determines the passage of water into the tubes, within small limits; increased pressure causes increased flow of blood through the kidneys, and produces increased secretion; but excessive pressure or very diminished pressure loads the vessels of the kidney and stops secretion, and if continued, ruptures the malpighian tufts, or causes albumen to exude.

The total quantity of dry albumen which passed out in twenty-four hours in the urine in different states of disease was found to vary from a few grains to at most about one ounce.

Having thus brought before you the effect of variations of mechanical pressure in altering the chemical condition of the urine, I shall now try to show you how altered chemical actions in different textures of the kidneys may give rise to altered mechanical conditions, as well as to altered states of nutrition and altered chemistry of the urine.

In Bright's disease very different chemical and mechanical results are produced when the different structures of the kidney from any cause take on a more active state of oxidation than occurs in the state of health.

It must be remembered that it is not yet forty years since Dr. Bright first drew attention to this complaint. Since then, though much confusion and misinterpretation has from time to time arisen, yet the progress of sound knowledge has been rapid, and a few years more will find all the difficulties and uncertainties regarding Bright's disease entirely removed.

Here, instead of confusing you with fatty disease, amyloid or fibrinoid disease, diffuse nephritis, parenchymatous nephritis, desquamative nephritis, and a multitude of other names, I shall try to point out the different results of peroxidation of the arteries of the matrix and of the tubes. As in inflammation of the lungs, whilst distinctly separating inflammations of different structures, I by no means meant that pleurisy and pneumonia, or bronchitis and pneumonia, or all three inflammations, cannot occur at the same time, so in inflammation of the kidney, interstitial nephritis and the so-called amyloid or fibrinoid disease, or interstitial nephritis and tubular or so-called desquamative nephritis, may occur at the same time; although, for clearness, I shall shortly bring before you each of these inflammations and their results separately.

In inflammation of the cortical structure of the kidney, it must be remembered that every possible degree of intensity or mildness, every possible variety of complication or of simplicity of textural affection, may occur; and although here, as elsewhere, a stage of increased action, a stage of effusion, and a stage of absorption may occur, yet anywhere a more or less permanent halt may take place, or the increased action may recommence with an intensity and extension beyond that of the original complaint. Though I am well aware that amyloid or fibrinoid disease is called a degeneration, and not an inflammation, yet, as I am sure that these undefined terms will come to represent the separate or consecutive action of peroxidation and suboxidation, and their mechanical and chemical results, I shall here treat of fibrinoid disease as arising from an increased action consequent on increased pressure and increased chemical change in the textures of which the artery is composed.

From the action of iodine and sulphuric acid on the deposit which occurs in the arteries of the kidney, Virchow concluded that a peculiar starchy deposit took place, and that this gave rise to one form of disease which was included under the general head of Bright's disease. There can be no question that starch granules are produced in the prostate and elsewhere, and there can be no doubt that starch, sometimes in considerable microscopic quantity, does occur in the urine of women and men. The granules of starch in urine, passed with every care to avoid external starch, become immediately blue with iodine. They swell up and disappear when treated with strong acid; give rise even to sugar when treated with saliva; but in most of the cases that I have seen there has been no albumen in the urine, nor any former history of any symptoms resembling Bright's disease, nor, even though the cases have been closely watched for months, have any symptoms of Bright's disease come on. Moreover, Virchow's

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so-called amyloid deposit has nothing to do with starch, except the name, which must be changed. It contains 15 per cent. of nitrogen and 53 per cent. of carbon; and in Virchow's "Archives," v. 16, p. 50, Friedreich states probably its true composition—that it is an altered fibrinous deposit. It is probably the result of an oxygenised action on fibrin effused into the muscular texture of the artery. The action begins in the walls of the smallest arteries, and extends from the malpighian tufts even to the renal artery. In extreme cases of contracted cortical structure, the diameter of the vessels is so narrowed that water even will hardly pass. Dr. Dickinson found, in some experiments made at my suggestion, that with a pressure which sent 119 ounces of warm water through the healthy kidney in ten minutes, through a very contracted kidney caused less than five ounces (℥4 ʒ6) to pass.(a)

I have already just now described to you what happens when the renal artery is tied and blood in very small quantity is able to pass into the cortical structure. The first result was immediate alteration in the chemistry of secretion, and the second result was an entire change in the chemistry of nutrition of the organ.

In the much slower process of general obstruction consequent upon thickening from slow peroxidation and increased pressure in the walls of the artery, the same two great results are produced.

First, the effect appears in the altered chemistry of secretion.

The quantity of water that can pass through the vessels of the kidney after death, although it gives no certain measure of the quantity of urine the kidney can secrete during life, yet gives some clue to the quantity of blood that passes through the Malphigian tufts to the capillaries from which the solid constituents which make up the contents of the urine are probably chiefly separated.

Gradually, as the arteries and Malphigian tufts become thicker, the course of the blood is thrown on the vascular circulation in the mammary portion of the kidney, and large quantities of water with but little of the proper constituents of the urine may there escape. But for this, the result on the secretion by the cortical structure would very quickly be the same as follows from tying the arteries that supply the kidney. The effects produced by tying the ureters have more resemblance to those produced by obstruction of the urinary tubes.

The latest experiments prove that the cortical structure of the kidneys must not be considered simply as diffusion cells, with pressure on one side of the membrane and no pressure on the other.

In the passage of muscle, nerve, cellular, and other highly complex substances out of the body, we must remember that long and various series of substances are produced, many of which are still unknown. Between the time when these complex organic compounds begin to leave the textures until they are finally thrown out by the kidneys and skin as they pass on through the lymphatics, blood, and excreting organs, they undergo continual downward change of composition by oxidation.

Thus, in the textures, one part of the albumen, fibrin, or syntonin, etc., may be oxidised, and give rise to highly complex neutral and alkaloid substances, and a part of these new substances even there may pass into substances as low in the series as kreatin, and a part of these may pass into uric acid or even into urea, whilst the largest part of the kreatin substances will pass into the blood, and a part of these will there be oxidised to uric acid, or still lower, whilst the larger portion will go to the kidney and skin, and there give rise to substances like uric acid, and sudoric acid, and urea; and when the action in the last oxidising place is complete, urea alone may be the final result.

Thus, the following sketch may be made:—

Albumen, fibrin, syntonin, etc., etc.	In the textures.	
Highly complex neutral and alkaloid substances.		
Substances having at least as much carbon as kreatin.		In the blood.
Substances as far down as uric acid.		
Urea.		In the urine and skin.

The urea may undergo another chemical change anywhere in or out of the body, and give rise to carbonate of ammonia.

Removal or suppression of the passage through the arteries of the cortical structure stops the higher compounds from passing to the kidney to undergo changes there; whilst tying the ureter or stopping the tubes causes the urates and urea to be reabsorbed back into the blood. The different states of altered chemistry of the blood, lymph, and textures thus produced have all been included in one general term—uræmia; and as this may arise from thickened vessels, thickened interstitial texture, or thickened tubes, and as it is a most remarkable example of secondary chemical disease arising from a mechanical obstruction caused by a primary peroxidation, it will form just one of those illustrations of the relationship of chemical to mechanical and mechanical to chemical disease which I have endeavoured in this course of lectures to bring before you.

(To be continued.)

(a) Med. Ch. *Trans.*, vol. 48, p. 243.

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.(a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College, and of University College Hospital.

Lecture XI.

ALBUMINURIA WITH AND WITHOUT DROPSY;—IN CONNEXION WITH BRIGHT'S DISEASE, HEART AND LIVER DISEASE, PREGNANCY, FEVERS, ETC.—ITS CHEMISTRY, PHYSIOLOGY, PATHOLOGY, AND TREATMENT.

(Continued from page 651.)

Albuminuria the Result of Organic Disease of the Heart, Liver, or Pancreas.

This is an exceedingly common class, and one demanding our most careful consideration, as judicious treatment can here do a great deal for the patient. The pathology of this class of cases is very simple, mechanical obstruction *inducing* passive renal congestion. As the albuminuria usually first makes its appearance at a late period of the cardiac, hepatic, or pancreatic disease, it often happens that the patient succumbs to the united effects of the double complication ere any well-marked anatomical alteration in the structure of the kidneys has had time to occur. When such is the case, on post-mortem examination the kidneys are merely found highly congested. Should death, however, not have proved immediate, there is usually some structural change met with in the renal organs, for, as we have already seen under a different heading, the continuance of renal hyperæmia gradually, but surely, leads to chronic hypertrophy, which in its turn ultimately induces a true structural change in the renal tissue. In the class of cases now under consideration, the anatomical alterations met with in the kidneys, as well as the functional derangements to which these changes give rise, must be regarded as the secondary results of the diseased liver, heart, or pancreas, as the case may be. But there is also another class of cases where, although the double complication exists, the pathology is different. I allude to those where the union of the renal and the other affection *is*, as *it* were, accidental. That is to say, each disease has originated independently of the other, certain causes having led to the renal affection on the one hand, certain other causes having induced the cardiac, hepatic, or pancreatic affection on the other. The double complication in the latter class of cases must be looked upon as a much more serious matter than in the former.

For the sake of illustration, let us imagine the case of a patient, who, after having for years been the subject of chronic kidney disease, becomes suddenly attacked with endocarditis, ultimately leading to permanent valvular obstruction, the tendency of this being, as we know, to lead to hypertrophy of the heart. Here, then, is a case of a most grave character; for in addition to the cardiac hypertrophy we have the increased tension in the arterial system produced by the already existing kidney disease, also tending to the same result. The evil does not even stop here; for just as on the one side the kidney disease tends to increase the cardiac hypertrophy, so on the other the valvular obstruction lends its helping hand to increase and perpetuate the kidney disease.

What holds good for cardiac affections holds equally good

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—Ed. *Med. Times and Gaz.*

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for obstructions to the portal circulation induced by hepatic or pancreatic disease. All these morbid conditions act and react upon each other in such a manner as to render it exceedingly difficult to define how much of any given effect is due to the one, how much to the other. Thus it often happens that a patient who has been labouring under the combined effects of cardiac and kidney disease suddenly becomes seriously worse. The swelling of the feet increases, the pulse becomes rapid and irregular, the breathing short and quick, and within twenty-four hours after being in his usual health he seems at the very gates of death. On examining such a patient carefully, we most probably find a foul tongue, a sallow complexion, an enlarged and engorged liver. Added to this a bastard condition of lung—half pneumonic, half bronchitic; râles copious; sputa sanguineolent; dulness irregular, the most distressing symptoms at the same time being the inability to take a full breath and the impossibility to procure sleep. No sooner does the poor patient lie down and shut his eyes than he starts up in a paroxysm of suffocation. Severe as these cases may be, they are by no means always without hope. I have seen patients as bad, and worse than here described, get comparatively well—at least, so well that they have lived for several months and been able to travel many miles. Perhaps this statement will be better appreciated if I relate a case of the kind; and the one I purpose selecting is that of a well-known publisher who I attended with two other Medical men. When first seen, in conjunction with Dr. Walshe and Mr. Courtenay, the patient's condition was briefly as follows:—Great difficulty of breathing; respirations 38; feeble and irregular heart's action; pulse 100; headache, sickness, and vomiting; sputa pneumonic, red, rusty, and tenacious; dulness over the lower pulmonary lobes on both sides of the chest; loud mitral murmur; œdema of the lower limbs; scanty and highly albuminous urine, of a specific gravity of 1010. Coupled with these, there was an engorged liver and a sallow skin. In fact, a more hopeless-looking case could scarcely be imagined; for, although the patient could not lie down to sleep, he seemed gradually drifting into a state of uræmic coma. His breath and perspiration had already a urinous odour, and that, coupled with the uræmic pneumonia, made one regard the case with anything but agreeable forebodings. Strange to say, however, under very active treatment directed to the skin, lungs, liver, and heart alternately, this patient ultimately recovered, and was able to leave his bedroom within five weeks from the time that he was in the condition above described, and within a very few weeks more he was able to take a fifty miles' railway journey with perfect impunity. During the period of active treatment the case several times assumed so severe a character that both Dr. Walshe and Dr. Williams, who also saw the patient during his illness, agreed with Mr. Courtenay and I in thinking that hours, not even days, would have limited his existence.

The influence of cardiac disease on renal affections is not yet all told, for it may lead to other complications than those already described—such, for example, as embolism of the kidney, of which the following case, kindly furnished to me by Dr. Bäumler, is a good illustration. It has the additional advantage, too, of being one in which the pathological condition was correctly diagnosed during life:—

E. K., aged 26, admitted into the German Hospital on October 3, 1864, with well-marked mitral disease; no dropsy; rather difficult breathing; crepitation at the base of the right lung.

October 4.—Urine scanty (about 700 c.c.), with deposit of urates; contained only a trace of albumen, a good deal of pigment, and a considerable amount of urea, so that on putting strong nitric acid to it, the urine very soon crystallised.

5th, 6 p.m.—Sudden attack of severe pain in the right side below the twelfth rib, and in the right loin. Complete collapse; extremities cold; slight cyanosis; no pulse could be felt; sickness and vomiting, diarrhœa. Rallied after the administration of stimulants.

6th.—Pain and sickness continued.

7th.—Diarrhœa stopped. A little blood in the sputa.

From the 7th to the 12th of October the prominent symptoms were in the chest, the pain in the right side having then nearly subsided.

12th.—Feels better; urine in quantity and appearance the same as on the 4th. *A little more albumen.* In the evening she was suddenly seized with vomiting, repeated purging, severe pain in the left hypochondrium, and collapse.

13th.—Pain continued very severe. (Great relief from subcutaneous injection of $\frac{1}{4}$ gr. of morphia.) The pain was greatest just below the twelfth rib, and radiated to the left loin.

15th.—No more diarrhœa. Urine 500 c.c.

16th.—Urine 1000 c.c., contained *more* albumen than on the 12th. The field of the microscope was covered with tube-casts, transparent and granular, and blood corpuscles.

22nd.—The same amount of albumen; felt better; œdema of the legs.

23rd.—Chest symptoms increased; considerable effusion into the right cavity of the pleura.

25th.—Less urine, less albumen.

27th.—Beginning jaundice.

31st.—No albumen nor casts.

November 2.—Urine about 1000 c.c., without deposit; large amount of bile pigment; *no* albumen.

11th.—*Not a trace of albumen* in the urine. Died on the same day.

The post-mortem examination showed a small fibrinous deposit in the right kidney in a state of shrinking; the upper part of the left kidney entirely diseased; one of the branches of the renal artery plugged up; the plug was about one inch long.

Albuminuria the Result of General Affections.

This includes a large group of diseases, which with advantage may be subdivided into the two varieties of febrile and non-febrile affections. Among the diseases composing these groups may be mentioned—

1st. Small-pox, typhus, typhoid, scarlet, yellow, rheumatic, puerperal, and remittent fevers.

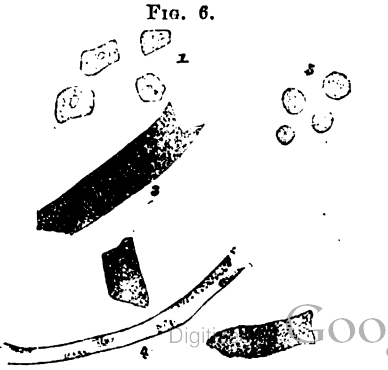
2nd. Pneumonia, pleurisy, bronchitis, phthisis, peritonitis, gout, scurvy, erysipelas, purpura, and cholera.

The urine in all these cases may be coagulable under three different conditions. In the first place, the kidneys may only permit the serum of the blood to escape; in the second place, not alone may the unorganised serum escape, but even the organised blood corpuscles, thereby giving to the case somewhat the appearance of acute Bright's disease, the urine being both coagulable and smoky, or even red. Thirdly, and lastly, in the severer forms of disease, especially in those assuming a malignant type, the walls of the blood corpuscles are broken down, and their disorganised contents—hæmato-globulin—escape, giving to the urine the colour and chemical reactions, without, however, the microscopical characters, of hæmaturia. Such a state of things is occasionally seen in putrid typhus, malignant scarlet fever, and severe purpura. I shall afterwards have to relate cases, under the head of intermittent hæmaturia, which closely resemble these, in so far as the urine contains disorganised blood constituents without blood corpuscles.

As regards the pathology of the albuminuria of general affections, all that need be said is that it is essentially due to renal congestion, and that there is usually but little difficulty in diagnosing the case, from the circumstance of its coming and going with the other affection. It is true that active congestion may also supervene in the course of one or other of the forms of primary albuminuria, but even then we have it in our power to recognise its existence by a peculiar form of renal tube-cast—the granular tube-cast. Granular casts were at one time thought to be characteristic of contracted kidney, but this I have long since proved to be an error. They may occur in cases of contracted kidney, as they may occur in any form of albuminuria; but the cause of their presence is then, as it is now, active congestion.

Some idea of the appearances presented by granular tube-casts can be obtained from the accompanying illustration.

Fig. 6.



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The casts may be large or small, quite full, or only partially filled with granular matter, the size of the cast depends on the part of the tube in which it was formed; the amount of granular matter it contains on the condition of the kidney. Quantities of escaped granular matter and epithelial cells may also be irregularly scattered over the field of the microscope.

Before passing to the subject of treatment, I would again call special attention to the fact that in every form of chronic kidney disease, the organ is liable—more liable than the healthy kidney to occasional attacks of acute congestion or of inflammation, and that under such circumstances the appearances met with in the urine become modified and complicated accordingly. Fatty casts being found mingled with blood corpuscles, waxy casts mixed up with pus cells, granular casts surrounded with oil globules, and so on, thereby throwing insurmountable difficulties in the path of the beginner. Care and experience will, however, soon clear the way and show that the apparent confusion is but perfect order not properly understood.

(To be continued.)

ORIGINAL COMMUNICATIONS.

REMINISCENCES OF THE CHOLERA AT ST. GEORGE'S HOSPITAL IN THE YEARS 1849 AND 1854.

By JOHN W. OGLE, M.D., F.R.C.P.,
Assistant-Physician, and Lecturer on Medical Pathology, St. George's Hospital.

(Continued from page 599.)

Case XVI.—No. 207, 1854. Female, aged 45. Admitted August 9; died August 10. Bowels generally relaxed.

Treatment.—Ammonia and brandy.

Post-mortem Examination.—Abdomen: The external surface of the ileum was more than usually vascular. The stomach and small intestines contained a quantity of light-coloured yellow fluid containing mucus and albuminous shreds. A few enlarged solitary glands only existed at the lower part of the ileum. The bladder was empty and contracted. The spleen was very large and pulpy, weighing 1 lb., and of a brownish red colour. Liver was of the same colour, but of natural size. Gall-bladder with plenty of bile. *Thorax:* Lungs and heart natural; both the auricles and the right ventricle of the heart contained much light-coloured, fibrinous clot; the left ventricle was empty and contracted. Lining surface of heart not bloodstained. *Cranium:* The brain on section showed many "puncta;" otherwise it was natural.

Special Remarks.—She had lately recovered from an attack of tertian ague, and afterwards the bowels had continued relaxed. She was admitted with pulse scarcely perceptible, and moist clammy skin. Never rallied. No mention of diarrhœa or vomiting or cramps, etc.

Case XVII.—No. 209, 1854. Male, aged 27. Admitted August 8; died August 13. Bowels relaxed for one month.

Treatment.—Opium and acetate of lead and capsicum. Brandy, beef-tea, and sinapisms to the epigastrium and other parts of the body. A tourniquet was applied to each leg with a view of preventing cramps.

Post-mortem Examination.—Abdomen: The stomach was natural. At the lower part of the ileum many Peyer's patches and a few solitary glands were very large. Liver natural; gall-bladder contained much bile. Kidneys very congested. Urinary bladder with several ounces of dark very albuminous urine. *Thorax:* Lungs very congested, and in parts very solidified. Heart natural; its left ventricle very contracted—right one containing firm clots; its lining membrane *not* blood stained. *Cranium:* Meningeal vessels slightly congested.

Special Remarks.—The use of the tourniquet appeared at first to produce benefit. Coma came on. For the last twenty-four hours of life no diarrhœa existed and no urine was passed.

Case XVIII.—No. 214, 1854. Female, aged 21. Admitted July 26; died August 20. No diarrhœa previous to more decided symptoms.

Treatment.—Mustard emetic, stimulants. Calomel when the choleraic symptoms came on. Afterwards calomel in two grain doses every two hours. Saline draught containing bicarb. soda, sulphate of magnesia, and antimonial wine.

Post-mortem Examination.—Abdomen: Mucous membrane of stomach very vascular, and its walls very thickened and hardened, and in one part perforated by an ulcer which was only blocked up by a fold of peritoneum. The inner surface of the upper part of the small intestines very vascular. The solitary glands were enlarged in the lower part of the ileum, and a few Peyer's patches also. A few glands in the colon enlarged. Mesenteric glands enlarged. Liver natural, and gall-bladder containing much bile. Urinary bladder empty and contracted. *Thorax:* Heart very weak; its right cavities and left auricle contained weak clotted blood, but the left ventricle was empty, though not much contracted.

Special Remarks.—Admitted with constipation and congested lungs, which had followed pleurisy. Five days after admission vomiting came on three or four times, and she had enemata and took aperients. On August 14, slight sickness again came on for two days, and returned on the 19th with diarrhœa. Collapse and fainting then came on.

Case XIX.—No. 216, 1854. Female, aged 53. Admitted July 5; died August 22. No diarrhœa previous to more decided symptoms.

Treatment.—Character of remedies given not stated.

Post-mortem Examination.—Abdomen: Stomach natural. Inner surface of the intestinal tract almost universally pale. The stomach and duodenum contained much slate coloured fluid; the other intestines contained yellow opaque fluid. The solitary glands of the ileum rather enlarged. Kidneys contained cysts and were otherwise diseased. Urinary bladder contained only a slight amount of urine. Liver, gall-bladder, and bile ducts natural. Uterus was the seat of a mass of ulcerated carcinoma. *Thorax:* Lungs very congested. Heart's substance very friable and yielding; both the right cavities contained blood and fibrin clot; the left auricle and ventricle contained slight blood clots, the ventricle not being contracted.

Special Remarks.—Having been admitted with carcinoma of the uterus, she much improved in general health until she was seized with choleraic symptoms on August 22. She quickly sank into collapse and died the same day.

Case XX.—No. 223, 1854. Male, aged 47. Admitted August 23; died August 25. Period of diarrhœa previous to more decided symptoms, two days.

Treatment.—Mustard emetics and calomel in 40-gr. doses, then in 2-gr. doses every two hours. Saline draughts containing bicarb. potash, sulphate of magnesia, and small doses of antimony. Castor oil once.

Post-mortem Examination.—Abdomen: Stomach natural. The lining of the intestines in places rather vascular. Intestinal glands natural. Liver, kidneys, and bile ducts natural. Urinary bladder empty and contracted. *Thorax:* The lungs contained scrofulous deposit and a vomica. Heart natural; the auricles contained much clotted blood and the right ventricle a well-formed clot of fibrin. *Cranium:* Brain natural, but an unusual amount of fluid was found in the ventricles and beneath the arachnoïd membrane.

Special Remarks.—Very slight amount of diarrhœa or vomiting existed throughout. Had been out of condition and ailing for some months.

Case XXI.—No. 224, 1854. Male, age not known. Admitted August 23; died August 25. Period of diarrhœa previous to more decided symptoms, one day.

Treatment.—Mustard emetic. Calomel gr. xx., repeated every half-hour, for seven and a-half hours, and saline draughts (antimony, chlorate of potash, bicarb. soda) alternate hours. Fragments of ice to suck. Sinapisms to the epigastrium.

Post-mortem Examination.—Abdomen: The mucous membrane of the stomach was opaque and rather thickened; that of almost all the intestines very vascular except that of the cæcum and descending colon. Solitary glands of the lower part of the ileum rather large, Other organs natural. *Thorax:* Lungs very congested. Heart natural, excepting a slight patch of ecchymosis at one part on the surface. *Cranium:* Brain showing many "puncta" on section. The meningeal veins very turgid with blood. Much clear serum existed in the ventricles.

Special Remarks.—Blood was passed with the evacuations from the bowels at the onset.

Case XXII.—No. 225, 1854. Male, aged 33. Admitted August 25; died August 26. No diarrhœa previous to more decided symptoms.

Treatment.—Mustard emetic. Calomel, gr. xx., repeated twice in the hour, and then given every hour. Saline draughts

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containing chlorate of potash and bicarb. soda. Sinapisms to the epigastrium.

Post-mortem Examination.—Abdomen: The external surface of the intestines was congested. The inner surface of the stomach and in places that of the cæcum and colon had the appearance as if charred by heat, giving the impression that blood beneath the mucous membrane had been acted on by chemical means. The inner surface of the cæcum and colon also showed much ecchymosis of blood. Solitary glands of the lower part of the ileum much enlarged, and Peyer's patches also in places. No ulceration existed in the stomach or intestines. Mesenteric glands enlarged. The contents of the stomach and duodenum were of a pinkish-white colour, that of the lower part of the bowel of a slate colour. Liver natural, and gall-bladder containing much bile; kidneys natural, and urinary bladder empty and contracted. The ascending vena cava contained much weak clot. *Thorax:* Lungs congested. Heart natural; right ventricle containing slight fibrinous clots, and both auricles containing weak blood clots; left ventricle contained thin blood. *Cranium:* Brain showed increased "puncta" on section.

Case XXIII.—No. 226, 1854. Male, aged 2½ years. Admitted August 26; died August 26. No diarrhœa previous to more decided symptoms.

Treatment.—Mustard emetic given, but not swallowed.

Post-mortem Examination.—Abdomen: Stomach natural; mucous membrane of the intestines generally softened and pulpy; solitary and Peyer's gland enlarged; kidneys natural; urinary bladder empty and contracted. *Thorax:* Lungs natural; left ventricle of the heart contained slightly clotted blood.

Case XXIV.—No. 229, 1854. Male, aged 70. Admitted August 26; died August 27. Period of diarrhœa previous to more decided symptoms not known.

Treatment.—Mustard emetic. Vapour bath.

Post-mortem Examination.—Abdomen: Stomach natural; inner surface of the intestines generally congested, especially that of the jejunum. A few both of Peyer's patches and of the solitary glands enlarged. Moreover, patches of ecchymosis of blood existed under the mucous membrane of the jejunum. Kidneys congested, their capsules being adherent. Liver pale; gall-bladder containing plenty of bile. Other organs natural. *Thorax:* The lungs contained a slight amount of scrofulous deposit. Heart natural, having soft blood clots in its cavities.

Special Remarks.—Fainted when taken out of bed, but recovered so as to take the bath.

Case XXV.—No. 231, 1854. Male, aged 27. Admitted August 9; died August 28. Diarrhœa existed for some weeks previous to more decided symptoms.

Treatment.—At first, for the diarrhœa, dilute sulphuric acid, with ginger wine. Afterwards sulphur and sesquicarb. soda every four hours. Then chalk and opium. When decided cholera set in, a mustard emetic was administered, and 20 grains of calomel given and repeated every half-hour. Also chlorate of potash and bicarb. soda. Brandy and stimulants.

Post-mortem Examination.—Abdomen: Stomach natural. Mucous membrane of the ileum (especially lower part) unusually vascular, and the solitary glands at this part enlarged. Mesenteric glands rather enlarged. Kidneys pale. Urinary bladder empty. Other organs natural. *Thorax:* Lungs natural. Heart flaccid, but not friable; left ventricle containing thick fluid blood, and the right one some weak clotted blood; but neither of them contracted. *Cranium:* Contents natural, excepting increased sub-arachnoïd fluid.

Special Remarks.—Was admitted for diarrhœa, having also lately had a fistulous abscess in the perinæum, which healed, and from the discharge of which he was much weakened. On the 27th symptoms of cholera set in, and collapse quickly came on.

Case XXVI.—No. 233, 1854. Female, aged 40. Admitted August 27; died August 30. Diarrhœa, previous to more decided symptoms, existed two or three days.

Treatment.—Calomel in 10-gr. doses every four hours, and bicarb. soda and chlorate of potash intermediately. Beef tea and stimulants. Vapour bath, which was repeated. Nitric æther and then chloric æther added to the saline draughts.

Post-mortem Examination.—Abdomen: Stomach natural. The solitary glands of the ileum were slightly enlarged, and the lining of the small intestine very bile-stained. Kidneys natural, and urinary bladder empty. Spleen full and large, and liver rather congested. Part of the wall of the uterus involved in ecchymosis. *Thorax:* Lungs and lining of bronchial tubes very congested. The left ventricle of the heart very contracted; in both cavities on the right side of the heart was a firmish blood clot; the lining surface of the heart was very blood-stained.

Special Remarks.—Diarrhœa at first stopped by medicine. During the attack of cholera the catamenial discharge made its appearance, having been stopped when taken ill. Only a very small amount of urine passed throughout the illness.

Case XXVII.—No. 234, 1854. Female, aged 28. Admitted August 27; died August 30. No diarrhœa existed previous to more decided symptoms.

Treatment.—Mustard emetic, which was repeated. Calomel in 20-grain doses, repeated every two hours. Saline draughts containing chlorate of potash and bicarbonate of soda. Vapour bath.

Post-mortem Examination,—Abdomen: Mucous membrane of the stomach rather vascular, and showing one or two patches of ecchymosis of blood. Inner surface of the ileum very bile-stained, and the solitary glands at its lower part enlarged. Mesenteric glands enlarged. The stomach and intestines contained lightish green fluid. The spleen was large and friable. Kidneys very congested. Bladder very contracted. Uterus vascular, and lined by a fibrinous exudation. *Thorax:* Lungs very congested posteriorly. Heart flaccid, and its lining membrane very blood-stained; the left ventricle, which contained a very small clot, was contracted; both its cavities on the right side and the left ventricle contained firmish, black blood-clot.

Special Remarks.—Cramps relieved by the vapour-baths. The pupils of the eyes very dilated. Hiccough came on, relieved by brandy. A very slight amount of urine passed. At one time there was a reaction and abeyance of symptoms of collapse.

Case XXVIII.—No. 238, 1854. Male, aged 18. Admitted August 31; died August 31. No diarrhœa existed previous to more decided symptoms.

Treatment.—Mustard emetic. Drachm doses of dilute sulphuric acid and chloric æther given every twenty minutes, but he was very sick whenever he took it. Emetic repeated.

Post-mortem Examination.—Abdomen: Mucous membrane of the stomach showed a few patches of ecchymosis of blood, and its solitary glands were rather enlarged. All the solitary glands and a few of Peyer's patches in the ileum much enlarged. Mesenteric glands very much enlarged. Kidneys contained a very large amount of blood. Urinary bladder empty and contracted. Liver very much gorged with blood; gall-bladder full. Spleen large and softened. *Thorax:* Lungs very congested. Heart's cavities free from any clot, but the left auricle and both the right cavities of the heart were full of black blood; left ventricle very contracted. Inner surface of the heart not blood-stained. *Cranium:* A somewhat unusual amount of fluid existed in the cerebral ventricles and below the arachnoïd.

Special Remarks.—A very slight amount of urine passed at any time.

Case XXIX.—No. 239, 1854. Male, aged 45. Admitted August 31; died September 1. Period of diarrhœa previous to more decided symptoms not known.

Treatment.—Mustard emetic. Calomel every ten minutes.

Post-mortem Examination.—Abdomen: Stomach natural. Inner surface of the lower part of ileum rather vascular, and a few solitary glands enlarged. Liver congested. The gall-bladder contained but a small amount of bile. Spleen rather congested. Kidneys congested. Urinary bladder empty.

Case XXX.—No. 287, 1854. Female, aged 29. Admitted August 23; died September 2. No diarrhœa existed previous to other symptoms.

Treatment.—Mustard emetic. Sinapism to epigastrium. Calomel gr. xx., and repeated in ten-grain doses every half hour, and then every hour. Saline draughts containing chlorate of potash and bicarb. soda, and rhubarb and aromatic confection after the jaundice sat in. Vapour bath. Brandy and stimulants, and astringents. Effervescing salines.

Post-mortem Examination.—Abdomen: Mucous membrane of stomach rather vascular; that of the small intestines pale, having a "sodden" look; that of the colon thickened in parts, and raised in ridges, having patches of ecchymosis of blood beneath. The urinary bladder contained a large amount of urine; gall-bladder full of thick mucus, but no bile. Other organs natural.

Special Remarks.—Was suckling at the time of the attack, but this did not suppress the secretion of milk. Jaundice

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came on and disappeared; she also had sores and hiccough. No urine passed throughout.

Case XXXI.—No. 301, 1854. Male, aged 26. Admitted September 20; died September 25. Period of diarrhœa previous to more decided symptoms, three or four days.

Treatment.—Mustard emetic. Two 20-grain doses of calomel, repeated in 3-grain doses every half-hour. Fragments of ice to swallow. Sinapisms to the epigastrium. Stimulants and calomel repeated. Latterly quinine was given every six hours, and retained.

Post-mortem Examination.—Abdomen: Stomach natural. Solitary glands of the ileum rather enlarged. Other organs natural. *Thorax:* Heart healthy; all its cavities contained much fibrin. The posterior part of one lung was solidified and contained purulent fluid.

Special Remarks.—Urine passed with the evacuations. Towards the last part of his illness the calomel was passed in the fæcal evacuations.

Case XXXII.—No. 303, 1854. Female, aged 19. Admitted September 8; died September 27. No diarrhœa existed previous to more decided symptom; but there was sickness with cramps for two nights.

Treatment.—Ammonia, followed by 3-grain doses of calomel and castor oil. Nitric æther and antimonial wine when the febrile eruption came on. Latterly bark and ammonia and wine.

Post-mortem Examination.—Abdomen: The various organs were natural; but the patches of Peyer were unusually distinct. The uterus contained a fœtus of the fourth month. *Thorax:* Organs natural; the blood very dark.

Special Remarks.—Had been "out of sorts" two weeks, and for two nights had been sick and suffering from cramps. The early stage of collapse passed off. Pain in the chest and a rose-coloured papular eruption of the face came on; and then the nose assumed an erysipelatous character. What was thought to be a miscarriage occurred.

Case XXXIII.—No. 304, 1854. Female, aged 37. Admitted September 26; died September 29. No diarrhœa previous to more decided symptoms.

Treatment.—Five-grain doses of calomel and saline draughts every hour, and iced drinks; brandy and arrowroot; hydrocyanic acid.

Post-mortem Examination.—Abdomen: The temperature of the abdomen fourteen hours after death was considerably higher than that of other parts. Stomach natural. The inner and outer surfaces of the whole of the intestines more vascular than usual. A few solitary intestinal glands, and also some mesenteric glands, were enlarged. Gall-bladder contained much bile. *Thorax:* Lungs and heart natural. The right cavities and left auricle of heart contained much weak jelly-like blood-clot; a very slight amount of the same existed in the left ventricle.

Special Remarks.—Urine passed during illness in plenty.

Case XXXIV.—No. 320, 1854. Male, aged 11. Admitted October 18; died October 18. Previous symptoms not known. There was no time for treatment.

Post-mortem Examination.—Abdomen: Stomach natural. Solitary glands and Peyer's patches of ileum unusually distinct, but not enlarged. Urinary bladder empty and contracted. Other organs natural. *Thorax:* The left lung was much "hepatised."

Special Remarks.—Brought to the Hospital in a state of stupor, which, along with febrile excitement, was said to have followed cholera.

Case XXXV.—No. 322, 1854. Female, aged 26. Admitted October 21; died October 24.

Treatment.—Treated only with reference to the state of the lungs.

Post-mortem Examination.—Abdomen: Excepting the liver, which was large and fatty, all the organs were natural. *Thorax:* Patches of lobular pneumonia existed in both lungs.

Special Remarks.—Had had cholera. The diarrhœa continued subsequent to recovery from collapse; and this was followed by fever and pain in the chest and head, with which she came into Hospital. The urine, which had to be drawn off, as she had a difficulty in voiding it, was albuminous.

Case XXXVI.—No. 348, 1854. Female, aged 39. Admitted October 5; died November 7. Period of diarrhœa previous to more decided symptoms, three or four days.

Treatment.—Mustard emetic. Saline, with sulphur. Ice to the neck. Sinapisms constantly applied to the surface. Stimulants and eggs.

Post-mortem Examination.—Abdomen: The kidneys were large and softened, with adherent capsules. The spleen also softened. Other organs were natural. *Thorax:* Cavities containing pus existed in both lungs. The heart was natural; its left ventricle contained slight blood-clot, and was not contracted. *Cranium:* Brain natural. An increased amount of fluid existed in the ventricles and beneath the arachnoid membrane.

Special Remarks.—Urine was drawn off. After rallying from collapse, febrile symptoms set in (October 14), with pain in the head, and delirium and mania following a peculiar livid attack of urticaria. Bed-sores and cough came on eventually.

To the above thirty-six cases which I have detailed as having occurred during the epidemics alluded to, I will now add a case which, as I find, happened in 1846, and will incorporate its consideration with that of the others.

Case XXXVII.—No. 156, 1846. Aged 60. Admitted July 10; died July 11. No diarrhœa had existed previous to more urgent symptoms.

Treatment.—Vapour bath. Calomel and opium and chalk mixture. All at first rejected, but a second dose of calomel retained. Brandy freely given, and beef tea. Hot water containing mustard.

Post-mortem Examination.—Thorax: Lungs and heart healthy; both the auricles and the right ventricle were distended with black semi-fluid blood, free from coagulum of fibrine. The left ventricle was empty. *Abdomen:* The stomach was filled with thick greyish fluid; its coats were natural. The intestinal canal was rather far advanced in decomposition; and the whole canal was filled with a thickish, brownish-red fluid. The mucous membrane was of a reddish colour throughout; and in various parts circumscribed patches of recently extravasated blood were found among the coats of the bowel. The various glands of the intestines were natural. The liver, spleen, and kidneys were natural.

Special Remarks.—There was throughout no suppression of urine.

(To be continued.)

CASE OF ATHEROMATOUS DEGENERATION OF AORTA.

ULCERATION AND DILATATION OF ITS COATS—RUPTURE INTO PERICARDIUM—SUDDEN DEATH.

By Assistant-Surgeon GEORGE F. DUFFEY,
M.B. University of Dublin.—1st Battalion 24th Regiment.

PRIVATE W. W., 30 years of age, strong, and apparently healthy, but of rather a sallow complexion. Had eight years' military service, two of which were passed in India; married, and of temperate habits. He had an attack of rheumatism in 1862, which lasted fourteen days, and there was a small cicatrix of a venereal sore on the prepuce, showing that he must have had syphilis prior to enlistment, as there was no admission for that disease against him in his Medical history sheet. He was in the Regimental Hospital comparatively recently (during the months of July and August) with subluxation of the right ankle; but was discharged on August 21. Being still then a little lame, he was unfitted for duty in the ranks, and consequently was appointed to attend to the cleanliness of the married quarters.

Neither during the time he was in Hospital, nor at any other period, did he complain to the Surgeon of the regiment or myself of anything being the matter with him, except the sprained ankle; but the widow states that he complained to her of pain in the left side of his chest for the last two and a-half years; and that during the week preceding his death this pain grew worse, his appetite failed, and he slept badly. Still, however, he did not come sick, and up to the moment of his death was engaged with his duties.

He was in the act of pumping some water, when he suddenly fell backwards; some of his comrades immediately ran to his assistance, and seeing his congested face and protruded eyeballs—thinking he was in an apoplectic fit—poured some water over him and carried him to the Hospital (a distance of only eighty yards from the place at which he fell) where I happened to be at the time. He was then in a state of syncope, and his face instead of being as at first florid, was very pale, no pulse was perceptible; brandy, ammonia, hot water

jars to feet, and other restoratives were called into use, but in vain; he gasped convulsively two or three times, and expired within five minutes from the time he fell.

On making the post-mortem examination, I found that the pericardium was filled with clotted blood, the weight of which was nine ounces. The aorta was greatly dilated; its coats in some places felt thick and hard, and in others very thin and soft. On removing the areolar tissue, its external surface appeared greatly congested, and in some places yellow cheesy-like patches were observed. On slitting up the vessel extensive and thick deposits of atheroma were seen; in some places the internal and middle coats were ulcerated. Between the orifices of the innominate and left carotid arteries was a small aneurismal sac, about the size of a filbert, and another was commencing to form just behind the right auricular appendix. Great difficulty was experienced in finding the rupture through which the blood had escaped into the pericardium. At last, however, after a long search, I found a small circular patch of ulceration, of a bright red colour, situated a little above the left sinus of Valsalva; through which a minute opening, only allowing the passage of a small sized probe, led into the sac of the pericardium. The heart was rather flabby, but the valves were normal.

This case is interesting as showing the large extent of the disease which must have been going on for so long a time, and which led to so sudden and fatal termination; existing without any marked or acute symptoms which would call a Physician's attention to it. The position of the opening through which the blood escaped into the pericardium, and its very small size, with the suddenness of the death, are remarkable. Arterial diseases are especially interesting to army Medical officers, as, from the vagueness of the symptoms occasionally accompanying them, particularly aneurism of the thoracic aorta, which, as Professor Stokes has remarked, "may be the most latent of all diseases," a man suffering from such a complaint, and otherwise appearing, as this man did, to be in the enjoyment of good health, might be considered as a malingerer, and a fatal termination consequently hastened by the performance of too arduous military duties.

Dublin.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASE OF LIGATURE OF THE EXTERNAL ILIAC ARTERY.

(Under the care of Mr. ADAMS.)

On November 17 Mr. Adams tied the external iliac for the cure of an aneurism of the common femoral artery. The case was that of a woman, aged 53, and was peculiar from its being supposed to have originated from a kick in the groin received three years ago. A swelling resulted from the violence inflicted, and remained stationary until five months ago, when it began to enlarge until it increased to the size of two fists, and extended into the pelvis at least three inches. The limb was much swollen and very tense in some parts, owing to the pressure upon the vein. The minute capillaries of the skin were much distended.

An incision of at least five inches was made in the usual situation, and the layers of abdominal muscles and the fascia transversalis were carefully divided, and the artery was readily secured.

The case has progressed satisfactorily to the present time, the tumour has much diminished, and the leg has returned to its natural shape and size.

The ligature came away on the twenty-ninth day.

BIRMINGHAM GENERAL HOSPITAL.

ILLUSTRATIONS OF THE CAUSES OF DEATH IN BRIGHT'S DISEASE OF THE KIDNEYS.

(By JAMES RUSSELL, M.D.)

(Continued from page 576.)

II.—DEATH FROM ERYSIPELAS AND FROM SOME SIMILAR FORMS OF ACUTE BLOOD POISONING.

The connexion which subsists between Bright's disease of the kidneys, on the one hand, and erysipelas and diffuse cellular inflammation, on the other, has long been recognised by Surgeons. Thus, Mr. Erichsen ("Science and Art of Surgery," 3rd ed.) writes:—"Some *diseased states of the blood* appear to predispose in the highest degree to the supervention of erysipelas. This is especially the case in diabetes, and in granular disease of the kidneys attended by albuminuria. As a consequence of renal disease, erysipelas will occur idiopathically, or from the most trivial causes; a scratch, the sting of an insect, or any of the minor operations in Surgery, more especially about the lower part of the body, will occasion it."—(P. 401.) Mr. Pirrie speaks in similar terms. This complication of renal disease with erysipelas is spoken of by Mr. Erichsen as almost precluding the hope of recovery; it will, however, be observed that in two of the following cases the patients had suffered from a prior attack.

Whatever be our opinion as to the identity of the Surgical form of erysipelas with that form of the disease affecting the head and face, which falls to the province of the Physician, the latter form appears almost as liable to occur in the course of chronic Bright's disease as the former; the cases which follow afford an illustration, and the proclivity to the erysipelatous disease is further manifested in two instances by the fact of each of the patients having already suffered from one attack before that which proved fatal.

Besides cases of erysipelas, instances of chronic Bright's disease present themselves, in which the case arrives rapidly at a fatal termination, after the occurrence of one or more rigors, and with every indication of blood poisoning, though no outward nor inward inflammation appears. There can be little question that such instances obtain explanation from the analogy afforded by erysipelas, and that they are closely allied to that disease, if not identical with it. Two examples are added.(a)

Case 3.—Large Kidney.

F. F., aged 17. Presented an obscure history of profuse hæmaturia through eighteen months, beginning after fall on loins. Urine found to contain coagulum and numerous blood casts, but not more albumen then explained by the blood. No anasarca. Few general symptoms.

Attacked in Hospital with erysipelas of head and face, from which had suffered twelve months before. Symptoms urgent, with delirium and vomiting, each continuing after subsidence of the inflammation. Urine almost suppressed for five days, became densely albuminous, and was charged with disintegrated blood and with crowds of blood casts; on the third day it was nearly solid by heat, albumen thence diminishing rapidly.

Eleventh day, satisfactory progress making towards recovery, when he died suddenly in bed, no one witnessing his last moments.

Sectio Cadaveris.—Nothing to note in brain nor in contents of chest, except hypertrophy of left ventricle of heart; heart's fascicles healthy, cavities contained some recent clot; blood generally fluid; collapsed lungs, loaded with dark blood; tubes injected; pulmonary artery free from clot; kidneys very large, 26½ oz., well coloured, thickly spotted with single coils of hæmorrhagic tubes throughout cortex; renal cells presented various abnormal shapes; tubules dilated; some small arteries hypertrophied.

Case 4.—Large Kidney.

G. B., admitted with erysipelas of head and face of two days' standing; a second attack. No urgent symptoms, except manifest tendency to sink. Pulse 80-85; respiration 42. Erysipelas ceased on the fourth day, but prostration increased. On following day pulse 112, respiration 58. Sordes on teeth and lips, vomiting and death. No anasarca.

Sectio Cadaveris.— Blood fluid; grey substance of brain pallid; loose fibrinous coagulum right side of heart; lungs densely loaded with bloody fluid, very firm in texture; tubes somewhat congested; kidneys 20 oz.; general single coils of hæmorrhagic tubes; cells ragged; outline of tubes obscure; some small arteries hypertrophied. The condition of kidneys in this case remarkably resembled that in the preceding case.

Case 5.—Amyloid Cachexia.

T. N., aged 38. Syphilis with secondaries since 1850,

(a) Possibly the following remark by Dr. Richardson ("Clinical Essays," p. 181) may *by analogy* throw some light on these last-mentioned cases:—"I admit that there are occasionally acute uræmic cases in which, towards their finale, either from decomposition of urea in the blood or from some change in the destruction of tissue coeval with the formation of urea itself, ammonia in absolute excess is presented in the blood and even in the respiratory products. These cases present many of the symptomatic characters of modified yellow fever."

involving the bones. Passed as a marine through Crimean and Baltic campaigns. Invalided five years for increasing debility. Then progressive anæmia and emaciation, loss of sexual power. Anasarca for two years. Presented advanced anæmia with great emaciation, entire prostration, and loss of appetite; urine contained a small amount of albumen, but no casts. Fits of great depression of strength, with low feverish irritation. Was sent to the Convalescent Institution outside the town, where was attacked with erysipelas of head and face, and died in four days.

Sectio Cadaveris. — Heart 12 oz., healthy fasicles, loose fibrin in right cavities; liver 10 lb. 3 oz. (avoirdupois); spleen 1 lb. 11¼ oz., each in advanced amyloid degeneration; mucous membrane of intestines did not present reaction with iodine, characterising amyloid disease of the tissues; lymphatic glands healthy; kidneys 11½ oz., cortex and medullary portions confused with each other; extreme and general hypertrophy with brilliant resplendence of all arteries and tufts, and great alteration of cells, which were small, abortive, or like scales; calvarium greatly thickened, bony granulations on surface.

Case 6.—*Granular Fat Kidney.*

E. W., aged 35. Sedentary occupation, privation, and probably intemperance. Renal symptoms of fourteen months' duration, chiefly debility. Loss of appetite, tendency to vomit food, pain in chest, and dyspnœa. Œdema (general) five weeks' duration.

Pallor, emaciation; general œdema and some ascites; urine very albuminous, contained fat casts and cells. No amendment; frequent vomiting; entire loss of appetite. In a month sudden pain in back; on same evening an erythematous eruption over lower extremities and abdomen. She sank rapidly; pulse became imperceptible; died next day.

Sectio Cadaveris.—Œdema of the lungs, chronic condensation of the lower lobe of each; tubes congested. Clot of pure fibrin in right ventricle, attached to the wall; fascicles of the heart healthy. Blood-coloured coagula in the large branches of the pulmonary artery going to the condensed lobes. Kidneys, 11½ oz., very anæmic; presented the ordinary character of the granular fatty degeneration of Johnson; rather general deposit of small oil globules, but particular coils of tubes gorged with very large quantity of oil. Absence of hypertrophy from the minute arteries.

ACUTE BLOOD POISONING OF UNCERTAIN CHARACTER.

Case 7.—*Granular Fat Kidneys.*

J. C., aged 51. A very dissipated life; intemperance, and repeated syphilitic infection with severe secondaries up to a year and a-half ago. Symptoms of Bright's disease for three months; anasarca; diminution of urine and dry skin; tendency to diarrhœa; anæmia, and reduction of strength.

Advanced anæmia; general anasarca; feeble heart; nine days before death rigors, without perspiration; wandering pains in limbs and neck; pinched face; dry tongue; pulse 140; burning heat. Then severe pain in joints, without local changes, and tenderness in muscles of thigh; rigors continuing, remained much shrunken and pinched. The last day violent repeated vomiting of dark fluid, and died suddenly. No local manifestation, inflammatory or otherwise. During this attack anasarca almost disappeared. Urine, through forty-one days, averaged 58 oz.; sp. gr. 1013, very albuminous; only diminished the last day of life. A few intracellular hyaline casts. No known source of infection.

Sectio Cadaveris.—Coagulum of pure fibrin in right auricle and ventricle; a loose cylindrical rod in pulmonary artery to primary branches, and a similar rod in aorta. Fascicles of heart nearly healthy. Lungs loaded with dark blood. Liver very soft, cells healthy. Spleen healthy. Kidneys 13 oz., anæmic; very general deposit of small oil globules, collected in large quantity in particular coils. Some hypertrophied arteries.

Case 8.

S. S., aged 49, was admitted with a painful affection of the right knee, present four months. He had not lived well, and had been the subject at different times of several very severe accidents, with tardy recovery in each case. Three weeks after admission, complained for two or three days of severe pain in the back of the neck and occipital region; then rigors, not followed by perspiration, and much depression. Pulse 108. He was pinched and sunken. Vomiting came on, and he died in three days. Urine in the bladder after death contained abundance of medium-sized granular casts.

Sectio Cadaveris.—General fluidity of blood, staining of tissues, and early decomposition. Brain and lungs healthy; degeneration of heart's fascicles; spleen soft. Kidneys 13 oz.; pale cortex; cells very granular; tubes very opaque; oil in particular tubes. Stomach and intestines healthy. Absorption of cartilage from condyles of right femur; to less extent from outer condyle of the left. Cancelli of bone, and vessels healthy.

DEATH FROM AFFECTIONS OF THE NERVOUS CENTRES.

Among the fatal complications to which Bright's disease is exposed, those originating in the nervous centres hold a very prominent place. Such complications may be attended with very obvious organic change in the centres themselves. Of this class, cerebral hæmorrhage is the chief. In a much larger number of cases no organic change in the nervous centres is appreciable—none, at least, which has a necessary connexion with the morbid phenomena immediately preceding death. Various degrees of congestion of the sinuses, of the pia mater, and of the cerebral substance may be met with. On the other hand, preternatural pallor of the cerebral grey substance, ventricular effusion, and increase in the sub-arachnoid fluid. But none of these changes are constant, and the case may present its most characteristic symptoms in the absence of every one of them.

Of this second class of disorders (that, viz., without organic change), that which is most concerned in the production of death is coma, with or without convulsion; but many more disorders of less immediate urgency may be added to the list, and are of considerable importance in practice. Such are vertigo, headache, abnormities of sensation and of the special senses, particularly of vision, and temporary paralysis. The dyspnœa, too, so prominent a symptom in renal disease, owns, in part, a cerebral origin, and even the vomiting, though unquestionably dependent upon irritation from the morbid secretions from the mucous membrane, and strictly analogous to the diarrhœa which is frequently present in Bright's disease, seems sometimes to be in part the result of cerebral disorder.

Dr. Richardson ("Med. Essays," vol. i.) has adduced analytical evidence in confirmation of the common opinion that these nervous disorders are due to the poisonous action of urea upon the nervous centres, and of urea as urea, not as any educt from that substance. Many apparent objections to this opinion are doubtless susceptible of explanation by the various subsidiary expedients adopted by nature to supply for a time the place of the kidneys. Thus, in a case to be adduced hereafter, a boy passed twelve days without secreting more than three ounces of urine in the whole; yet his intellect was entire, excepting a tendency to sleep, and no other cerebral symptoms presented themselves until the last three hours of life; but his breath was fetid and intensely alkaline, his body exhaled a urinous odour, and he had incessant vomiting, ejecting much more fluid than he had swallowed. Somewhat a similar explanation will probably remove difficulties in explaining the occurrence of nervous disorders which have been suggested in the chronic forms of the disease now under consideration. In chronic Bright's disease the urinary excrement which is not duly eliminated by the kidneys doubtless finds a vent through other channels, and particularly through the mucous membrane of the stomach and intestines; hence the facility with which dyspepsia and diarrhœa are induced in these cases. A system of subsidiary elimination is thus probably carried on for years, till it is checked by some accident or by increasing disease in the vital organs, when nervous symptoms are instantly excited. The general state of depressed nutrition through the body must also be attended by a like condition of the nervous centres; in fact, by emaciation of them, and thus they would become liable to be injuriously affected by a much smaller dose of the poison than in the early periods of the renal affection. A parallel state of things is witnessed in chronic alcoholism and in lead poisoning.

Cerebral disorder is very likely to happen in the acute form of Bright's disease. Among the chronic forms it has appeared to me to be more frequent in the chronic desquamative disease of Johnson than in other forms, in consequence of the extreme destruction of the secreting cells which the disease ultimately produces.

Cerebral Hæmorrhage.—The relation between cerebral hæmorrhage and chronic renal disease was explained by Dr. Kirkes in a paper in the *Medical Times and Gazette*, November 24,

1855. He places the renal disease first in the order of phenomena; the resulting hypertrophy of the left ventricle of the heart in the second place; this hypertrophy not being checked in its action by any obstruction at the aortic orifice, drives the blood with preternatural force into the brain, thus inducing disease and subsequent rupture of the cerebral vessels.

Case 9.—Chronic Desquamative Disease.

J. H., aged 75. Found by the police in the street insensible. Presented the ordinary symptoms of cerebral hæmorrhage. Died on the fourth day. Urine by catheter half albumen; granular and large and small waxy casts. A temperate subject; never gout. Epistaxis for some time. Never œdema. Brief attack of confusion a month ago, with temporary loss of speech; previously some oppression of breathing.

Sectio Cadaveris.—Ecchymosis of pia mater of each hemisphere of cerebrum, and of upper surface of cerebellum. Arteries at base particularly brittle and atheromatous. Recent clot in right and in third ventricles; softening and destruction of the upper portion of the thalamus and neighbouring tissue. Fat in right ventricle of heart; hypertrophy of left; atheroma of right coronary; advanced degeneration of fascicles of heart, except of the septum. Weight of heart 15 oz. Atheroma of the aorta and innominata. Kidneys 9 oz.; chronic desquamative disease, with cysts. Tubules dilated to $\frac{1}{150}$ in.; many stripped; many wasted to $\frac{1}{1000}$ in. in diameter. Hypertrophied arteries; resplendent tufts.

Case 10.—Chronic Desquamative Disease.

A man of middle age was found in the street "in a fit." Was admitted at 3 p.m. and died at 10 p.m. No history obtained.

Sectio Cadaveris.—Increase of the sub-arachnoid fluid; congestion of the brain and membranes; entire central parts of the brain occupied by one large recent clot; left thalamus much broken up by the effusion; a small recent unconnected clot in right thalamus, which was otherwise healthy; one or two small opaque patches in the basilar artery; internal carotid more patulous than usual and brittle; left ventricle of heart hypertrophied; fibrinous clot in the right ventricle; arch of aorta greatly degenerated and dilated. Emphysematous lungs. Kidney advanced in chronic desquamative disease with cysts.

Coma.—Uræmic coma by its sudden occurrence, sometimes without having been preceded by obvious symptoms, has given rise to important difficulties in diagnosis. It may simulate the operation of certain vegetable poisons, and may thus be a cause of serious suspicions. Some striking cases of this description are related by Dr. Richardson in the essay already alluded to. In one case which occurred to myself the insensibility was supposed, from the position in which the patient was found, to have been the result of a fall. In other instances the case has presented a striking resemblance to typhus or typhoid fever, and when a previous history has not been obtainable, is liable to be mistaken for one of those diseases.

Case 11.—Fat Kidneys.

A middle-aged man was brought into the Hospital in a state of insensibility. He was a stranger, and had gone into a small hotel on the preceding evening complaining of illness. He was found next morning unconscious. He presented a typhoid aspect; pulse 108. Skin, however, quite cool, and thickly spotted with small scabs over the trunk and limbs. No anasarca. Some urine drawn from the bladder contained albumen. He died in convulsions the same night.

Sectio Cadaveris.—Increase of sub-arachnoid fluid; considerable amount of fluid in the ventricles; congestion of the pia mater and sinuses. Grey matter of the brain deeply coloured. Lungs gorged with bloody fluid. Spleen diffluent, with thickened capsule. Kidneys 16 oz., opaque tubes, sprinkling of oil globules; large number of single coils full of blood; many tufts also entirely or partially filled with blood; intertubular capillaries empty.

Case 12.—Chronic Desquamative Disease.

M. C., aged 31, stated to have lived irregularly and to have formerly suffered from syphilis; anasarca five years ago.

A severe attack of English cholera; at midnight of the fourth day, after imprudent eating, an attack of epileptiform convulsions, recurring in repeated fits up to 1 p.m. next day, with continued unconsciousness. Pallor. Pulse 130, very feeble. One pupil more dilated than the other. Respiration with a plaintive sound. Sordes on teeth. Urine suppressed. After dark fœtid evacuations fits slighter and less frequent and partial return of consciousness. Thin involuntary micturition. The following day again unconscious; other symptoms unchanged. Return of convulsions in the evening and death.

Sectio Cadaveris.—Increase of subarachnoid fluid; unusual number of blood points in cerebral substance. Hypertrophy of left ventricle of the heart. Lungs œdematous; extensive diffused pulmonary apoplexy; pulmonary artery free. Kidneys loaded with blood; in advanced stage of chronic desquamative disease. Urine in the bladder densely albuminous.

(To be continued.)

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Medical Times and Gazette.

SATURDAY, DECEMBER 23.

ETIOLOGY OF THE CATTLE PLAGUE.

At the last meeting of the Cattle Plague Commissioners, a table was put in by Dr. Ballard, the Medical Officer of Health for Islington, which is a somewhat important contribution to the etiology of the disease, inasmuch as it shows the fallacy of some views which have been maintained by persons interested in the cattle trade as to the origin of the disease, and also the influence of certain unwholesome conditions of the sheds where cows are confined in predisposing to attacks of the cattle plague. The table consisted of a list of the cow-sheds in the parish of Islington, arranged as nearly as possible in the order of their attack, showing the cubical capacity of each, the cubical space allotted to each cow in the several sheds, the habitual cleanliness or dirtiness of the sheds, the source of the water-supply, the situation of the dung-pit, whether within or outside the shed, the number of cows habitually kept, the number of cows attacked and dead since the outbreak of the plague, and the results of disinfection. Most of the results deducible from these statistics were given *viva voce* in the evidence.

At the outbreak of the disease in Islington, there were in the parish 71 licensed sheds, containing a mean number of 1317 cows. By the close of November the disease had appeared in 47 sheds. The disease commenced in one of the two largest establishments, and was traced to the introduction of some newly-bought cows from the Cattle Market. It next appeared in the establishment situated nearest to this one. In several of the earliest outbreaks it followed shortly upon the introduction of one or more new cows into the sheds; in other instances it attacked nearly simultaneously separate distant sheds belonging to the same owner, or sheds belonging to different owners situated in the same yard. The history of the spread of the disease wherever it could be traced was that of a contagious malady. The chances of introduction of the specific poison of any contagious disease will necessarily be greater the larger the establishment, since in large establishments new cows are more frequently brought into the sheds than in small ones. Dr. Ballard's table shows that in Islington the larger establishments really have suffered disproportionately. Thus, of five establishments where from 40 to 400 cows were

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kept, *all* were attacked; of six establishments where from 20 to 40 cows were kept, 5, or 83.3 per cent., were attacked; of twenty-two establishments where from 10 to 20 cows were kept, 15, or 68 per cent., were attacked; and lastly, of thirty-five establishments where less than 10 cows were kept, 22, or 62.8 per cent., were attacked. Dividing the sheds in the parish into those which were habitually kept clean and those which were habitually kept in a slovenly manner, it was observed that the disease broke out first in one of the best kept of the sheds, and that the second shed attacked was quite a new one, carefully kept, and that most of the sheds earliest attacked were habitually clean. On the other hand, some of the worst-kept sheds did not have any outbreak until late in the epizootic, and some have been free up to the present time. Taking the cleanly and habitually-neglected sheds, the outbreaks have been about the same proportion in each. Dirt alone does not appear to have generated the disease in the establishments in Islington. There are, however, three conditions which Dr. Ballard's experience seems to show have exercised some influence in predisposing to the outbreaks in the sheds. One of these conditions was the *crowding of the cows* within the sheds. The cubical space allotted to each cow in the sheds which had become infected was on the mean 606 feet; while in those which had remained free up to the end of November the mean space per cow was 803 feet. To put it in another way, there are upon Dr. Ballard's table the measurements of 70 separate sheds. In 9 of these, where the cubic space per cow amounts to 1000 feet and upwards, 4 sheds, or 44 per cent., were attacked; out of 20 where the cubic space per cow amounts to from 600 to 1000 cubic feet, 14, or 70 per cent., were attacked; and out of 44 sheds varying in capacity from 200 to 600 feet per cow, 35 were attacked, or a proportion as high as 79.5 per cent. Another condition which appeared to favour the outbreak in the sheds was the custom of some cowkeepers of *storing their dung in a pit situated within the shed itself.* The position of the dung-pit is recorded in 68 establishments. It was situated outside the shed in 56, and inside the shed in 12. Of these latter establishments only two have at present escaped an outbreak, and from one of these the cows were early removed to the fields. Hence, of the 11 sheds with the dung-pit thus situated that have retained their cows, 10, or above 90 per cent., have suffered from the plague; whereas, out of the 56 remaining establishments, 37 have suffered, being at the rate of 66 per cent. The third condition referred to is *the source of the water supply*, which is noted in 65 instances. 55 of these establishments are supplied by the New River Company, and outbreaks took place in 35 of these, or nearly 64 per cent. But there are 10 establishments which obtain their water supply from superficial wells, and in two instances the wells are situated within the sheds themselves. This is the case in the first establishment attacked in Islington. Out of these 10 establishments, 9, or 90 per cent., have had outbreaks of the disease. On the other hand, of 57 establishments where the cows were supplied with New River water, 37, or only about 65 per cent., were attacked by the plague. Unfortunately, no analysis has been made of the water of these wells; but this is a fault which the Commissioners can rectify. Dr. Ballard told the Commissioners that a similar proclivity to suffer from lung disease was manifested in 1857 in sheds which were crowded, and where the dung was stored within the shed; and deduced from this that the influences exerted by these conditions were not to generate the cattle plague poison, but to predispose to its operation. With respect to the *efficiency of disinfection* by means of limewhiting and the free use of chloride of lime, Dr. Ballard's table shows that 18 cowkeepers bought into infected sheds between the outbreak of the epizootic and the end of November. Nine of these cowkeepers cleared out their stock completely, and disinfected in the manner stated, before introducing fresh cows, and in no case where this was done had the disease at present recurred. Of the other nine who employed the same method of disinfection, but at no time completely cleared out their stock, five have had a recurrence of the disease in the cows newly introduced. These are the most important points brought out by Dr. Ballard's table, and they are such as ought to be followed up by similar observations elsewhere.

These observations are important, not only on account of the light they throw upon an obscure point of etiology, but also because they show that similar conditions operate in promoting allied maladies in man and in the animals which he keeps for his service, and that similar rules of sanitary administration are applicable to both. The liability of large establishments, such as parish schools, where children are constantly being received from infected families, to suffer from outbreaks of epidemic disease is almost too notorious to mention; while the influence of crowding, fermenting fæcal accumulations, and contaminated water (in the case of cholera and typhoid especially of contaminated well-water), are recognised facts in human etiology. They are also important as showing the desirableness of not leaving such inquiries as these to be pursued by veterinarians and amateurs, but of placing them in the hands of men whose minds are trained by habitual exercise to sanitary investigations in human etiology.

RAILWAY ACCIDENTS.

The daily journals have lately reported several actions against railway companies for compensation on account of injuries received in railway accidents. Three of the cases arose out of the Staplehurst accident, the terrible details of which will still be fresh in every one's memory, though six *months* have passed away since it occurred. One hardly looked to hear of any cases of action at law arising out of it; the company seemed so hopelessly without defence, one supposed all the cases would have been settled privately; but of course when the sum demanded as compensation is manifestly exorbitant, the directors have hardly any option, but must in the interests of the shareholders fight it out. But even shareholders will hardly love to get good dividends at the expense of safety in travelling; so no doubt every one has observed, with a degree of stern satisfaction, that in all these cases the companies have been heavily mulcted, for we have no way of compelling incessant watchfulness and caution except by making the railway companies feel sure that they will imperil their profits by any proveable degree or kind of carelessness. In one of the Staplehurst accident cases, a case in which life was lost, the jury awarded £7000 damages; in a second, in which incapacity for business for a time only was the result, £3500; in the third, of like character, £1500. All the trials have, we doubt not, been very generally and eagerly perused, and it would be easy to note several points of great general interest that arise out of these and similar trials; as, for instance, the liability of railway companies to pay damages varying according to the—to them unknown—value of passengers who all pay the same fares; while for cattle and goods they are not liable beyond a certain amount, unless, at the time of booking, a special value is declared by the taker of the railway ticket, and a kind of insurance fare paid. But we desire to call attention to these trials purely from a Medical point of view. They were of special interest to us Professionally. All of them, except the one first mentioned, had this character in common—that there was no question of danger to life, or of lasting injury. Mr. Defries, the plaintiff in the second case, had shown the most serious injuries at the time of the accident, having received a severe wound of the head, with concussion of the brain. He had been totally incapacitated from business for some months, but the weight of the Medical evidence was in favour of his eventual recovery. The jury awarded him rather more than a year's income—viz., £3500. In another case the only

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external injuries had been "some cuts and bruises, and a severe flesh wound;" but the plaintiff had received "a severe shock to the system," and would certainly be laid on the shelf for a considerable period; he was awarded the value of two years' income—£1500. In a third case, the plaintiff had been flung with violence against the side of the carriage and much shaken; his only apparent injury was a severe bruise on one shoulder, but about a month afterwards he began to suffer from tingling in the fingers, and other symptoms, which his Medical attendants attributed to "concussion of the spine." The jury awarded him also about a year's income.

It will be observed that in all these cases the chief mischief and misery arose from those mysterious conditions—"shock to the nervous system," or "concussion" of a nervous centre. Now we desire to ask this question, What do we really and clearly know about injuries of this kind? about their diagnosis and prognosis? Of course, there is no great difficulty in diagnosing concussion of the brain, or a marked case of concussion of the spine, but is our knowledge very clear and definite when we have such cases as the third one mentioned above to deal with? And how much, or little, can we authoritatively state as to the probable future course of cases of concussion, or of "shock to the nervous system?" concerning the degree of health and vigour likely to be recovered,—the probable effects on the general nutrition—the probability or possibility of diseases of degeneration, resulting from the lowering of nervous power, and the disorders of circulation? We certainly know something more on these subjects—owing to railway accidents—than we did years ago; but our knowledge is, we fear, very vague and indefinite, and it is all oral knowledge; it floats about in the Profession, but is nowhere recorded; and this is more than a pity,—we cannot but think it rather a disgrace to us as a Profession. There must be now a vast mass of knowledge and experience concerning the consequences of injuries received in railway accidents lying almost fallow and useless, and we have before this expressed our surprise and regret that no one has taken the trouble to gather and record it. Dr. Buzzard published a short time ago, in the *Lancet*, notes of the present state of two or three persons injured in a railway accident a few years ago; but the example so well set has not been followed. We are sure that a good collection of the after-history of such cases would have great value scientifically and practically, and would be eagerly received by the Profession; and we cannot believe that there would be any serious obstacles in the way of such a collection being made. It would not be a very difficult or laborious work for any Surgeon or Physician—or the two working together—of good name and standing; the Profession at large would, we believe, readily aid them, and, were the inquiry properly conducted, it cannot be supposed that the sufferers themselves would refuse information. A demand for compensation is always founded on a carefully considered Medical report of the injuries received, and this it would probably be quite possible to obtain; add to it a clear and trustworthy report of the health of the patient two, three, four, or more years afterwards, and we get a record of the greatest value in the consideration and adjudication of all future cases of a similar nature. Surely it is hardly creditable to us that we are still unable to point to any such records. If no larger information than this were given, a work of very considerable value and usefulness would result; but if a sketch of the treatment adopted was also obtained, the practical value of the cases would be greatly increased. We should thus gain great assistance in our diagnosis of the exact nature of injuries, in our prognosis as to their future course and termination, and as to the likelihood of their leaving any seeds of disease behind them, and in our treatment of them. We should undertake their management with greater confidence, and be enabled, if necessary, to make a better appearance in the witness-box.

THE WEEK.

THE BRITISH MEDICAL ASSOCIATION AND THE COLLEGE OF SURGEONS.

The following answer has been received by the Secretary of the British Medical Association from the Royal College of Surgeons, in answer to the memorial of the British Medical Association:—

"Royal College of Surgeons of England,
"15th December, 1865.

"Sir,—I have laid before the Council of this College your letter of the 14th of August last, and the accompanying memorial from the President and members of the British Medical Association, 'again bringing under the notice of the Council of this College the general dissatisfaction of the Fellows and Members of the College at the mode of electing the Council, and earnestly requesting that the Council will be pleased to obtain a new or supplementary charter, in order to render it lawful for the election of Councillors to be conducted by means of voting-papers, which may be filled up by non-resident electors, after some such plan as that prescribed for the Universities of Oxford, Cambridge, and Dublin, in their election of members of Parliament.'

"I am desired to acquaint you that the memorial has been deliberately considered by the Council.

"Every attention has been paid to the wishes of so large a number of the Profession as that which is represented by the British Medical Association.

"The Council are fully aware of the great convenience which voting by proxy might afford to many of the country Fellows, yet cannot lose sight of the fact that a great number of the Fellows of the College residing at a considerable distance in the country have regularly attended the annual elections of the Members of Council; and the Council are of opinion that voting by proxy would tend seriously to diminish the active and thoughtful interest in the affairs of the College which personal attendance on the part of the Fellows is calculated to promote; and that such a mode of election would thereby be detrimental to the welfare of the College.

"I am desired to add that the Council do not, therefore, deem it expedient to apply to Government for a new or supplementary charter to carry out the request contained in the memorial from the President and Members of the British Medical Association.

"I am, Sir, your obedient servant,
"Edward Trimmer, Secretary.

"T. Watkin Williams, Esq., General Secretary,
British Medical Association."

DR. DRUITT ON THE SPIRIT OF SANITARY LAW.

The new Metropolitan Sanitary Association, which is a kind of younger sister of the Social Science Association, held its first public "Conference" on Thursday evening, the 14th, at the Rooms of the Society of Arts. An address was delivered by Dr. Druitt on the general spirit of sanitary law, and on some of the difficulties of working the details of the laws at present existing. We understand that the address will be published, and, if so, shall notice it hereafter; but (if we understood it aright) may say that we believe the author advocates the giving more power to vestries and district boards, so that they may get done, right out, what now is hardly done after repeated delays and fruitless applications to police magistrates.

DR. RICHARDSON ON ANIMAL POISONS.

At the last monthly meeting of the Metropolitan Association of Medical Officers of Health, Dr. Richardson read a most elaborate paper on the "Origin and Nature of the Disease-Producing Animal Poisons." We regret that we are not able to publish it this week; but, at any rate, it will appear in Dr. Richardson's own *Social Science Review* for January. It is difficult to give a short analysis of it, but may state that the author is opposed *toto cœlo* to the "zymotic" theory. That he believes the animal poisons, such as produce scarlatina, glanders, &c., to be of the nature of animal alkaloids, capable of being united to acids, and of being again precipitated and

recombined. Hence, that they are not in their nature "living," "cell," "germinal," or "organised," though they arise in and may co-exist with, living matter. The *modus operandi* of the poison is *catalysis*, not *zymosis*. We give the following as Dr. Richardson's general conclusions, with one special instance, relating to the cattle plague; but of course the whole paper must be studied by every one who desires to form a full and fair judgment:—

"1. All the organic disease-producing poisons are modified poisons—secretions. 2. The secretions are rendered poisonous by two processes—(*a*), By contact with organic poison pre-existing; (*b*), by direct decomposition. 3. The poison of each secretion possesses several qualities: it can only be absorbed by particular channels, and it can only provoke further disease by coming into contact with a secretion allied to that from which it was itself derived. 4. The reproduction of the poisons depends on the continuance of the process of physical changes in a continuous secretion. 5. The poisons kill by various means—(*a*), By the secretion causing obstruction of necessary function; (*b*), by exhaustion from excessive secretion; (*c*), by extreme irritation of nerve and reflex injury; (*d*), by the absorption of the poisoned secretion into the blood and disorganisation.

"The cattle plague is, without doubt, communicated from animal to animal by the transmission of a diseased secretion from the mucous surface of the gastro-pulmonary tract of the diseased animal to the same surface of the healthy animal. The diseased secretion having infected some point of secretion in the nostril, mouth, or throat of an animal, there is quick transformation of all further secretion thrown out at the infected spot. This infected secretion in turn is swallowed to affect the whole of the alimentary tract, and ultimately, by absorption, the blood. The disease is, in short, a local malady becoming general. It spreads at this moment by contagion, but it may have had a direct origin—*i.e.*, an origin without a pre-existing cause."

MR. MORTON ON LONDON MILK.

On Wednesday evening, the 13th, Mr. Morton delivered a very able address on this subject at the rooms of the Society of Arts, Adelphi. Strange to say, that although he was dealing with so tempting a subject, all that he said was calm, temperate, and truthful! Not a particle of thaumaturgy; no account of the manufacture of curd and butter out of chalk or of admixture with sheep's brains! (We are sorry, by the way, to say that a complaint has reached us this very week that a Medical Practitioner has got into a scrape by calling some good milk a *composition*.) The whole paper is practical and matter of fact, and deserves to be carefully read.(a)

"My prejudices were those of a countryman—that cows are healthier and better, and yield the best and wholesomest milk in fields—that London cow-houses are a nuisance to be abated, and that they ought to be all removed outside—that the best way of supplying a large town with milk is to bring it from the country—that it is more reasonable, cheaper, better, to carry 10 lbs. weight of milk from a country farm to the town-consumer's door than to carry 60 lbs. or 70 lbs. of green and other food from that farm to a cow-house close by the consumer, there to convert it into the 10 lbs. of milk which it will produce—and, finally, that Londoners are worse fed with milk than any considerable body of men, women, and children elsewhere in the island. The whole inquiry, I am bound to say, has led me very materially to alter these impressions. I now believe that London cow-houses need not be a nuisance—not so great a nuisance certainly as London stables—I believe that the milk made in them is better than what is delivered at the railway stations from the country—that it is a wiser, cheaper, and better thing to carry mangolds, grass, and hay the few miles needed to town than to carry one-sixth their weight of the milk they yield twenty or thirty miles from the country. I believe that cows in London cow-houses are and may be healthily and comfortably kept—nowhere more so, and that the risk of loss by disease, so far as regards the manner of their food and lodging, is not greater here than in the Gloucestershire and Cheshire pastures; and I believe that hitherto, in point of fact, London has been better fed with milk than the average of south country villages."

(a) See *Journal of Society of Arts*, December 15, 1865.

It is clear that past conditions, however, will be little guide for the future. The supply of milk is at present short and uncertain, and no milk is delivered to the consumers from the country that has not been milked from twelve to eighteen hours. We are glad to find that the Metropolitan Officers of Health are of opinion that the purity of milk should be protected by a special enactment. Certainly, the milk sellers have a right to charge what they please, and the customers have a right to an unadulterated article.

THE "CALENDAR" OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

This work has at last made its appearance, and is a great improvement on the old "College List," containing, as it does, a large amount of interesting information. Not the least curious part of the volume is that which relates to the finances of the College, as given in the annual report of the receipts and expenditure of the institution during the past collegiate year; and in order to show the *increase* or *decrease* in each item we have, where practicable, compared the accounts in question with those of the preceding year, and in double columns exhibit the result of the analysis. Thus it appears that the total receipts amounted to £11,634 4s. 8d., from the following sources of income, viz.:—

	£ s. d.	Increase of £ s. d.	Decrease of £ s. d.
Preliminary examination in general knowledge for Diploma of Member	183 0 0	53 15 0	—
Primary and pass examination for Diploma of Member	8896 10 0	—	1205 10 0
Examinations for Diploma in Midwifery	121 16 0	—	16 16 0
Ditto ditto Dental Surgery	42 0 0	—	882 0 0
Professional examinations for the Fellowship	115 10 0	84 0 0	—
Elections to the Fellowship	336 10 0	157 0 0	—
Admissions to the Council	42 0 0	—	21 0 0
Rent of chambers	690 15 8	—	11 19 10
Sale of lists of Members, synopsis of mus. catalogues, and incidental	12 0 0	—	11 11 0
Dividends on investments in Government Securities	1194 3 0	69 6 10	—

The disbursements amounted to £12,085 18s. 2d., divided under the following heads, viz.:—

	£ s. d.	Increase of £ s. d.	Decrease of £ s. d.
Fees to Council, Courts of Examiners	£890 12 0	—	—
Fees to Treasurers and Auditors	19 19 0	—	—
Diploma stamps	364 9 0	—	—
College Department—Coal, gas, anatomical subjects, firewood, candles, oil, printing, engraving, advertisements, postage stamps, etc.	1079 19 8	—	—
Museum Department—Catalogues, synopsis, specimens, microscopes, spirit, preparation glasses, instruments, extra assistance, wood, etc.	758 5 3	—	—
Library Department—Purchase and binding of books, etc.	326 16 10	—	—
Prizes	70 2 7	—	—
Lectures	172 10 0	—	—
Oration, including dinners under deed of trust	124 4 6	—	—
List of Members, printing, binding, etc.	48 19 0	—	—
Insurance	46 10 0	—	—
Taxes and rates	752 4 6	—	—
Salaries and wages	9206 18 8	—	—
Pensions	307 13 0	—	—
Law expenses	33 10 10	—	—
Furniture	73 18 10	—	—
Alterations, repairs, and painting	763 2 0	115 11 8	—
Annuity under a deed of trust	44 8 2	—	—

It, therefore, appears that the income amounted to £11,634 4s. 8d., and the disbursements to £12,085 18s. 2d., being an excess over the former of £451 13s. 6d.

CURIOSITIES OF THE COLLEGE "CALENDAR."

The following analysis of the above work, just published by the Royal College of Surgeons, will no doubt be read with some interest by our readers:—From 1855 to 1865 the Members have increased from 11,638 to 14,375, and during the same period the Fellows have increased from 980 to 1344. In 1860 only 37 Fellows attended the annual election of Fellows into the Council. At the last election the number had in-

creased to 355—the largest on record. At the present time there are 312 Fellows by examination, 254 honorary living out of the original 542, and 744 by election, making a total of 1310. There are 960 Licentiates in Midwifery, being an increase of only 34 over the number of last year. The decrease is still more striking in the number of persons who have received the Certificate of qualification in Dental Surgery, which, in July, 1864, amounted to 280, with an addition of only 4 during the succeeding collegiate year. It appears that 17 Members passed for the Fellowship and 3 were rejected during the year, and 31 received the honour by election. The number of gentlemen who have passed the preliminary examination in classics, mathematics, and French for the Fellowship since its institution amount to 116, but a great number have been admitted to the Professional examinations without this preliminary, because they had passed the Matriculation Examination at the University of London. Only 8 Assistant-Surgeons have passed their examinations for full Surgeon in the Royal Navy. The father of the Council and Court of Examiners appears to be Mr. William Lawrence, admitted a Member of the College on September 6, 1805, and who is in his 83rd year. The oldest officer of the College appears to be our friend, Mr. T. M. Stone, who is put down as Assistant-Librarian so long ago as 1832. All the others are juveniles. The Council appears to have had sixteen meetings during the past year, and the Court of Examiners no less than fifty-four, when they passed 366, and referred back to their studies 131, candidates for the Anatomical and Physiological Examination. For the Pass or Surgical and Pathological Examination for the diploma of Member they admitted 402, and referred back to their studies for six months 60. The Board of Examiners in Midwifery met three times, passed 39, and rejected only 3. The Board of Examiners in Dental Surgery examined only 6 candidates in the year, and rejected 2. Three members of the Court of Examiners appear to have filled the president's chair twice, viz.:—Mr. Lawrence in 1846 and 1855, having been elected a member of the Court in 1840—just a quarter of a century ago; Mr. South in 1851 and 1860, having been elected in 1848; and Mr. Luke in 1853 and 1862, having been elected a member of the Court in 1851. The Honorary Medal of the College appears to have been presented to only four of the Fellows and Members, viz.:—In 1800 to James Wilson, in 1822 to James Parkinson, in 1825 to Joseph Swan, and in 1844 to George Bennett, now of the University of Sidney.

VOTING BY PROXY.

In the last number of this journal we published a carefully compiled table, showing the interest taken in the affairs of the College of Surgeons by the members of the British Medical Association, especially by those two sections, the Fellows of the College by examination and election, as evidenced by their respective attendances at the annual election for seats in the Council. From this tabular statement it appeared that more than half of the Fellows by examination attended the last annual meeting, whereas little more than a fourth of those by election, both being members of the Association, attended this important duty. In order to exhibit more clearly the correctness of the views already expressed on this subject, we have obtained the following return of the two classes attending the annual elections into the Council since 1860:—

1860,	only 37	Fellows voted, viz.,	4	by exam. and	33	by elect.
1861,	254	„	93	„	161	„
1862,	228	„	78	„	150	„
1863,	305	„	107	„	198	„
1864,	289	„	111	„	178	„
1865,	355	„	132	„	223	„

The above statement, showing the great and *increasing* interest taken in the annual election by the examined Fellows, will not add to the equanimity of our contemporaries, judging from the puerile attempt to blacken the plaintiff's character. Facts, as now shown, are stubborn things, and we can go farther, and show both of our contemporaries that "*Vote by proxy*" is not the universal cry they wish to make it appear, even from the honorary and elected Fellows. Let us ask them, and especially the organ of the Association, whether such men as the following, who, from their constant, their regular attendance at the annual meetings, may be looked upon as an important part of the constitution itself, have declined joining in the outcry for the reasons assigned in our last? We would particularly instance the De la Gardes and James's of Exeter; Jackson, of Penrith; Garstang, of Clitheroe; Jackson, of Sheffield; Teale, of Leeds; Spooner, of Blandford; Wiblin, of Southampton; Osborne, of Bitterne; Mayo and Wickham, of Winchester; Fox, of Broughton; Green, of Bristol; Sankey, of Dover; Soden, of Bath, etc.

BANBURY LOCAL BOARD OF HEALTH.

Our readers will remember that not long ago Vice-Chancellor Wood issued a writ of sequestration against the Banbury Local Board of Health for disobeying an injunction of the Court of Chancery. The injunction was to restrain the Board from permitting, from July 1 this year, "any sewage, or water polluted with sewage, to pass through the drains and channels under their control into the River Cherwell" in such a manner as to render the waters of the river unfit for use, or injurious to health. The Board made various efforts, "in conjunction with eminent chemists," to render the sewage harmless; but, though unsuccessful in this, they made no application to the Court to give them further time, and they still continued, after July 1, to pollute the waters of the river. In consequence of this disobedience the writ of sequestration was issued, against which they then appealed. Lord Justice Knight Bruce considered the motion "groundless, frivolous, and arbitrary." Lord Justice Turner did "not go so far as that," but agreed in dismissing the motion with costs. This will be a further salutary lesson to Boards of Health that they must not improve the drainage of towns by polluting the rivers of the country.

HOMŒOPATHY AND THE CATTLE PLAGUE.

It is quite refreshing to find, amongst the voluminous lucubrations on the cattle plague which the *Times* newspaper has imposed for science and sense on a long suffering public, so exceptional a letter as the following. Sir J. T. Tyrell, the author of the letter, is a well-known agriculturist, and has had ample means of forming an opinion on the subject on which he writes. It will be seen that he completely disposes of the Dutch homœopathic statistics:—

"*To the Editor of the Times.*

"Sir,—Supposing that by this time the doctrine of the Mansion House in regard to Sanitariums, and its advocacy by the *Times*, are exploded and given up, and, if possible, the more wretched but equally mischievous doctrines of homœopaths are also by this time abandoned, there is some hope that the unanimous and clearly-spoken views of the Royal Agricultural Society, and the deputations of forty counties expressing the same sentiments, will be embodied in some clear and unmistakeable recommendations and edicts from the Privy Council forthwith.

"The measure of slaughtering at the outports would, no doubt, effectually deal with foreign cattle; but the advice of sending the butcher to the farm for the same purpose is not so easy or free from objection. Many persons, to my knowledge, have warned off the butcher and farrier from their premises, as they are in the habit of constantly killing or being employed about infected or suspicious animals. The offal of eight or nine bullocks or cows is not so easily disposed of, and nothing conveys the infection so readily. The trade of bringing mangold to London and taking back manure is almost annihilated, and the infected manure conveyed by rail and water will, no doubt, preserve the disease for some time.

"The worst part of the case is the collusion between farmers and cattle jobbers whose trade is annihilated. The practice

of selling at least doubtful animals prevails to a great extent. This fact is well known in Victoria-street, and, unless the police have some special reward upon conviction, driving at night and collusion will not easily be put a stop to. The mischievous statement that seventy-five beasts were cured in Holland, which went the round of the papers to suit the homœopaths, was coined in this way:—The two or three out of twenty that sometimes survive the attack, all that survive from the lungs complaint, and the whole from the foot and mouth that get well of themselves, make up the rest; the statement being utterly at variance with the facts.

"The cattle conveyed by rail through Holland are not suffered to touch the soil, but are put on board ship directly. The authorities were astounded when they heard that 75 per cent. were cured in Holland.

"It would be a great boon if the Government, upon the authority of Victoria-street, would make known an easy chemical mode of converting the offal of diseased or suspected animals into agricultural manure, which no doubt can be done, as it is well known that bad fish is converted in this way, and used in powder. Unfortunately the real disease, the lungs complaint, and the mouth and foot complaint, resemble each other to some extent to ignorant veterinarians. This adds greatly to the annoyance and perplexity of the infliction.

"It would be a great blessing if the Government would decide on something, and not take advantage of their position to do what they please—anything or nothing. Having no opposition to take advantage of any shortcomings, the sagacious Emperor of the French and his Minister of Agriculture well know how to best deal with this matter.

"At this moment Boulogne is enjoying good meat of all kinds; butter, cream, and milk without fear and without stint. We are making frantic efforts to know the number of animals, ovine and bovine, that there may be in the country. Many other questions are much more pressing. The roast beef of Old England is in danger, and calls upon the Government to protect it. "I remain, Sir, your obedient servant,

"Boreham House, December 19." "J. T. Tyrell.

MR. F. SEYMOUR HADEN'S ETCHINGS.

We have received a letter of invitation from Mr. Gambart to inspect the etchings of Mr. F. Seymour Haden, F.R.C.S. A multiplicity of engagements have hindered us from having that pleasure. Any of our readers, however, who have seen the two columns of large-print criticism in the *Times* of Wednesday last would have difficulty in conceiving that works of so high a rank in art were executed by a hard-working Medical Practitioner. We subjoin the following extract from the *Times*:

"It may be well to premise that Mr. Haden is not a painter by profession, but an eminent and laborious Surgeon. His etchings are the work of his rare hours of leisure. He himself calls them his 'holydays,' and in them he asserts the great principle that relaxation is necessary even for a Surgeon, and that hours so spent are a gain alike to Practitioner and patient in the increased vigour with which a profession is pursued after such short intervals of recreation. They bear upon them the impress of the delight with which they have been produced; of that enjoyment of nature in her broadest and most beautiful aspects which is never so intense as in those of her lovers who are not on terms of everyday intercourse with their beloved mistress. With such men, however, the *study* of nature is as unremitting as the opportunities of recording her beauties are rare, and if anything we have said should leave the impression that Mr. Haden's work betrays an amateur's half knowledge or imperfect mastery of his materials, we must hasten to remove it. As far as he has chosen to carry his work, it is both complete and masterly. But his conception of the true province of landscape art, as given in a letter of his to the friend who has furnished the letter-press of this volume, leads him to prefer a broad and rapid rendering of the dominant characters and leading truths of a scene to elaboration of detail and finish of execution."

FROM ABROAD.—THE PRIZES AND PRIZE QUESTIONS OF THE ACADÉMIE DE MÉDÉCINE—THE ETHER AND CHLOROFORM QUESTION—GIFTS IN ARTICULO MORTIS.

At the anniversary of the Académie de Médécine the following prizes were adjudged:—1. The Academy Prize of 1000 francs, subject "Traumatic Paralysis," was awarded to M. Antonin Martin, an Army Surgeon. 2. The Portal Prize of 1000 francs, having for its subject the "Specific Characters of Cancer," was awarded to M. Cornil. 3. The Civrieux Prize of 1000 francs, "The Relations of General Paralysis and Insanity," was given to M. Magnan, a Paris *interne*, honourable mentions being also awarded to MM. Péon and Lacoste. 4. The Capuron Prize of 1000 francs, "The Pulse in the Puerperal Condition," was not awarded, but "an encouragement" of 600 francs was given to M. Hémey, a Paris *interne*. 5. The Barbier Prize, 8000 francs. Of this, 7000 francs have, by reason of the wider interpretation now given to it, been adjudged this year to M. Chassaignac, the eminent Surgeon of the Lariboisière, for the invention of a Surgical procedure, "*L'Ecrasement Lineaire*," which has established itself in the domain of practice. The remaining 1000 francs has been presented to M. Legros, of Aubusson, for his memoir on the "Cure of Scrofulous Ulcers without Deforming Cicatrices." 6. The Amussat Prize of 2000 francs for the work, based simultaneously on anatomy and experiment, which has realised the greatest improvement in Surgical therapeutics, has not been awarded, but a premium of 1500 francs is presented to M. Marmy, of the Military Hospital at Lyons, for his memoir on the "Regeneration of Bone by the Periosteum," and another of 500 francs to M. Gellé, of Paris, for one on "Lacerations of the Capsule during the Reduction of Recent Dislocations of the Hip." 7. The Godard Prize of 1000 francs for the best memoir upon external pathology is divided, 600 francs being given to M. Legros, of Aubusson, for his memoir on the "Indications and Accidents of Tracheotomy," and 400 to M. Bertholle, of Paris, for a memoir on "Foreign *Bodies* in the Air Passages." In addition, a great number of medals have been awarded to the most meritorious among the Public Vaccinators, the Physicians for Epidemics, and the Inspectors of Mineral Waters.

At the same meeting of the Academy, M. Jules Béclard pronounced what is admitted on all hands to have been a very brilliant *éloge* on M. Villermé, who, dying only so recently as 1863 at the advanced age of 81, is but too little known to the rising generation. As one of the principal founders of the study of public hygiene in France, and one of the most indefatigable of modern social statisticians, he much aided in giving an impulse to the study of a class of questions which are exerting an immense influence on the well-being of mankind. Besides being the originator and conductor of that invaluable repertory the *Annales d'Hygiène*, he published an immense number of original works and memoirs, all marked by earnest labour and a spirit of cautious deduction.

The following are the prize subjects announced by the Academy for the years 1866 and 1867:—1. The Academy Prize (1000 francs) for 1866, "Epidemic Erysipelas;" for 1867, "The Clinical History of Fibro-Plastic Tumours." 2. The Portal Prize (1000 francs) for 1866, "The Pathological Anatomy of the Nerves in the Principal Visceral Affections;" for 1867, "The Various Species of Melanosis." 3. The Civrieux Prize for 1866 (800 francs), "The Migraine;" for 1867 (1000 francs), "Dementia." 4. The Barbier Prizes (4000 francs) for 1866 and 1867, for the discovery of a cure for reputed incurable affections, or in default of this the effecting some notable improvement in Surgical treatment. 5. The Orfila Prize (2000 francs), "Digitaline and Digitalis." The production of digitaline and the chemical characters capable of determining its presence in Medico-legal researches. The pathological appearances and symptoms produced by poisoning with these substances. To what extent and in what degree should experiments made upon animals with vomited matters, with those found in the system, or the products of analysis, be adduced as indication and proof of the existence of the poison and poisoning? 6. The Lefèvre Prize (1500 francs) for 1866, "Melancholia." 7. The Godard Prize (1000 francs) for 1865, for the best memoir on "Internal

Pathology;" and for 1867, for the best memoir on "External Pathology." 8. The Capuron Prize (1000 francs) for 1867, "Describe the changes which infants undergo who remain within the uterus for a more or less prolonged period after their death, indicating, if possible, from the nature of such changes, the epoch at which death occurred. 9. The Amussat Prize (1000 francs) for 1867 will be decreed to the writer of the work which, based simultaneously on researches on anatomy and on experiment, has given rise to or prepared the way for the most important advance in Surgical therapeutics. 10. The Itard Prize (3000 francs) will be adjudged to the author of the best book or memoir on "Practical Medical or Applied Therapeutics," such work having been published at least two years. The memoirs, written in French or Latin, must be forwarded to the Academy by March 1 of the respective years.

M. Petrequin, of Lyons, brought the subject of *etherisation* the other day before the Academy of Sciences. It seems that he and almost all the Lyonese Surgeons have adopted ether in preference to chloroform during the last fifteen years, and have met with no fatal cases or serious accidents, while complete anæsthesia has been promptly and effectually secured. Its free adoption at first was impeded by three circumstances, which no longer prevail. 1. The defective and complicated character of the apparatus employed. These have been now superseded by a simple contrivance, termed a *sac a ethériser*, which is admirably efficient. 2. The ether employed at first was of insufficient strength and impure. A strong, pure, concentrated, rectified ether at 62° or 63° is now sold for the purpose at the Lyons' *pharmacies*. 3. The inexpertness of the early manipulators is now exchanged for a dexterity which induces quiet and speedy etherisation; while a careful observation of the pulse and respiration secures the patient from all accidents, which are easily averted, when threatening, by temporary suspension of the inhalation. Such accidents, under ether, are always progressive, and not sudden, as under chloroform. They may be anticipated or arrested, and never present themselves with the formidable rapidity characterising some of those induced by chloroform. M. Velpeau, while believing that the statement of the entire innocuity and prompt utility of ether made by so important a body as the Lyons Practitioners is highly deserving of the attention of the Academy, does not think the argument for its preference over chloroform at all conclusive. Many of the dangers attaching to this latter agent may also be due to its impurity or unskilful application; but, speaking from his own experience, he has employed chloroform in many thousand cases during the last fifteen years, without ever meeting with a fatal case. This, too, is the case with many of the Surgeons in the best practice in Paris, and with the entire school of Strasburgh. In fact, either agent may have its useful application under different circumstances.

M. Legrand du Saulle states, as a guide to Medical Practitioners, in a recent number of the *Gazette des Hôpitaux*, what is the French law respecting manual gifts made in *articulo mortis*. A Government *employé*, unmarried, finding himself seized with what he rightly conceived to be a fatal attack of cholera last October, immediately gave a sum of money to his old servant charging her with his final instructions. He also besought his Medical attendant to remit to a person he named various jewels, a portfolio of letters, and bank bills of a considerable value. The latter, only wishing to oblige his patient, promised to comply with his request, and effectually did so a few days after his death, which took place on the next day after the attack. Afterwards, having some misgivings as to the strict legality of his interference, he consulted M. Legrand upon the subject. This gentleman replies that according to the French law there can be no doubt that money, jewellery, shares, and the like may be given from hand to hand, without the intervention of legal documents; and these said gifts may be made by a moribund, providing always that he retains his intellectual faculties. But for the gifts to be valid, it is essential that the patient make them absolutely and irrevocably, whatever be the result of the disease; for if he only do so *sub conditione mortis—i.e.*, under the idea of retaining the possession of the objects in question in the event of recovery, then the donation is null and void. These manual gifts are also valid when the objects are remitted through a third party; but then this party must either possess a natural right to accept them, as in the case of a father for his child, or a guardian for his ward, or must be furnished by the donor with powers of procuration duly authenticated. If the third party possess no such power of receiving, he must remit the objects in question to the party for whom they are destined before the death of the donor, or at all events a willingness to accept such gift must have been stated prior to death. There must, in fact, be a concurrence on the part of the donor and acceptor. In the present case, a Medical Practitioner receives at the hands of a dying cholera patient valuable objects, with a request that he would transmit them to a beloved friend. But he had no legal mission to receive them, and yet he did not so remit them within a period that could render the gift valid; for the patient died next day, and the presents were not conveyed to their destination until some days afterwards. The gift, therefore, is null and void, the rapid death of the donor having placed it out of the power of his attendant to carry out his wishes within the legal time. The acceptance of the gift not having been announced prior to death, this revoked the mission he was charged with. M. Legrand der Saulle concludes with the sensible advice that the less a Medical Practitioner meddles with the private affairs of his patients the better. His functions are clearly defined, and he should avoid being made the instrument of conveying the gifts of the dying.

REVIEWS.

The Elements of Prognosis in Consumption, with Indications for Prevention and Treatment. By J. E. Pollock, M.D., F.R.C.P., Physician to the Hospital for Consumption, etc. 8vo, pp. 432. London: Longmans.

De la Cause Immédiate de la Phthisie Pulmonaire, et des Maladies Tuberculeuses, et de leur Traitement Specifique par les Hypophosphites, etc. Par J. F. Churchill. Second Edition, 1864. 8vo, pp. 976. Paris.

There is probably no department of practical Medicine in which greater advance has been made during the present century than in the etiology and treatment of consumption. Founded on accurate principles of auscultation, the whole history of the complaint has required reconstruction, and is only now obtaining precision and completeness. Nor, indeed, could the inductive process have advanced with much greater speed. It was natural that the earlier observers should record and comment on the most acute and marked cases brought under their notice; and a certain element of time was indispensable to correct these first results by the teachings of more chronic, obscure, or abnormal varieties. The very name, moreover, presented an obstacle which could only gradually be surmounted. Phthisis, one of the vaguest designations which we have inherited from Greek medicine, while it merely indicates the commonest symptom of any chronic disease, namely, wasting, has by familiar use got such a homely sound, such an adventitious value, that it seems to represent not only a uniform definition, but an unerring and unfavourable prognostication. The lay public still clings firmly to this view, and does not hesitate to sign the death-warrant of any friend whose emaciation is thus technically described, though really it may be due to dyspepsia, syphilis, or even insufficient diet.

Dr. Pollock has therefore done good service in boldly opening the question of prognosis, and his clear sensible work fully bears out the promise of its judicious title. It has long been obvious to careful students of pathology that there were at least four varieties into which deposited tubercle might be naturally classified; and clinical observation has shown an

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increasing competence to subdivide the indisputable, but somewhat rough, evidence of the dead-house by the more delicate tests of living symptomatology. Dr. Pollock, in the very outset of his work, lays down as a principle that "the most accurate physical examination, and the most refined tact in estimating symptoms must fail in establishing more than a diagnosis—perfect it may be, as regards the present, but fallacious as representing the future of our case." Hence the not unfrequent instances of prolonged life in individuals "who had been stethoscopically condemned to an early death," or as the public more coarsely phrase it "who had been given up by the doctors." But as diagnosis alone falls very far short of the requirements of the patient from his Medical attendant, "it is proposed," says Dr. Pollock, "to offer facts derived from the experience of the writer, and in some instances from that of others, which, by illustrating the ordinary history and progress of the disease, its varieties and anomalies, shall furnish us with data for a method of prognosis which shall not be empirical." The general conditions of chronic organic disease are then considered in relation to the system, which may recover, tolerate, or yield. Modifications may take place in the organ primarily attacked, and in dependent, kindred, or contiguous organs; secondary attacks may invade distant organs; but the general result is a lower average state of health, in which all functions are brought down to the level of the damaged powers, and "the balance is restored between the weak organ and the requirements of the system." It is thus shown that the resistance of the system may, in the case of phthisis, actually overpower the disease and end in recovery. "Even the localised tubercular deposit, whether consisting of grey, single, miliary masses, or of a softer and more diffused exudation, has no doubt in many instances been absorbed or thrown off." More commonly, however, simple toleration and quiescence is established, the local and constitutional symptoms subside together, and a period of intermission or arrest is secured, which even in the third stage, where cavities exist in the lungs, may be indefinitely prolonged, especially in patients above the age of forty. This intermission ends either by a renewal and extension of the original morbid process, by the addition of secondary attacks on other parts, or by both of these concurrently. It is not until the final stage is reached, that the steady downward course terminates in hectic, exhaustion and colliquative discharges. The following chapter is devoted to the description of the local or constitutional origin of tubercle, the latter view being adopted and supported by some original, though sometimes doubtful, arguments. The existence of a "pretubercular stage" as it has elsewhere been termed, and the "conservative character of early emaciation" are especially open to this comment, though the subject is too wide for present consideration.

The duration of phthisis forms the next topic, and starts by the principle that "as long as phthisis continues to be viewed as a single affection of invariable progress and termination, so long will contradictory opinions be offered as to its average duration. Tuberculosis possesses in the simple fact of a certain uniformity of the morbid material a basis which includes all its subdivisions, but such wide deviations occur in its progress and results, that no average which should be of the slightest use in practice can be derived from the most careful records of all the instances of the disease which ever occurred under observation were they viewed as a single affection." This is a statement which must commend itself to all who have endeavoured to apply statistics to practical medicine. It may be said of our cases, as it was of men's opinions, *sententiæ ponderantur, non numerantur*. The mere counting of medical names is a false process which delays science rather than advances it, by a spurious parade of non-existent accuracy. The distinctions of the text are here well supplemented by two diagrams, in which the relative duration in twenty-six varieties of the disease is exhibited at a single glance. In a future edition we may suggest that the unit of measure, on which the comparison is founded—that is, the value in time of one division of scale—should be made rather more prominent; it has hitherto quite escaped us, although of course it is not essential for a proportional estimate. The longest duration appears here to belong to chronic second stage, and hardly less to chronic third stage; chronic first stage is somewhat less favourable, and various complications, such as emphysema, fistula, syphilis, rheumatism, and pregnancy, produce other modifications. The premonitory stage of phthisis next occupies the writer's attention. Its title is open to exception, as above suggested, for though the existence of tubercle cannot yet be substantiated by physical signs, there is no evidence for denying its presence, or for looking on the earliest constitutional symptoms otherwise than as indices of morbid change already begun. Wasting and fever, with obvious blood disorder, do, however, as a fact, often precede auscultatory changes, and their prognostic value is very fairly estimated by Dr. Pollock. The distinction between such a state, and the simple anæmia so often confounded with it, is minutely drawn out, and the results of the discussion are concisely given in three summaries of an aphorismal character.

A short resume of pathological facts, extracted from various writers, assuming four possible conditions of the deposited tubercle—namely, absorption, toleration, cretifaction, and destructive softening, leads to a longer discussion of causes which influence the four results. Some good cases of absorption are given in detail, and a tabular statement makes the comparative frequency of the chief physical signs easy to be appreciated; the bearing of each such sign on prognosis is adverted to, and then valuable facts are recorded respecting the ultimate result of the most chronic cases, where often the original ailment has been forgotten, and its real nature erroneously denied from the very fact of protracted life. "Such individuals," says Dr. Pollock, "are capable of performing most of the duties of active life, and are often unconscious of any ailment for successive years—sometimes they run on to old age; withal, there is a consciousness that they are never quite well, and that the enemy has one foot in the citadel; they are the condemned of the auscultators, having received a verdict from a fashionable Physician, fifteen or twenty years ago, and set to work, like wise men, to convert his faithful warning into a falsehood. The truth must be told. These persons generally die of consumption, and sometimes break up most rapidly. The late stages of their disease are out of all proportion in speed to the middle period." Calcareous deposits in the lung furnish the next subject, their occasional perfect and not unfrequent partial removal, the non-hereditary and chronic character of this variety, and the favourable prognosis being amply illustrated. Chronic second and chronic third stage occupy space proportionate to their importance; the elements of rapidity or slowness being the nature of the deposit, the amount of irritative changes, and the cessation or continuity of the blood-disease. The auscultatory changes corresponding to obsolescence are better given than in former works, and some observations, such as the displacement of the heart by contraction of a cavity, have hitherto hardly attracted sufficient notice. Illustrative cases of chronic cavity are abundantly cited, and compared with the results of other observers, the prognostic indications being as usual summed up into a series of short propositions. An incidental point is here introduced, to which the author attributes much importance—namely, digital clubbing. The remarks upon it are of great practical interest, though perhaps the limitation of the symptom to phthisical subjects is overstated. It is often seen in a most marked form where chronic pleurisy, not obviously tubercular, is present. Strumous phthisis, age as a modifying agent, the concurrence of rheumatism, gout and diseased heart, the association of emphysema and asthma, and the influence of menstruation, pregnancy, and lactation, each provide materials for a good chapter, and are followed by special consideration of some more common and intrinsic symptoms, such as hæmoptysis, diarrhœa, and fistula. Pneumothorax, a commoner event than is supposed, after the first dangers of sudden collapse and secondary effusion have been surmounted, occasionally exercises a conservative influence, and is followed by a rally for an indefinite period. Hereditary influence, the means of prevention, the influence of professions and occupations, each briefly summed up, lead to a chapter on specific treatment, which insists on the importance of correcting the diathesis rather than attacking the deposit; this is followed by the direct treatment, offering no points of novelty, and forming, with a chapter on climate, the least satisfactory part of the work. On the whole, however, we are glad to express a very favourable opinion of Dr. Pollock's book. It represents a step forward in the natural history of phthisis, and exhibits a fair and dispassionate spirit. It forms an excellent sequel to the two Medical reports of the Brompton Hospital, on which it is partly founded, and may be termed a workmanlike contribution to Medical literature.

Dr. Churchill's bulky volume is of quite a different character. While Dr. Pollock aims at giving a review of his subject as far as is at present known, Dr. Churchill boldly steps forward with a new theory and doctrine. His views

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will be familiar to many readers, and our present object in noticing his second edition is, not so much to furnish an analysis of its contents, as to ask for a dispassionate estimate of their truth. Phosphorus and the hypophosphites burst suddenly on the world some few years ago as a panacea for the commonest of all diseases. Their value was no doubt overstated, and prejudice was excited by an unwise secrecy as to their nature. They were hastily and scantily tried, found not in every case to be successful, and as hastily abandoned. We submit that the subject was far too soon put out of court, that some published experiments are painfully inconclusive, and that others look as if the observer had already judged the case unfavourably before he began. On the other hand, facts of a positive character are coming to light which should correct our *primâ facie* views. One such may be cited in the communication of Dr. Tirifahy to the Medical Academy of Brussels, published in the Journal for August last. He narrates, in detail, and with most convincing impartiality, the results of forty-two cases thus treated by himself. Of these, eight are so far cured that the presence of tubercle cannot now be substantiated; eight others improved greatly, and six to a less degree. The author of the paper very judiciously concludes that the drug is of real value. He is far from considering it a specific in all cases, and freely admits that "even though phthisis is cured by all treatments—nay, gets well itself without treatment," yet any formula hitherto in use may well envy his results. This opinion will, we can state most positively, be confirmed by competent observers in England. It is because the key to the discrepancy seems to be found in Dr. Pollock's work that we have placed the two books in juxtaposition. Phosphorus compounds, such as Dr. Churchill recommends, we believe to be of the greatest value in some forms and varieties of phthisis, though useless and perhaps hurtful in others. In the admitted insufficiency of our present treatment we are not justified in rejecting any promise of amelioration. No doubt the scepticism with which every novel proposal in medicine is met in this country tends to prevent hasty and unprincipled experimentalism, but it is an error if we allow the feeling to degenerate into inactivity, prejudice, or routine.

GENERAL CORRESPONDENCE.

BLOOD CORPUSCLES IN RINDERPEST.

LETTER FROM DR. ANDREW SMART.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your report in the *Medical Times and Gazette* of Saturday, of Dr. Crisp's paper on "Cattle Plague," read to the Pathological Society, it is stated that Dr. Crisp had not seen the stellate form of blood corpuscles depicted by me as characteristic of the disease. Will you permit me, in reference to this statement, to say that the delineation referred to is a copy drawn by an artist from microscopical preparations demonstrated by me and seen by many scientific persons?

It is requisite to explain that the blood examined was taken from the vessels of dying animals in the last stage of the worse form of the uncomplicated disease. In no other disease that I am acquainted with is the property of cohesion of the blood corpuscles so marked and so difficult to overcome. The cells cling tenaciously to each other on the microscopic field, and run together in irregular and shapeless masses, and their separation for the purpose of examination becomes a task of extreme delicacy.

The cell walls of the blood cells which are at length by careful manipulation thus isolated are seen to corrugate and after a time assume the remarkable stellar configuration which I have represented. This observation has since been confirmed by other independent observers here.

I am, &c. ANDREW SMART, M.D.

28, Alva-street, Edinburgh, December 18.

ON PROFESSOR SIMPSON'S NEW ANÆSTHETIC.

LETTER FROM MR. R. RANSFORD.

[To the Editor of the Medical Times and Gazette.]

SIR,—Professor Simpson seems to have misunderstood Messrs. Duncan, Flockhart, and Co., as I sent down the said specimen of bichloride of carbon to be tried as an anæsthetic, either by itself or mixed with chloroform or spirit, and suggested it might be converted into chloroform by

I proposed mixing with chloroform and spirit, believing it to be too powerful in action—its conversion as likely to attract a manufacturer's attention to its qualities.

Professor Simpson, in his able paper, remarks, "but it takes a longer time to produce the same degree of anæsthesia" than chloroform. This is owing to 30° difference in boiling-point, and, if desirable, might be remedied by warming reservoir with water.

I am, &c.

London, December 18. R. RANSFORD.

ARMY MEDICAL CANDIDATES.

LETTER FROM PROFESSORS THOMAS LONGMORE, E. A. PARKES, AND W. C. MACLEAN.

[To the Editor of the Medical Times and Gazette.]

SIR,—Our attention has been called to a paragraph in your leading article on the Commission now sitting at the Admiralty, in which you refer in very disparaging terms to the Medical candidates now going through the course of special instruction at the Army Medical School. In justice to the gentlemen concerned, we think it right to state that this attack is quite unwarranted, and can only have been made in ignorance of the true facts of the case.

We are, &c.

THOMAS LONGMORE, Deputy Inspector-General, Professor of Military Surgery.
E. A. PARKES, Professor of Hygiene.
W. C. MACLEAN, Deputy Inspector-General, Professor of Military Medicine.

Army Medical School, Royal Victoria Hospital, Netley, December 13.

*** With reference to the article which appeared in our impression of December 9, after contrasting the Naval with the Army Medical Service, and speaking of the very small number of men coming forward to fill the vacancies in the former, we went on to speak of an exhaustion of the number of those who care for the sweets offered by the latter service, adding that "her last batch of Medical aspirants exceeded all the others in the extent of their ignorance." Our distinguished correspondents have clearly mistaken the gist of our remarks. We said nothing whatever of the Medical candidates now going through the course of special instruction at the Army Medical School. We were informed on good testimony that nearly half (speaking roughly) the number of men—the "Medical aspirants" for admission into the services—failed to pass at that examination. The Professors at Netley seem to have fallen into the error that our remarks were applied to the *passed* men—the candidates now at Netley; whereas, we actually employed the term "Medical aspirants" in order to avoid the confusion implied by the application of the term "Medical candidates" to those men who no longer aspired to enter, but had actually succeeded in passing the portal.

THE LOCALISATION OF CATTLE PLAGUE BY UNWHOLESOME CONDITIONS IN COW-SHEDS.

LETTER FROM DR. EDWARD BALLARD.

[To the Editor of the Medical Times and Gazette.]

SIR,—The following results of some statistics of cattle plague as it has appeared in the cow-sheds in Islington may probably interest your readers. They will appear in due time, with the tables from which they are deduced, in the Report of the Cattle Plague Commission, but as they have an immediate practical bearing, you may probably see fit to publish them in anticipation:—

1. The cattle plague, up to November 30, has attacked 48 out of 69 establishments in Islington.

2. It has attacked the larger establishments in preference to the smaller. This is quite in accordance with what might have been anticipated in a disease spreading by contagion, inasmuch as the larger any establishment, the greater the chances of infection from the introduction of fresh stock.

3. Arranging the infected and non-infected sheds in accordance with what we have observed as to the cleanly or slovenly manner in which they are habitually kept, there is no evidence from our outbreaks here in favour of the origin of the disease in mere want of cleanliness.

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4. Crowding of cows within sheds has appeared to favour the outbreak of disease, a larger percentage of outbreaks having occurred in sheds affording only from 200 to 400 cubic feet of space per cow, than where the cows have been less crowded.

5. The outbreak of disease has been clearly promoted in certain establishments by the custom of storing the dung, in a pit or otherwise, *within* the shed itself. The capacity of the sheds did not appear to affect this result materially, but where crowding was excessive it appeared to predominate in its deleterious influence over the influence of this cause. Out of 11 establishments where the dung was thus stored, outbreaks took place in 10.

6. The source and character of the water supply appear to have exerted in some instances an influence in localising the disease. Thus, out of 10 establishments where the water supply of the cows was from a superficial well in the shed or yard, 9 were attacked with the plague, the percentage of attacks in establishments supplied with New River water being considerably smaller.

7. In 1857 I made a similar inquiry into the influence of two of the above conditions—viz., crowding and the storing of dung within sheds—upon the localisation of another epizootic disease—"pleuro-pneumonia"—and I found that a similar relation was observable. This fact seems to me to favour the conclusion that these unsanitary conditions rather operate by way of so affecting the general health of the cows as to predispose them to suffer from a specific poison than as producing the disease (either pleuro-pneumonia or cattle plague), independently of any more immediate or exciting cause.

8. In the largest establishments the influence of the above predisposing causes is little, if at all, observable, being overridden apparently by some superior cause, such as would be their liability to invasion in consequence of their greater liability to the introduction of the specific poison from without.

9. In the medium-sized establishments the predominating predisposing cause appeared to be the well supply of water in place of the filtered water supply furnished by the New River Company.

10. In the smallest establishments, together with the less liability to the introduction of the specific poison from fresh stock, the predisposing influences of crowding and the emanations from dung long retained within the sheds were preeminently observable. In larger establishments it is worth the while of a contractor to remove dung frequently; but in the smallest establishments, the dung is habitually left to ferment until a sufficient load has accumulated.

11. In nine instances where the cows were completely cleared out from infected sheds, and then the sheds thoroughly disinfected, by means of limewashing, chloride of lime, etc., and fresh cows subsequently introduced, no renewal of the disease took place; whereas the disease did recur among the new stock, *notwithstanding disinfection*, in a certain proportion of cases—about half—where the sheds had not been previously completely cleared of cows.

I am, &c.

EDWARD BALLARD, M.D.,
Medical Officer of Health for Islington.

December 20, 1865.

ON PROVINCIAL MEDICAL CHARITIES.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your number for November 25 you have a leading article on "The Profession and the Press," in which you have strongly commented on remarks made in the November number of the *Cornhill Magazine* "On Provincial Medical Charities." Although the members of the Medical Profession ought to feel honourably bound to shield and protect each other from unjust treatment by the public, and should possess those freemasonry principles which ought to bind them together in brotherly love, yet times and circumstances occur in which this amity cannot be exercised and extended, as in those cases in which public interest demands an alternative, or when the principles of humanity are sacrificed. All questions which are strictly Medical ought to be discussed in a Medical journal, but I respectfully disagree with you that the writer of the above-named article in the *Cornhill Magazine* ought to be blamed for inserting his remarks in that periodical. The manner in which Medical charities are conducted is most assuredly a social question, and, therefore, ought to be freely open to public inquiry and discussion. It can never add to the true interests of the Medical Profession to attempt to limit the working of a Medical charity to the Medical staff, or to attempt to prevent in any way the subscribers and trustees of such institutions, and, indeed, the general public, from knowing how the duties are discharged; if those duties are faithfully performed, honour is acquired by the Medical officers, and, in most instances, is most unhesitatingly awarded; and if those duties are not so performed, it is high time, for the sake of humanity, that a better system should be adopted.

You strongly censure the remarks of the writer in the *Cornhill Magazine* as to the plan of prescribing for the out-patients. You state that he says that they "are seen at the rate of three per minute," and that they are "kept waiting in crowded, unventilated rooms from eleven in the forenoon until half-past three in the afternoon." This is a sad picture of inhumanity; and in all those institutions in which this disgraceful practice exists the sooner the general public are acquainted with the fact the better. Although this writer's statements may be, as you say, "gross exaggerations" so far as the mode in which the out-patient department is conducted in many Hospitals and Dispensaries, yet I fear the nature of the diseases of the poor patients who attend in the out-patient room is not investigated with that diagnostic care, and treated with that scientific precision and management which are demanded in order to realise curative effects from the medicines prescribed. The exigent necessities of these poor creatures ought to have the humane consideration of the Medical officers, and the waste of their time (which is the capital of the poor) obviated as far as it is possible in this department.

In those Hospitals in which the out-patients are treated on a hurried routine principle, the fault does not rightly belong to the Medical officer, but depends on the number of patients for whom he has to prescribe in the relative short time he can possibly devote to them.

Although it is true that the general public know little of the "unrequited toils" of the members of our Profession, and of the arduous duties which they perform at Hospitals and Dispensaries, yet as the poor patients are not responsible for either the irksome labours or the length of time which is consumed in the attendance of the Medical officers, every means should be adopted to ensure an efficient medical treatment of their diseases.

There are, in my opinion, at least, two causes which tend to produce this real or supposed evil in the out-patient department. First, too large a number of patients relative to the number of the Medical officers; and, secondly, to the opinion entertained by the Medical officers of the little interest which these cases afford. The writer in the *Cornhill Magazine* contrasts the numerical strength of the Medical staff of the London and Provincial Hospitals, &c., and considers that the Medical official system pursued at the former has great advantages over that of the latter.

The staff of Medical officers ought never to be so limited as to render their duties too arduous or impossible to be correctly or justly performed. "In London the ordinary arrangement is to have three Physicians and three Surgeons, three Assistant Physicians and three Assistant Surgeons;" and in some institutions "there are special departments, each with its complement of officers." And there is no doubt but that an increased number in the Medical staff of many Provincial Hospitals would be a great advantage to the institutions. In no Hospital department is this desirable change more needed than that of out-patients; and the arrangement here should be such that the Medical officer does not feel the number of patients to be burdensome to him.

An increase in the number of Medical officers may be said to be unnecessary. Indeed, I have heard it stated that such a change would deteriorate the value of the office, and consequently prevent men of repute from becoming candidates. In the abstract this objection may have the semblance of truth; but, if fully considered, it is utterly unfounded, because the simple question is to proportion the number of Medical officers, having their respective status in the institution, to the number of the patients. The object of every Medical man in seeking an Hospital appointment is, doubtless, to obtain a better social and Professional position; and this object is certainly more likely to be accomplished when the Hospital duties are conscientiously and justly performed, and they can be best fulfilled only when the work is properly proportioned to the staff.

Secondly.—The opinion entertained by some Medical men that the out-patient cases are generally of that class which excite little Medical interest is totally at variance with

facts. Every case of disease, whether slight or serious, has some point of interest, and ought to be properly treated.

Now it appears to me that the diseases which are seen among the out-patients are of very great importance, and ought to be scientifically treated by the Medical officers, not only on their own account, but as being of the highest value, and perhaps as the most appropriate department for the commencement of an educational system. The diseases in question may be little appreciated by Medical students; but this neglect depends on a disregard of the intrinsic value of these cases, and on the careless routine mode in which these diseases are too often treated.

The great number and varieties of disease of a slighter character, and their earlier stages, would doubtless afford to the Medical student the most valuable source of information.

Dr. Priestley says:—"There is no better training for the emergencies of future practice than that afforded by the out and in-patient departments of a general Hospital; and the student, however industrious, who does not test his Medical knowledge at the Hospital, and as gold in the refiner's fire, try it at the bedside of the patient, is very apt in after years of practice on his own responsibility to find every case an exception to the ordinary definition of disease laid down in the class-room . . . and to be constantly at a loss how to proceed."

Dr. Handfield Jones says:—"The student should have brought before him (illustrations of disease) in museums, dissecting-rooms, Hospital wards, and out-patient rooms," &c.

The out-patient department of a Hospital, if properly regulated, is one of great humanity; but if not wisely administered it is the reverse. Every facility should be afforded for the admission of patients; in fact, there ought to be no restriction, but a free admission granted, instead of throwing the onus of obtaining a recommendation upon the poor sick patient, who is frequently in a very unfit state to be rambling about the streets seeking to obtain one. Some very excellent remarks pertaining to this subject may be read in the *Medical Times and Gazette*, vol. ii. 1863, p. 489.

Although unwilling to trespass further on your valuable space in this communication, I intend, with your kind permission, to send for insertion in your valuable publication some other remarks on Hospital management.

I am, &c.,

Dec. 15, 1865. AN ORIGINAL SUBSCRIBER.

*** We have much pleasure in giving publicity to the above statement of opinion from one of the most respected of provincial Physicians. But our opinion as to the propriety of a general and indiscriminate attack in the *Cornhill Magazine* on the Medical staffs of all provincial Hospitals—evidently the work of a member of our own Profession—remains unaltered.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 12.

Dr. ALDERSON, F.R.S., President.

A PAPER, by Dr. A. T. H. WATERS, was read, entitled

OBSERVATIONS ON THE MORBID ANATOMY AND EARLY PHYSICAL SIGNS OF PNEUMONIA.

Although the conditions which characterise pneumonic inflammation—engorgement, red hepatisation, and grey hepatisation—have been accurately described by various pathologists, discrepancy of opinion exists on some points connected with the morbid anatomy of the disease, such as, 1st, the bloodvessels involved in the inflammation; 2nd, the particular part of the pulmonary substance which is the seat of the disease. These points can only be cleared up by a careful comparison of the healthy with the pneumonic lung. With regard to the bloodvessels involved in pneumonia, the opinions of pathologists are divided. Some believe that the capillaries of the pulmonary artery are those essentially affected, those of the bronchial arteries being most probably also involved; some consider the bronchial capillaries mainly concerned; while others think it probable that both sets of vessels are simultaneously affected, although perhaps in different degrees. In considering this question it is necessary to examine into the arrangement of the blood-vessels of the lungs, to define clearly the parts to which each set is distributed, and to ascertain the exact portions of the pulmonary substance involved in the pneumonic inflammation. The true respiratory portion of the lungs consists of a series of air sacs situated at the extremity of each bronchial tube. These air sacs are separated from each other by thin membranous walls. The pulmonary arteries are the only blood-vessels distributed to the air-sacs. These vessels ramify in the walls of the sacs, and form in them the pulmonary plexus. They are engaged not simply in carrying blood for the special function of the lungs, but also for the nourishment of the tissue to which they are distributed. Although the bronchial arteries pass along the bronchial tubes and supply the structures of those tubes and the areolar tissue of the lungs, they send no branches to the walls of the air-sacs, which are solely occupied by the plexus formed by the pulmonary artery. In speaking of the areolar tissue of the lungs, the author wished it to be distinctly understood that no such tissue is found in the walls of the air-sacs; it is only demonstrable in the adult lung around the bronchial tubes, the larger blood-vessels, and the lobules, as well as beneath the pleura. Such being the distribution of the blood-vessels of the lungs, and the arrangement of the areolar tissue, the next point for consideration is the exact seat of the pneumonic inflammation. On examining, under the dissecting microscope, a piece of inflamed lung which has reached the stage of hepatisation, it is at once seen that the seat of the exudation is the air-sacs. These cavities are filled with solid matter; and, if the preparation has been kept in spirit for some time, moulds of the cavities can be drawn out. As the air-sacs are the seat of the exudation, it is obvious that the exudation must be poured out from their walls. The structures composing these walls must, therefore, be the seat of the inflammatory process; and as they contain no other vessels than those derived from the pulmonary artery, it is the branches of this vessel alone which are involved in the disease. In a piece of hepatised lung, exudation is sometimes found in the smaller bronchial tubes; at other times it is absent from them, and merely fills the air-sacs. Its presence in the bronchial tubes by no means proves that it has been poured out from their lining membrane; for it may have passed into the tubes from the air-sacs, being pressed out from the latter as they have become over-distended. In some cases of pneumonia there is no reddening of the mucous membrane of the finest bronchial tubes—no post-mortem appearances to show that there has been anything more than a simple uncomplicated pneumonia; whilst, in other cases, an increased vascularity of the bronchial membrane indicates the concurrent existence of bronchitic inflammation. Some pathologists, in speaking of the morbid anatomy of pneumonia, have described the exudation as taking place, in part, into the interstial tissue. They have not, however, described accurately what they mean by interstitial tissue; and it is very important that clear notions should exist with reference to this particular point. The author has already mentioned that the lungs are not permeated throughout with areolar tissue, and that it only exists in certain parts, and in small quantities. The true lung-tissue—that which has been known as the parenchyma of the lung—consists of the walls of the air-sacs. These walls are firm and strong, but very thin. They consist of yellow elastic tissue, and a basement membrane, enclosing the pulmonary plexus. No areolar tissue is found in these walls; a fact which the morbid condition produced by pulmonary emphysema fully demonstrates. Although in pneumonia the walls of the air-sacs become somewhat thickened, this is due, the author believes, chiefly to the enlargement of the capillaries which they contain, and only partly to their retaining some of the exudation. Grisolle thinks that in pneumonia the capillaries are very probably augmented in number. It is impossible to decide positively with reference to this point, but the author's opinion is decidedly opposed to that of Grisolle. He believes that no development of new vessels takes place; they increase in size, but not in number. In grey hepatisation, the air-sacs are still the seat of the exudation, and no destruction of their walls takes place unless an abscess is formed. There is no interstitial suppuration; the exudation-matters, in the process of cure, are either re-absorbed or expectorated. The following conclusions are drawn from the foregoing facts:—1. That pneumonia consists of an inflammation of the walls of the air-sacs of the lung

2. That the blood-vessels involved in pneumonia are the branches of the pulmonary artery, which constitute the pulmonary plexus; and that the capillaries of the bronchial arteries are in nowise implicated, unless there be a concurrent bronchitis, which is an addition to the pneumonia, and not an essential part of it. To pass to the second subject of the paper—the early physical signs of pneumonia. The author believes that engorgement is not the first morbid change that takes place in pneumonia, and agrees with Dr. Stokes that there is a prior stage, characterised by a dryness of the pulmonary membrane, and probably intense arterial injection. In proof of the probability of this condition, an appeal is made to the facts furnished by auscultation—viz., the existence of a dry, harsh, loud, respiratory murmur preceding the crepitating râle. Two cases have lately been under the author's care in which the existence of a loud respiratory murmur was noted as an initial physical sign of pneumonia. In both cases there was acute primary pneumonia coming on in lungs previously healthy.

Case 1.—P. F., a carter, was admitted into the Liverpool Northern Hospital on August 18, 1864. Early on the day of admission he got wet, and in the course of a few hours had pain in the limbs and rigors. When admitted into the Hospital, at midday, he was seen by the House-Surgeon. There were no febrile symptoms, and no abnormal physical signs about the chest. On the following day, about noon, his condition was as follows:—Pulse 120; respiration 32; skin very hot and dry; left side painful; percussion-sound and movement of chest natural; at the lower and back part of the left lung a loud, harsh, peculiar respiratory murmur was audible: no such sound could be heard elsewhere. The next day the pain in the side was almost gone; pulse 104; respiration 28. The physical signs were as follows:—Deficient movement of left side; dulness at left base, with crepitating râle over nearly the lower half of the left lung. The crepitating râle, which was distinctly of a pneumonic character, occupied, in fact, this day, the seat of the harsh, loud respiration of the preceding day. It is needless to follow the history of the case further. The crepitation was succeeded by all the symptoms and signs of confirmed pneumonia.

Case 2.—A Frenchman was admitted into the Liverpool Northern Hospital on January 23 of the present year. He complained of dyspnœa and pain in the chest. On examination, a loud, harsh, respiratory murmur was heard over the lower and back part of the left lung. The movements of the side were good, and there was no crepitation or dulness. The breath sounds were normal over the opposite lung. On the following day the physical signs were as follows:—Slight dulness at the base of the left lung, and well-marked crepitation over about the lower half of the same lung. In fact, as in the preceding case, the puerile respiration of one day was replaced by the crepitating râle on the next. The patient subsequently had all the symptoms of confirmed pneumonia. From the occurrence of these cases the author cannot entertain a doubt that neither is the crepitating râle the earliest physical sign of pneumonia, nor engorgement its first morbid condition. It is true that he had never been able to demonstrate the existence of the latter by post-mortem examination, nor, indeed, would it, he thought, be easy to satisfy those who were sceptical about it by such an examination, for they might consider the condition the result of mere congestion. At the same time, this absence of post-mortem proof should not blind us to the facts which clinical experiences teaches.

Dr. C. J. B. Williams said that some thirty years ago he had worked a good deal on the subject connected with the paper, and he was glad that the author confirmed the principal point with regard to the essential seat of pneumonia which he had propounded so long since. This was, that the inflammation essentially occupies the great pulmonary plexus of vessels; and that its occupation of these vessels, through which all the blood of the body has to pass, gives to pneumonia much of its grave character. In fact, from this circumstance pneumonia becomes much more than a local affection—it partakes of the characters of a blood disease; and its symptoms are more constitutional than those of any other local inflammation. Thus in sthenic pneumonia the whole body is intensely heated; in typhoid pneumonia the several symptoms are those of typhus or blood-poisoning; in suppurative pneumonia they are those of pyæmia. The important bearing of this on treatment is obvious. He would further remark that other pulmonary diseases besides pneumonia, especially affecting the great pulmonary plexus of vessels, also manifested their effects on the blood of the whole body. Thus in general emphysema of the lungs, which wastes and reduces many of the pulmonary vessels, the system becomes anæmic and cachectic; and in extensive pulmonary tuberculosis the degenerative or scrofulous tendency rapidly pervades the body. So far, then, as Dr. Waters referred the primary seat of pneumonia to the pulmonic capillaries, he (Dr. Williams) agreed with him. But when he went on to exclude the extreme bronchial and other tissues from a share in the lesion, and to deny the very existence of any intervesicular or filamentous tissue, he (Dr. Williams) would wait for a further confirmation before he could accept his view. He had himself ascribed the peculiar rusty, viscid expectoration of pneumonia to an extension of the inflammation to the mucous membrane of the minutest bronchi, and had attributed the fine crepitant rhonchus to the forcible passage of air through this viscid mucus into the cells; and he still doubted that a better explanation could be given. There was something quite characteristic in this sign, consisting of a series of fine sharp crepitations accompanying inspiration, which seem to be close under the ear, and limited to the spot of vesicular tissue which is their seat; and not, as in the case of bronchial rhonchi, heard in adjoining parts. Its ephemeral duration, too, was significant of the tendency of the inflammation to go on to more complete obstruction and consolidation, which superseded the crepitation by other signs. No doubt, if Dr. Waters's observations were exact, the pathology of pneumonia would be much simplified; but he (Dr. Williams) doubted whether they were compatible with the occurrence of certain varieties of pneumonia which had been described by himself and others, and which seemed to point out a variation in the extent of the inflammation, involving other tissues beyond the mere pulmonary plexus. Neither could he (Dr. Williams) agree with Dr. Waters in the importance which he attached, or in the explanation which he gave, to the partial loud respiratory sound which sometimes precedes the crepitant rhonchus. In many cases it is never heard, for the breath sound is weaker than usual before the crepitus begins. In other cases, an irregular, exaggerated sound is sometimes heard; but it appeared to him to be a supplementary movement in the parts around the spreading obstruction, rather than to be due to dryness of the vesicles, as supposed by Dr. Waters. And here he (Dr. Williams) would take occasion to remark, that it is a mistake to suppose that inflammation causes dryness at any stage in serous membranes, or in parenchymata. In mucous membranes there certainly is dryness in an early stage, from the interstitial congestion and effusion interfering with the natural mucous secretion; but in serous membranes it was otherwise—increased exudation attends every stage of inflammation. Some authors had erroneously ascribed the friction sound of pleurisy and pericarditis to dryness of the membrane; but he (Dr. Williams) had ascertained by experiments on animals that the friction sound is always due to a deposition of coagulable lymph, sometimes extremely thin; and this, by its adhesiveness, is the cause of the rubbing sound between the serous surfaces. Neither is there any reason for assuming the existence of dryness, in the early stage of inflammation, of the pulmonary vesicles, which are as simple as serous membranes. In conclusion, Dr. Williams thought they were indebted to Dr. Waters for his researches; but he did not consider them conclusive on this subject, interesting alike to pathology and diagnesis.

Dr. Fuller remarked that he could not coincide in the author's views respecting the limitation of the exudation in pneumonia. Though in some instances confined to the pulmonary cells, the exudation in certain cases takes place principally into the interlobular cellular tissue. The cases referred to present all the general symptoms of pneumonia except expectoration, and all its ordinary physical signs except fine crepitation. Dulness on percussion is speedily developed, and the ordinary respiratory murmur is replaced by intense tubular breathing; but there is little or no expectoration, and the disease runs its course without the occurrence of fine crepitation. The cases are not common; but Dr. Fuller had met with several, and had watched them too closely to be mistaken as to the non-existence of crepitation. It might be argued that in these exceptional cases the exudation is really poured out into the air cells, but that it is too viscid to admit of the passage of air, and too viscid therefore to admit of bubbling and the production of crepitation. But this is altogether a gratuitous assumption. Admitting this explanation to be correct, there ought to be crepitation and expectoration at least during the stage of resolution. But such was not the case in the instances

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which had fallen under Dr. Fuller's observation, and in the few examples of the disease which he had examined after death the appearance of the lungs corroborated his view as to the seat of the exudation. The interlobular cellular tissue was distended and thickened, whereas the air vesicles were almost empty, and the surface of the lung, even when torn, was perfectly smooth, instead of being granular, as it is when the air-cells are distended with exudation. Dr. Fuller was opposed to the view expressed by the author as to the occurrence of a stage of pneumonia prior to that of engorgement, if by that term the author meant to express arterial injection or congestion. The first effect of irritation in all membranes is arterial injection, which is speedily followed by congestion and retardation of the circulation; and although, as stated by Dr. Williams, the blood is at fault prior to the setting up of the local mischief, Dr. Fuller was unable to conceive any local condition antecedent to that of arterial injection. In the cases cited by Dr. Waters, dulness on percussion is stated to have existed coincidently with the abnormal loudness and harshness of the respiration, and before the accession of crepitation. According to Dr. Waters' theory, this dulness cannot have been referable to exudation. To what, then, could it have been attributable if not to engorgement or arterial injection? Dr. Fuller's opinion was also at variance with that of the author in reference to the earliest physical sign of pneumonia. He did not believe that fine crepitation is usually preceded by a loud and rough respiratory murmur. On the contrary, his opinion, founded no less on pathological considerations than on careful observations at the bedside of the patient, coincided with that expressed by Dr. Williams —an opinion held also by Grisolle and Skoda,—that weakness of the respiratory murmur, attended by loss of purity and softness, usually characterises the onset of the disease. In exceptional cases, as noted by Dr. Waters, local loudness and harshness of the respiratory murmur is the precursor of pneumonic crepitation; but this in Dr. Fuller's observation was only in cases such as those cited by Dr. Waters, in which dulness on percussion proved the existence of consolidation in some adjacent portions of the lung, and in which, therefore, the loudness of the respiratory murmur remarked upon by Dr. Waters was simply the result of exaggerated breathing in the portion of lung under examination, consequent on the inactivity of the consolidated portions immediately adjacent. How any supposed dryness of the pulmonary membrane can be held to account for it, Dr. Fuller was at a loss to conceive; for it is not contended that the lung becomes sufficiently dry to crackle, and it was beyond his comprehension how any portion of lung which is capable of expanding without crackling can give rise to a sound either louder or harsher than the natural respiratory murmur. An abnormal loudness of respiration—the sound of exaggerated breathing—may be met with in any portion of the lung where the existence of dulness on percussion shows the adjacent parts to be consolidated; but until dulness on percussion proclaims the existence of pulmonary consolidation, the earliest physical sign of pneumonia is weakness, not loudness, of the respiratory murmur.

Dr. Greenhow thought the Society much indebted to Dr. Waters for his very interesting and suggestive communication, but there were some points on which he could not entirely agree with him. He (Dr. Greenhow) believed that connective tissue must enter into the structure of the walls of the air-cells, although doubtless in very small quantity, in the normal human lung, and his opinion was founded on pathological observation. He had within a few months had the opportunity of examining three specimens of lungs which had been the seat of interstitial pneumonia—that form of disease which is frequently excited by inhalation of hard, angular, mechanical particles, such as grit. In one of these cases, which had recently been under his care in the Middlesex Hospital, a considerable portion of the upper lobes of both lungs was found to be consolidated into a firm, black tissue, cutting with a smooth section, entirely free from the granular appearance of a section of consolidated lung in ordinary pneumonia. On examining under the microscope a slice taken from the lung intermediate between the consolidated and crepitant portions, the walls of the air-cells were found to be greatly thickened, and with a deposit of pigment in the intercellular tissue. He believed the thickening of the walls in such cases to be due, not, as he had understood Dr. Waters, to the increased size of the capillary vessels, but to the thickening of the connective tissue entering into the structure of the air-cell walls.

Mr. W. Adams and Mr. Savory made some remarks, chiefly in reference to a paper published some years since in the Society's *Transactions* by Mr. Rainey, "On the Minute Anatomy of the Lungs."

Mr. John Birkett communicated a letter on the

HYPODERMIC INJECTION OF QUININE,

By Dr. James M'Craith. The author of this letter is senior Surgeon to the Smyrna and Aidin Railroad, and the communication embraced the results at which he has arrived with regard to the hypodermic injection of quinine for the cure of malarious diseases amongst the men employed on the works of the railway. The writer first explained the relative equivalent values of different terms used by French and English authors in writing of continued, malarious, and typhoid fevers; and then described his experience of the fearfully sudden effects of the malaria poison on men employed on the railroad, and the universal applicability of quinine in this fever, and indeed in all diseases which weakened the general health and strength, and which on that account were sure to take on the character of the prevailing fever epidemic, whatever it might be. He then described the various forms of malaria fever, which he arranges under three heads, as Simple Ague, Masked Fevers, and Pernicious Fevers. The hypodermic method of injection was found most valuable in the third class of cases; and an example is detailed in which a patient, who had been in a profound coma for a long time, and was incapable of swallowing anything, was rapidly relieved by the injection of three grains and a half of quinine in each arm. A form of the pernicious fever called by the French "algide," and remarkable for the long continuance of the "cold stage," out of which the patient rarely recovers, was mentioned as one in which, from the intestinal canal being very much obstructed, the injection would most probably prove successful. Several cases of the choleraic form of malaria fever and of ordinary fever were also related, which were found to yield to the subcutaneous exhibition of the specific, after the ordinary method had proved quite ineffectual. The writer described the symptoms of two forms of yellow fever, the epidemic contagious and the endemic malarious non-contagious, with some severe cases of the latter, in which neither the exhibition by the mouth nor the hypodermic injection of quinine succeeded. The epidermic acid treatment, accidentally suggested to the author a few years since by Mr. Wordsworth, is found to be very successful with the white race only; but the climate of Smyrna does not suit the black, and he must eventually die out of it. No injurious results have been found to follow the hypodermic injection, but small abscesses are not unfrequent. The author does not think the hypodermic method will supersede the usual treatment by the mouth, but that it will prove extremely useful where a great scarcity of the remedy exists, or where the symptoms will not allow of its exhibition by the usual method.

Mr. Birkett explained that the paper had been drawn up at his suggestion, and he thought it was a valuable contribution to Medicine.

THE PATHOLOGICAL SOCIETY.

Tuesday, December 5.

Dr. Peacock, President.

Dr. Ramskill showed a specimen of

RUPTURE OF THE HEART.

A woman, 61 years of age, was seized about an hour after breakfast with acute pain in the region of the epigastrium. She complained of feeling sick, her face and lips were very pallid, the pulse scarcely to be felt. When told to go to bed she got up and walked into her bedroom. At 1 o'clock, when Mr. Couper, her Medical attendant, called, she was in a doze. A consultation was arranged with Dr. Ramskill at 5 o'clock, but she suddenly died. Mr. Couper was hurriedly summoned to her bedside; she was heard to make several deep-drawn inspirations, and then died. Ten minutes before death she had been talking to her son-in-law. The post-mortem examination was made by Dr. Bazire at the request of Dr. Ramskill. On slitting open the pericardium, it was found to be filled with black blood, partly fluid and partly coagulated (but not firmly, of the consistency of black currant jelly), in a uniform layer round the heart. Pericardium healthy and normally transparent. Heart small, very soft, and flabby; this softness contrasting with the *rigor mortis* of the body. On removing it, black liquid blood was seen to ooze out of a rent in the

anterior wall of the left ventricle, about midway between the apex and base, and close to the inter-ventricular septum. The rent measured about a quarter of an inch in length, and was merely linear. The wall of the organ at that part felt softer and thinner than elsewhere over an area of the size of a shilling. There was a good deal of yellow fat deposited on the heart. The coronary arteries were not atheromatous or calcified. On laying open the left ventricle, the inner aperture of the rent was found to be partly covered over by a pretty adherent fibrinous clot, but not occluded. Two or three columnæ carneæ were lacerated, and the thin portion of the wall already mentioned was stained of a dusky red colour from imbibition. The rest of the organ was, on the contrary, paler than usual, and the consistency of its texture was so diminished that it tore easily under the least pressure. The mitral valve had lost its transparency, but was neither puckered nor rough, and the left auriculo-ventricular orifice seemed natural. The right ventricle was completely collapsed, and did not contain a single drop of blood; its walls were remarkably thin; they were soft also, but less so than those of the left chamber. The pulmonary artery and valves were healthy; the tricuspid valve was normal. The semilunar valves of the aorta felt hard, almost cartilaginous, along their attached border, but were normal in their unattached or free portion. Small patches of commencing atheroma could be seen all round the circumference of the aorta at its origin. The artery higher up was healthy.

Mr. Callender showed a specimen of

FRACTURE OF THE CARPAL END OF THE RADIUS AND OF THE SCAPHOID BONE.

A male, aged 45, fell from a height and fractured his skull, his right thigh, and his right radius. He died five hours after his admission into St. Bartholomew's Hospital. On examining the wrist the radius was found to be broken at its carpal extremity, four-tenths of an inch from the joint, the proximal portion of the bone being driven into the distal, completely crushing it, the fracture extending in many places into the wrist joint. The proximal portion of the shaft was also displaced inwards, carrying with it the ulna, the latter bone being torn away from its triangular ligament, to which the tip of the styloid process remained attached. The scaphoid was broken across about its middle, the fissure extending through the bone to the articular surface for the os magnum. The entire hand was displaced backwards and to the radial side, the ulna projecting. The displacement was easily reduced by simple extension, but the outline of the radius remained irregular, rough projections of bone being felt chiefly on the dorsal aspect. This specimen shows the manner in which, when driven with great force, the proximal portion of the radius is forced into the carpal extremity, breaking it up into many pieces, splitting into the wrist joint, and, in this instance, fracturing the scaphoid bone, the latter being a rare complication. "Indeed," Mr. Callender said, "there exists to my knowledge in this country only one specimen in which an injury to the carpus has been sustained in conjunction with any such hurt to the radius. The impaction of the shaft, by which this mischief was occasioned, was prevented from locking together the two portions of the bone by reason of the great commination which has scattered in all directions the carpal extremity of the radius; it is evident, however, from the position of the shaft, and from the nature of the injury to the ulna, that the impaction was established in a direction forwards and to the ulnar side in the manner which I have described elsewhere. One point of interest remains to be referred to. The comminution caused two fragments of bone to be tilted backwards and between the two the tendon of the extensor carpi radialis brevior was fixed and firmly compressed, so that it could not be freed from its entanglement until after removal of the soft parts surrounding the portions of broken bone."(a)

Dr. Peacock showed a specimen of

DISSECTING ANEURISM ORIGINATING IN RUPTURE OF THE COATS OF THE AORTA AT THE DESCENDING PORTION OF THE ARCH.

This specimen, which was sent to Dr. Peacock by Mr. Hacon, of Hackney, was removed from a man, 45 years of age, a wine cooper, but who had not been accustomed to active exertion. On January 31 he went out into the country with a party of pleasure, and while there he was seized with violent pain in the epigastrium and severe dyspnœa. The attack subsided, but he had several recurrences, and died suddenly in one on February 7. After death a very large accumulation of coagulated blood—several pounds—was found in the posterior mediastinum and behind the left costal pleura. It had separated the pleura from its attachments, and compressed the lung, but there was no blood in the pleural cavity or in the sac of the pericardium; a small coagulum existed also in the anterior mediastinum. On further examination the blood was found to have escaped from a rupture of the aorta at its upper surface, situated immediately behind the origin of the left subclavian artery. The coats of the aorta were torn through by a transverse slit extending around about one-third of the circumference of the vessel, and partly separating the subclavian artery from that vessel. This laceration had allowed the blood to pass between the fibres of the middle coat, to separate the middle from the external coat, and to penetrate to the cellular tissue outside the aorta, so as to produce the extensive effusion found in the posterior mediastinum and behind the left pleura. From the transverse rupture, a second, following a longitudinal direction, extended for a short distance towards the arteria innominata, and involved the origin of the left carotid artery, but this only partially penetrated the coats. From it the blood had passed between the layers of the middle coat of the carotid, separating them and forming a passage extending upwards of an inch from the origin of the vessel. The ascending portion of the arch of the aorta was somewhat dilated, and its coats were throughout in places atheromatous and thickened. The heart and its valves were stated by Mr. Hacon not to have been diseased. Dr. Peacock remarked that the case was interesting in several respects. 1st. The seat of the rupture at the descending portion of the arch was unusual. Of the cases collected by Dr. Peacock, and of which an analysis was published in a previous volume of the *Transactions* (xiv.), eighty in number, in eight only were the internal ruptures in this situation, and of the five others subsequently referred to (vol. xv.) none had the same position. 2ndly. The termination by the escape of blood into the posterior mediastinum and behind the left pleura, while the pleural and pericardiac cavities were free, was almost unique. Of the cases previously collected, in which the rupture had the same situation as in this instance, none terminated in the same way, and of those in which the internal ruptures were seated in the ascending portion of the aorta one only terminated by bursting into the mediastinum—in that case the anterior mediastinum. 3rdly. The prolongation of life for seven days, and the very large extravasation of blood which was found after death, were also remarkable; though generally when the rupture was more distant from the heart life was more prolonged than in the cases where the injury occurred at the origin of the aorta. It is not clear from the specimen whether the blood had commenced to escape into the mediastinum at the time at which the injury first occurred, or whether, on the contrary, the rupture was then partial, and became entire only shortly before death; but it seems probable, from the very large amount of blood which was effused, and its firmly coagulated state, that the former had been the case.

Dr. Peacock also exhibited, in conjunction with Dr. Wale Hicks, a specimen of

ULCERATION AND STRICTURE OF THE ŒSOPHAGUS.

It was removed from a man, aged 55, a smith, of intemperate habits, who died in St. Thomas's under his care. He had œdema of the lower extremities and chronic bronchitis, and when first admitted the urine was slightly albuminous, but though several times examined no albumen was subsequently detected. He died with symptoms of effusion on the brain. After death it was ascertained that about twelve months before he had been suddenly seized with vomiting, and brought up blood, and ever afterwards had had difficulty and pain in swallowing, so that he was not able to take any solid substance.

(To be continued.)

(a) Museum of the Middlesex Hospital. I., 23, C. St. Bartholomew's Hospital Reports, Vol. I., page 285.

Dr. R. Fowler is a candidate for the coming vacancy of Medical Officer to the Charterhouse. Dr. Fowler is well known to our readers as one of the most active working men in the Profession. He is author of a Medical Dictionary, and has contributed out of the stores of a considerable experience a large number of cases to Medical periodicals. Besides, he has made observations on that most difficult subject, Poor-law Medical Reform, and has done much to elucidate that very complicated problem.

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THE EDINBURGH REPORTS ON THE CATTLE PLAGUE.

We publish the following extracts from a fourth report by Dr. Smart on the pathological appearances of cattle plague and other epizootic diseases at present prevailing among the cows in Edinburgh:—

SUMMARY OF PATHOLOGICAL APPEARANCES.

The number of cases formerly examined and reported upon were insufficient as a basis of general inference, but the following conclusions rest upon a much wider foundation, and are deduced from upwards of one hundred dissections of animals which died of cattle plague and other epizootic diseases.

1. The disease is one which principally attacks the mucous membranes—that is, the membranes lining the internal cavities of the body; but these do not all exhibit similar morbid conditions, nor suffer to the same extent in the morbid changes induced.

Pathological Appearances Invariable, but not Characteristic.—These are, first, the state of the bowel. This resembles the condition found existing in the ordinary muco-enteritis of cattle.

2. The condition of the lining membranes of the bladder and uterus is such as occurs in all congested states of these organs.

3. The central portions (pyramids) of the kidneys present the congestive condition found in the early inflammatory stage of these organs.

4. The heart, liver, and spleen may be regarded as functionally healthy. They are in the condition which results from exhausting disease of any kind, and the lining membranes of the air passages exhibit the morbid changes which are present in acute bronchial catarrh.

5. The remarkable and unique gangrenous rings or patches found on the folds of the third stomach exist in only a proportion of all the cases examined; they are, therefore, neither invariable nor characteristic marks of the disease.

Pathological Appearances which are Invariable and Characteristic.—These are,—1st. The peculiar appearance and diseased condition of the lining membrane of the fourth stomach. It likewise manifests all the morbid changes so distinctive of this disease in their most advanced and destructive forms. It is, therefore, the most characteristic pathological lesion. 2ndly. The reddened and congested condition of the vulva. 3rdly. The eruption or roughening on some parts of the superficial membrane of the mouth. When these diseased appearances are found co-existing with the condition of the bowel already described, the pathological group is complete and unequivocal. As regards negative conditions, there exists no true ulceration anywhere, and rarely any trace of inflammatory products are found. The reddened colour of the diseased membranes is due to vascular congestion in its extreme form, and not, as frequently alleged, to ecchymoses or extravasations. Emphysema of the lung is not, as has been stated, a concomitant condition of the disease.

Condition of the Blood.—The blood, instead of being "watery and deficient in fibrine," as at first asserted, is in an opposite condition—viz., the water is deficient, the fibrine increased, and the salts diminished.

The Character of the Disease, as deduced from the morbid appearances which it presents, as we have already seen, bears no resemblance to the ulcerative typhoid fever of man. As regards human typhus, the analogy likewise fails. The morbid conditions are undoubtedly peculiar. In so far as any resemblance to human disease exists, it points to a condition of the internal lining membranes analogous to the conditions of the skin in acute scarlatina, and the disease might not inaptly be termed an internal or mucous scarlatina. The general congestive but non-inflammatory state of the mucous membranes, the epithelial desquamation from the mucous surface, the increased temperature of the animal in the early stage of the disease, and the incubation period and critical days, are facts which all tend to support this view, while the condition of the kidneys and the invariable presence of albumen and blood-cells in the urine lend additional confirmation to it.

Comparative Pathological Appearances.—I instituted a series of comparative dissections with the object of ascertaining how far the pathological lesions existing in cattle plague were peculiar and distinctive. Animals affected with pleuro-pneumonia and murrain (mouth and foot rot), the two other most prevalent and destructive forms of disease in cattle, were selected for this purpose, and the following conclusions have been arrived at:—

Firstly, the pathological appearances found existing in uncomplicated pleuro-pneumonia bear no resemblance to those either of cattle plague or of murrain disease.

Secondly, in murrain, or mouth and foot rot disease, a portion of the lining membrane of the fourth stomach presents, in some degree, the reddened aspect found in the same stomach of animals affected with cattle plague; but there exist the following very marked distinctions:—1. In murrain, the congestive reddening is limited to the upper third of the membrane. 2. The colour of the membrane in murrain, as compared with that of cattle plague, is deficient in depth, and never exhibits the purple or mulberry tinge. 3. The epithelium is entire, and the mucous membrane otherwise sound. 4. In all the cases of murrain examined, the reddened colour of the membrane was found associated with dark-coloured spots, varying in size and configuration. These dark patches are sub mucous haemorrhages or apoplexies. The blood thus deposited acts as a foreign body, and ultimately induces erosion of the superjacent membrane.

From these conclusions it will appear that the morbid lesions existing in the chief epizootic diseases of cattle possess features which are broadly distinguishable.

EXPERIMENTS WITH SHEEP.

About six weeks ago, two of the sheep which had been kept three weeks in the sanatorium were handed over to me by Mr. Swan for further experiment. They were placed in a stall where two cows had just died of the most malignant form of the disease, and they were allowed to move about the byre in which several diseased animals were under treatment. Both sheep remained well until three weeks ago, when one of them became sickly, and subsequently went through all the usual stages of cattle pest, though in a modified form. On the eighth day of the disease it showed the first signs of recovery, continued to improve, and is now quite well. The other sheep continued well during the whole period. The result of this experiment, and others repeated elsewhere, would seem to show that sheep do not enjoy immunity from the disease, although they are liable to its attacks in a much less dangerous form. In the present case the attack was mild, although the animal was exposed to contagion for a lengthened period. From the results of this and other experiments we may fairly conclude that, with ordinary precaution, the disease is not likely to assume an epizootic character among sheep, although isolated cases may occur during its prevalence among the cattle. ANDREW SMART, M.D.

28, Alva-street, Edinburgh, December 11, 1865.

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, December 14, 1865:—

Charles William Philpot, King's College Hospital; Nathaniel Edward Davies, Llanrwst, North Wales; John Humphreys, Cheltenham Branch Dispensary; John Harrington Wright, Lower-road, Woolwich; Joshua Price Edwards, Tunstall, Staffordshire; John Shirley Steele Perkins, Exeter; William Matthews Bobart, Wilmot-street, Derby; George Richard Cooke, South Belgravia, S.W.

The following gentlemen, also on the same day, passed their First Examination:—

Robert Lewis Willcox, King's College Hospital; William Stanger, Guy's Hospital; Charles Adcock, Queen's College, Birmingham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to and new Appointments that take place.

ANDERSON, CHARLES J., L.R.C.S.I., has been elected Medical officer to the Kilkeel Union Workhouse, Co. Down.

ATKINSON, JAMES, M.R.C.S. Eng., has been appointed Surgeon to the London and North-Western Railway Company's Works at Crewe, Cheshire.

COWAN, JOHN B., M.D. Glasg., has been appointed Professor of Materia Medica in the University of Glasgow.

DAVIES, Mr. J., has been elected House-Surgeon to the Flintshire Dispensary, Holywell.

DUDFIELD, T. ORME, M.D. St. And., has been elected Surgeon to the Kensington Dispensary.

HUTCHINSON, JONATHAN, F.R.C.S. Eng., has been appointed Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

JONES, E., M.D., has been appointed to the Commission of the Peace for the County of Hereford.

NAYLER, GEORGE, F.R.C.S. Eng., has been appointed Assistant-Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

PEACOCK, A. L., M.R.C.S., has been elected Medical Officer and Public Vaccinator for Church Stanton District of the Saunton Union.

SEWARD, NOBLE, M.D. Glasg., has been appointed Medical officer to the Tallaght Constabulary, Co. Dublin.

The following appointments have been made in the 99th Regiment by the Right Hon. Lord Carew, Her Majesty's Lieutenant for the County of Wexford:—Solomon Richards Biggs, Esq., M.D., to be Surgeon, *vice* Verling, deceased; commission dated November 29, 1865. John Coghlan, Esq., M.D., to be Assistant-Surgeon, *vice* Biggs, promoted; commission dated December 7, 1865.

BIRTH.

WATTERS.—On the 16th inst., at 110, Islington, Liverpool, the wife of Dr. H. B. Watters, of a daughter.

DEATHS.

BURKITT, ROBERT J., M.B. Dub., at Old Bawn, Tallaght, Co. Dublin, on October 7.

CHERRY, GEORGE, L.R.C.S. Edin., at Caerleon, Newport, Monmouthshire, on December 3, aged 62.

FORMBY, RICHARD, M.D. Cantab., at Shorrock's Hill, Formby Point, Liverpool, on December 15, aged 75.

HARRIS, W., Surgeon, at 6, Andover-villas, Stoke Newington, on December 16, aged 68, formerly of Bolsover, Derbyshire.

KITSELL, JAMES, M.R.C.S. Eng., at Pendleton, Manchester, on December 6, aged 63, formerly of Droitwich.

PORTER, JOHN H., M.D., at Cheltenham, on November 29, aged 64.

READ, THOMAS, L.A.H. Dub., at 18, Hornton-street, Kensington, on December 13, aged 64.

RIDSDALE, HENRY R. S., M.R.C.S. Eng., at Southampton, on December 14, aged 28.

SMITH, THOMAS F., L.S.A., at Chulmleigh, Devon, on December 2, aged 64.

STOCKER, GEORGE S., M.R.C.S. Eng., at Sidmouth, Devon, on November 28, aged 67.

WALL, C. E., M.D., at Leinster-square, Rathmines, Dublin, on December 12.

WING, EDWIN, M.D. Lond., late Resident Physician Superintendent of the General Lunatic Asylum, Northampton, on December 17, aged 47.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Alton Union.—Dr. Henry V. Sandford has resigned the Bentley District; area, 15,588; population, 3340; salary, £100 per annum.

Blandford Union.—Mr. Edward O. Spooner has resigned the Second District; area, 17,450; population, 4795; salary, £120 per annum. Also the Workhouse; salary, £20 per annum.

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Lexden and Winstree Union.—W. Daniell has resigned the Eighth District; area, 11,640; population, 3260: salary, £60 per annum.

APPOINTMENTS.

Abingdon Union.—Henry Banks Spencer, M.R.C.S.E., M.D. St. And., L.S.A., to the Fifth District.

Edmonton Union.—Robert N. Cobbett, M.R.C.S.E., L.S.A., L.M., to the Southgate District. John Cresswell, M.R.C.S.E., L.S.A., to the Winchmore-hill District.

Hollingbourn Union.—Thomas S. Hutchinson, M.R.C.S.E., L.R.C.P. Edin., L.M., to the Stockbury District.

Saint Ives Union.—William R. Grove, M.D. St. And., M.R.C.S.E., L.S.A., to the Saint Ives District and the Workhouse.

Louth Union.—John Deane Baker, M.R.C.S.E., L.S.A., to the Hainton District.

Manchester Township.—Thomas James Webster, M.R.C.S.E., L.S.A., as Assistant Medical Officer for the Bridge-street Workhouse.

PRELIMINARY EXAMINATIONS.—During the past week eighty gentlemen have been undergoing their examinations in Arts, etc., at the Royal College of Surgeons, their ages varying from 15 to 28. The result cannot be made known to the candidates until early in the ensuing year, when those gentlemen who shall have been successful can at once enter on their Professional studies, counting from the half session. The next Anatomical and Physiological Examination will take place on the 13th proximo.

THE ANNUAL GENERAL MEETING OF THE ODONTOLOGICAL SOCIETY OF GREAT BRITAIN will be held at the rooms of the Society, 32, Soho-square, on *January* 8, 1866, (*instead of January* 1) at eight o'clock, for the purpose of electing the officers and Council for the ensuing year. At this meeting also the following alteration in the bye-laws will be proposed by the Council:—"That on and after October 1, 1869, no gentleman shall be eligible for admission as resident or non-resident member of the Society who does not hold the diploma of Licentiate in Dental Surgery of the Royal College of Surgeons of England, or some other diploma recognised by the General Council of Medical Education and Registration in the United Kingdom."

PROFESSOR AGASSIZ, who is making a scientific expedition along the Amazon in Brazil, reports most astonishing discoveries. He writes under date of September 8, and says he has found over 100 new species of fish in the Amazon although he has examined scarcely one third of that river. He is now ascending the stream, and will ultimately visit Peru.—*Times' Correspondent*, Dec. 18.

THE WANT OF MEDICAL OFFICERS IN THE NAVY.—In an admirable article on the present position of the Naval Medical Service, the *Western Daily Mercury*, of December 12, states that, in consequence of the dearth of Surgeons, the Admiralty have, in the instance of a Medical officer attached to a ship in the Mersey, been obliged to stoop to the humiliation of refusing to accept his resignation until it was thrice urged on them, the last time by memorial!

"DR." HUNTER'S assailants, Frederick Jones and Samuel Merrick, have been convicted at the Central Criminal Court, the former of an assault with intent to do grievous bodily harm, the latter of a common assault. They were recommended to mercy by the jury on account of their excited state. Sentence deferred.

ALLEGED POISONING BY TOBACCO.—The *Manchester Guardian* relates the account of an inquest on a lad who was said to have been killed by chewing tobacco. He had been employed for three years in the tobacco manufacture. About three weeks ago, after failure of appetite, he complained of lightness in his head, and ceased to work. He subsequently became drowsy, and was seized with pains in his stomach. Medical aid was called in, but the lad died on Monday. A post mortem examination was made by Dr. Braddon, who found the mucous membrane of the stomach much inflamed and stained, and the heart pale and flabby. The brain was congested, and the coverings of the mouth and throat were stained brown. Dr. Braddon was of opinion that these appearances were probably produced by the chewing and swallowing of tobacco, and that the cause of death was the absorption of nicotine. The boy would not, he believed, have received any particular harm from his occupation. The deceased's mother said she had seen him smoke once, and his brother stated that he had seen him chew tobacco on one or two occasions. The foreman under whom the deceased worked said that from the appearance of his mouth he suspected he chewed tobacco, and he also stated that he was in the habit of breaking the stalks with his teeth instead of cutting them. The jury returned a verdict of "Death from the absorption of nicotine."

LADIES' SANITARY ASSOCIATION, LEEDS.—The first annual meeting of the Ladies' Sanitary Association of Leeds was held in the Philosophical Hall, on Monday last. The Bishop of Ripon occupied the chair. Mr. Ikin, the secretary of the Society, read the report, which showed that the Society was prosperous, and was performing an immense amount of good. The Bishop, in speaking on the adoption of the report, made an address as remarkable for its eloquence as for its depth of thought. His Lordship said that the whole of his experience in clerical life was to the effect that it was impossible to implant even moral, not to say religious, sentiment in the hearts of men until their physical health and physical condition were raised to an efficient standard. Morality and religion could never take root in an impure physical soil. Dr. Richardson, who had attended from town by special invitation to move one of the resolutions, described the difficulties that lie in the way of sanitary reform, the mode in which such reform should be carried out, and the prospects in view. At this moment, when sanitary subjects are the topics of debate in Leeds, the meeting cannot fail to be of service.

THE following are the last week's Cattle Plague Returns. By comparison with those of the previous week, it will be seen that there have been 8187 attacked, 5187 deaths, 826 slaughtered, and 915 recoveries, since December 9:—

Census Divisions.	Attacked. Week ending December 16.	Attacked. Week ending December 9.	Attacked. Week ending December 2.	Result of reported Cases from the Commencement of the disease. Attacked.	Killed.	Died.	Recovered.	Remaining.
1. Metropolitan Police District	43	129	44	7013	3056	3122	268	567
2. South Eastern Co.	70	55	104	4417	1431	2389	343	243
3. South Midland Co.	745	627	510	4742	1257	2679	219	587
4. Eastern Counties	390	245	180	5752	2120	2761	357	514
5. South Western Co.	101	71	23	432	126	248	15	93
6. West Midland Co.	143	84	102	1424	376	726	117	205
7. North Midland Co.	3 8	171	78	1188	224	598	66	260
8. North Western Co.	945	673	423	3174	924	1713	225	912
9. Yorkshire	12 2	1037	938	6954	490	4130	715	1618
10. Northern Counties	139	138	119	1197	443	552	96	128
11. Monmouthshire and Wales	287	245	116	1456	82	990	136	240
12. Scotland	1701	1881	1191	17588	2351	9795	2129	3315
	6454	5876	3828	53338	12389	29709	4685	8245

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Mr. Bradford's communication is intended for publication.

Beta.—In our next.

An Anxious Inquirer.—The Colleges all discourage it.

Academicus.—We regret that want of space prevents our publishing the series of questions proposed to the candidates for the degree of B.A. in the Natural Sciences Tripos in the University of Cambridge.

A paper has lately been read by Mr. W. Handsel Griffiths, of Dublin, on an "Improved Haemodynamometer," before the Royal Irish Academy. Mr. Griffiths' work on the subject is being published by that institution, and will shortly appear.

Dr. MacCormac has recently published some original views on the production of phthisis. He had become convinced that fouled air was productive of consumption. Pondering the subject, it occurred to him that the unexcreted carbonaceous waste was no other than tubercle, and, consequently, the only source of consumption and scrofula. In fact, the tuberculous product accounts very exactly, in his opinion, for the disposal of the carbonaceous waste, of which the respiration of air already breathed prevents the excretion. Dr. MacCormac describes in his treatise the disastrous workings of rebreathed air, and enters very fully into the details needful, in his view, to assure the absolute extinction of consumptive disease.

POOR-LAW MEDICAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I must again crave your indulgence for space to inform the Poor-law Medical officers that I have prepared the draft of a Bill on the subject of Poor-law Medical Relief, and have transmitted it to Dr. Henry, the Secretary of the British Medical Association, for the opinion of the Poor-law Medical Relief Committee of that Society, as the annexed letter will explain.

Since the last publication of the list of subscribers, I have received the following sums of money, which I have carried to the account of the

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Association:—Dr. Sankey, Hollingbourn, 20s.; David Skinner, Hollingbourn, 5s.; H. T. Wood, Tavistock, 5s.; T. Robinson, Cheadle, 5s.; W. Sheppard, Ashford West, 10s.; W. Woodward, Worcester, 5s.

I am, &c.

12, Royal-terrace, Weymouth, Dec. 16. RICHARD GRIFFIN.

Copy of a letter to Dr. Henry, Secretary of the British Medical Association, December 5, 1865.

"My dear Sir,—If the Committee on Poor-law of the British Medical Association think they can do anything in the forthcoming Session of Parliament, I should say no time ought to be lost in determining on the steps to be pursued. For this purpose I send you the draft of a Bill, which, if your printer (at the expense of the British Medical Association) would print and forward a copy to each of the Poor-law Committee, they might then make their remarks upon it, and submit them to you; and if you find we are likely to agree, I should suggest that the Poor-law Board be asked to receive a deputation next month, and that we should then urge the President to bring in a Government measure on the subject. Failing of success with the Board, we should endeavour to procure an independent member of some weight in the House to introduce a Bill.

"I am, &c. "RICHARD GRIFFIN."

POOR-LAW MEDICAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I am sorry to see that Mr. Griffin's appeal to the Poor-law Surgeons of England has not been responded to by them in the manner that it deserved. That gentleman's disinterested action has been applauded by the Medical Press, and appears to have been unanimously approved of by all those most deeply interested in the movement; and yet (after the lapse of so many weeks) there is nothing done; no one to come forward to give him a helping hand in his honest work. What, then, is the reason of all this lukewarmness, this indifference? Is it that we have no grievances to be redressed? All with one accord must answer "No" to this question, and, indeed, have so replied for a generation past. Have we, then, just cause to complain, and do we admit ourselves beaten? It would appear so from the long silence of the many, and the sad want of enthusiasm manifested by the most of us. If we persistently say to ourselves that all efforts can be of no avail, then, indeed, do we resign our cause into the hands of our opponents. But this is surely not what men generally do, and least of all Englishmen, educated Englishmen. I deny that a continuous and united effort must be fruitless in result. Never yet was it so in this world's work, and assuredly cannot be allowed to be in this particular instance. I will not believe that we are about to give up all that we have been seeking and asking for during the past ten years. Shall we lack energy and determination to go on and fight the battle until success is certain? No; we will not weary till the public and the Legislature are made to know and feel the full extent of our wants, and the evils and sufferings of our poorer neighbours, nor ever rest until those wants be satisfied and those evils remedied. Let us, then, come together, let us unite under our old and tried champion, and go forward in the right way. He has signified his willingness to remain at his post, and to continue the onerous duties of leadership. Let us not refuse our chosen man, and leave him single-handed in this emergency. No time should now be lost; the time for action is an important one, as he has pointed out. Then let us without further delay come to his assistance. Money is required; nothing can be done without it; but money alone is not sufficient; we must be united, and thus render him moral aid. Subscriptions should be immediately forwarded to Mr. Griffin, at Weymouth; he will then lose no time in calling us together, and taking the necessary steps to further progress in the way which he so clearly pointed out to us in his admirable letter published in the Medical Journals six weeks since.

I am, &c. WM. PROWSE.

Amersham, Bucks, December 13, 1865.

HAY FEVER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A question is asked in your last Saturday week's impression to which the title of the following book is the answer:—"Der Typische Frühsommer-Katarrh oder das Esgenannte Heu-fieber, Heu-asthma. Von Phillipp Phœbus. Giessen. 1862." I am, &c.

Cheltenham, December 14. MEDICUS.

DEATHS FROM CHLOROFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It is probable, I cannot help thinking, that my friend Professor Simpson underrates the danger of chloroform as an anæsthetic. We have had about 250 published, and possibly twice as many not published, deaths from chloroform in the human subject, hundreds of experiments also on the lower animals killed by chloroform, but all of both classes agreeing in certain conditions as to the appearance of the lungs, heart, etc., so that the element of chance seems diminished, and yet we are told that accidents are not amenable to any strict co-ordination; not more than so many chance deaths from Epsom salts; or, to quote textually, Dr. Simpson asks whether every two and a-half million doses of opium, antimony, aloes, and Epsom salts be attended with as little danger as two and a-half million doses of chloroform.

Now, without laying any stress on the fact that one-half of this two and a-half million doses is used in external applications, liniments, manufacture of collodion, chlorodyne, etc., I would say that the deaths are always fixed and instantaneous from chloroform; always, or nearly so, occur in healthy adults (three men to one woman); always in trivial operations, or immediately before, not after, operation; almost always by apnœa; the right side of the heart invariably gorged; the lungs with specific appearances, etc.; so that the deaths are not merely fortuitous. Then as to classing together deaths from doses of opium and doses of Epsom salts; who ever heard of deaths from the latter? We have here two equals compared to unequals. No doubt the deaths from chloroform are few and far between; but it would be a great mistake to dissuade us from the study of them, for only in that manner can we come to understand and prevent them. Vast improvement has taken place in that direction of saving life, but certainly not by looking on the death as a thing of chance, impossible to solve as an impossible death from Epsom salts. I doubt if in twenty years we have had 250 deaths from this latter, or one death at all; and so the thing is reduced to one of those illogical syllogisms of which the late Mr. Joseph H. Green treats in his work recently published, and so common in Medicine.

Depend on it, chloroform is far more dangerous than either antimony, aloes, or Epsom salt. Deplorable deaths occur every month of which nothing is heard. We shall have a death at some day of a lord high admiral, duke, or duchess, and then the gravity of the question will stagger all the world; but it is very much calculated to mislead, this dictum that chloroform requires no more precaution than a dose of Epsom salts; like the cattle plague, pooh-poohed at first, because it had not touched the dukes or earls. Let us have some direful accident in the upper circles, and then it will be wondered we made so little of such deaths generally from chloroform, and neglected the lesson they teach of how by galvanism they are easily prevented—a fact founded on the study of the causes of the death so misapprehended, as I believe, by my Edinburgh friend.

I am, &c.

Sackville-street, W. CHARLES KIDD, M.D.

NOTES ON A CASE OF RESPIRATION AND OTHER SIGNS OF VITALITY IN A FŒTUS PRESUMED TO BE OF LESS THAN FIVE MONTHS' GROWTH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—On June 7, 1859, I was called to attend Mrs. ——, of Biggleswade, who was suffering from acute pleuritis. She was pregnant, and persisted that she was only "four months gone." She is the mother of three full-grown children.

On June 10 I was summoned, and found her in labour. At 7 a.m. the os uteri was fully dilated, and, the membranes protruding, I ruptured them, which gave exit to a large quantity of liquor amnii. The breech presented, and in a few minutes a female fœtus of a reddish colour was born. Its nails were but imperfectly formed; it was nine inches in length, and weighed only 8 oz. and 3vi.; but to my intense astonishment it was alive. It fairly extended its limbs, and tried to cry. It, however, emitted no audible sound, and in ten minutes it gave up the ghost.

The uterus made several attempts at contraction, which being entirely fruitless, at the end of half an hour, hæmorrhage supervening, I introduced my fingers and extracted the placenta, which was adherent. Contraction immediately ensued, and the flooding ceased.

I am, &c. CHAS. F. NURSEY, L.R.C.P. Edin., etc.

December 16, 1865.

ARMY MEDICAL GRIEVANCES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I am glad to see there is a Commission sitting to inquire into the condition of the Royal Medical services, though I am not sufficiently sanguine to expect that any good will result from it.

I presume the intention of the Commission is to gain, if possible, a clear insight into the grievances of both services; but the source from which they appear to be collecting their witnesses indicates a failure at the outset. It is not to be expected that any Assistant-Surgeons or Medical officers of any grade will enter into an impartial statement of grievances before the very men who hold their destinies in their hands; and therefore to summon some of the Medical staff from Aldershot before the Commission, to tell their Director-General that they consider he has neglected their interests, is a farce. It would answer the purpose far better to call upon those gentlemen who in the last twelve months have resigned their commissions to state fairly and openly their full reasons for doing so. No doubt their recorded reasons would look favourable enough, as no one would be likely, in writing to the Director-General for permission to resign, to state as his reason that he was dissatisfied with the service and its head. Should he do so, he would probably expect to see shortly after in the *Gazette* that he had been permitted to resign, Her Majesty having no longer any need of his services. Having had the honour of being an Assistant-Surgeon in the army, and been in India for some time, I think that that country has had a large share in causing the dissatisfaction that exists.

To give an instance of their mode of dealing with Assistant-Surgeons, an application was made to the authorities for an increase of pay, according to the scale of the Royal Warrant; but the answer was not satisfactory. It stated that the increase should be given to the pay proper, by being taken from the allowances. A remonstrance against such palpable injustice elicited the reply that the increase had been already given, as a rupee was worth 2s. 6d., and ended with an order that no more letters were to be written on the subject. There are gentlemen now in the service who can bear witness to the truth of this statement.

I should like to hear the Commission reconcile the above with a remark of Sir Charles Wood's in Parliament—that there was a difficulty in introducing a gold currency into India, as a sovereign was worth more than ten rupees. I am, &c. L.R.C.P. LOND.

THE TUTORIAL ELEMENT IN MEDICAL EDUCATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Your article last week on the University of London must, I am sure, have gratified many of your readers who take an interest in the subject of Medical education. Though I differ from you on some points of detail, I am glad to find that you advocate so strongly the development of the tutorial system at our Medical schools and colleges.

Some time ago the Archbishop of York—no mean authority on matters of education—pointed out in an address which he gave at St. Mary's Hospital that the great strength of Oxford and Cambridge as places of learning lies in this tutorial system, and he indicated some of the advantages which we should derive by developing that element in Medical education. His words gave weight to an opinion which has for a long time been gaining ground in our Profession, and it is most desirable that the subject should not be allowed to slumber.

A tutor ought to be appointed for every twenty or thirty men on the roll of the school. The new students should be divided equally among the several tutors, and should continue their pupils during the whole time that they are prosecuting their studies. The duties of the tutors should be to supply regular catechetical instruction to the first year's men, to prepare all for their examinations, and, above all things, to make friends with their pupils, so as to direct their studies, assist them with advice, and, speaking generally, to exercise a beneficial, social, and moral influence over them. The tutors should be young enough to sympathise with the students, but old enough to instruct and advise with weight and authority. If possible, rooms should be provided for them in the college or in the immediate neighbourhood of the school, so that they might be in constant relation with the men under their care.

Where there is a difficulty in providing a salary, the tutorship might perhaps be associated with such offices as those of Demonstrator or Assistant-Demonstrator of Anatomy, Curator of the Museum, Pathological Registrar, etc. In this way the tutor's fees might be supplemented, and such a plan would be quite in harmony with that which prevails at Oxford and Cambridge.

Were a sufficient number of tutors appointed with such duties as I have indicated, I believe that it would not only enhance the value of Profes-

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sional lectures and clinical teaching, but that it would be of incalculable benefit to the students in a social and moral point of view.

I am, &c. WILLIAM FAIRLIE CLARKE.

1, Curzon-street, Mayfair, December 14.

THE LATE DRS. BAILEY AND BICKERSTETH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Last year the Medical men of this town and its environs did themselves the honour to erect in the hall of the Somerset Hospital here a tablet recording their sense of the merits of Dr. Samuel Bailey, R.N., as the founder of the first Hospital in South Africa, who had died, in the 86th year of his age, after an honourable career as a Physician for fifty years, at the Cape. We have now placed another tablet in the vestibule of the Hospital, directly opposite to the late Dr. Bailey's, and I enclose a notice, taken from our *Mail*, of its inscription, etc. :—

"IN MEMORIAM.—The Professional associates of the late Dr. Bickersteth have gracefully paid their tribute to his memory, by placing a tablet in the vestibule of Somerset Hospital, commemorative of his distinguished talents and eminence as a Physician. Dr. Bickersteth's celebrity was not confined to the colony, and we believe that thousands, in all parts of the world, who benefited by his counsel will endorse the expression that 'in his death Medical science and the public sustained a grievous loss.' The tablet is of the purest marble, and bears the following inscription :—

"'IN MEMORIAM,
HENRICI BICKERSTETH, M.D., F.R.C.S.,
CHIRURGI NOSOCOMII SOMERSET,
HUNC LAPIDEM
SOCII ILLIUS MEDICI STATUUNT FAMAM EJUS CELEBREM DOTES QUE INSIGNES, ADMIRANTES ET COLLAUDANTES.
MORS EJUS ET MEDICÆ ARTI ET POPULO, MAGNO DAMNO FUIT
E VITA EXCESSIT
DIE VI AUGUSTI, MDCCCLXIII.,
ÆT. 49.'"

I am, &c. HENRY A. EBDEN, M.D.,

President of the Government Medical Board in Cape Town.

Cape Town, South Africa, October 25, 1865.

P.S.—The late Dr. Bickersteth was for twenty years a Surgeon at the Somerset Hospital, and enjoyed very high repute there, as well as in a large private practice among visitors from India and other lands.

EFFECT OF ACID MIXTURES ON THE TEETH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you permit me, through the medium of your paper, to beg as a favour of your many Professional readers that they will give consideration to the following subject, of great importance to the public, and one that I feel assured only requires ventilation to attract the attention it deserves? My object is to point out the daily increasing necessity that all prescriptions containing acid in any form, however much diluted, should be accompanied by proper precautions as to their use. So serious are the evils arising from the neglect of such a measure, that I feel it my duty to bring the subject forward without further delay. When I assure you, Sir, that contact with acid is more permanently prejudicial to the teeth than anything I could mention, you and your readers will be able to make your own estimate as to the amount of damage the public at present sustains from this cause. I am quite aware that some Medical men accompany prescriptions of this nature with directions for the use of a glass tube or medicine spoon, with a view to avoiding their deleterious effects in the mouth, but these I hold to be inefficient for the purpose, and I strongly advocate the substitution of an antacid, for which the following simple form would suffice :—"Wash the mouth with a little sal volatile and water before and after taking the mixture." Should exception be taken on account of the additional trouble that this would involve, I am sure that all respectable chemists and druggists would readily adopt a printed form to the same effect, which could be affixed to every bottle containing an admixture of acid. I am, &c.,

WILLIAM D. NAPIER, M.R.C.S., and Dental Surgeon.

22, George-street, Hanover-square, Dec. 13.

CHRISTMAS HOLIDAYS TO MEDICAL STUDENTS.

Professor Bennett, at the close of his lecture this morning, condescended to give what he evidently considered an explanation why the Medical students had been deprived of their holidays. He said that the Senatus had, after mature consideration, sacrificed the Christmas holidays in order to be able to close the session at the end of March, instead of carrying it on to the third week in April. He showed very plainly, what every one admits, that it is highly desirable that those who go up for examination in April should not have to attend classes up to the last day; but stated that if we have holidays now we must go on till that date in April.

Now, we ask simply for this, that lectures be omitted from the 26th to the 29th inst. inclusive—viz., four lectures. By this means we shall be able to take a holiday from the 23rd inst. to January 2—viz., ten days. Why it should be necessary, if these four lectures be given up, that fifteen extra ones should be delivered in April, I think it will puzzle a wiser man than myself to see.

Professor Bennett further stated that, though Englishmen liked to enjoy a merry Christmas, they, being in a very small minority, would inflict a fortnight's unpleasant idleness on the larger number of Scotchmen. To this I would answer that among Medical students of the University the English are not a small minority; and also that the Scotchmen will be as glad of the holiday as we are, as is proved by the fact that the students in Arts, Divinity, and Law—almost entirely Scotchmen—have it granted to them. I am, &c. SPERO.

—*Scotchman.*

A protest, from which the following are extracts, has been forwarded to the Senatus of the University of Edinburgh by Mr. Chas. E. Smith, Chairman of a Committee of students :—

"Having observed with considerable surprise a notice in the University Calendar for this year intimating that, whilst the usual Christmas holidays are to be granted to students of the Faculties of Arts, Law, and Divinity, they are to be denied to students of Medicine, we, the undersigned Medical students of this University, beg to remonstrate and protest against such innovation.

"We beg to remonstrate on the following grounds :—

"1. We see no reason why the students of Medicine should be deprived of a custom enjoyed by students of the other Faculties.

"2. By abolishing our Christmas recess, you deprive more than one-third of the students of this University of a right and custom enjoyed by them from time immemorial.

"3. Whereas the Medical students of every other University in Scotland, and likewise every Medical school in Great Britain, enjoy a Christmas recess, we see no reason why we alone should be denied the benefit of this custom.

"4. Whereas the fame of this University, and the reputation of the distinguished Professors who occupy its Chairs of Medicine, have attracted large numbers of students from all parts of Europe, but more especially from England; and whereas it is the national custom in England not only to observe Christmas-day, but likewise for members of families to meet, if possible, during that season of the year, we consider it an unjustifiable hardship for the University authorities to interfere with these domestic arrangements

"5. That the amount of time and attention exacted from us by your curriculum of study (more especially from those students who come under your new regulations) allow very little either of leisure or relaxation; and we beg to assure you that a Christmas recess is more than ever necessary."

*** Without knowing the reasons to the contrary, we can but hope that the Medical students will not be deprived of the right to a merry Christmas. We see that the University Court are inclined to grant the holiday if the Senatus will relent.

COMMUNICATIONS have been received from—

Mr. W. PROWSE; PHARMACEUTICAL SOCIETY; Mr. A. L. PEACOCK; Mr. R. HARRISON; AN ANXIOUS ENQUIRER; Dr. T. O. DUDFIELD; Dr. C. KIRBY; Mr. G. P. EDGE; Dr. ANDREW SMART; Mr. J. L. JEFFERY; THE SECRETARY OF THE BRITISH MEDICAL ASSOCIATION; Dr. H. B. WATTERS; Mr. R. RANSFORD; BETA; ODONTOLOGICAL SOCIETY; ROYAL INSTITUTION; Dr. JOHN GOODMAN; Mr. W. REID; APOTHECARIES' SOCIETY; Dr. G. P. DUFFEY; Dr. F. W. GIBSON; Dr. C. F. NURSEY; Dr. DYCE BROWN; Mr. R. GRIFFIN; AN ORIGINAL SUBSCRIBER; Dr. R. LAWSON TAIT; Dr. A SAMELSON; L.R.C.P. LOND.; Dr. N. MCCORMAC; MEDICUS; Dr. LIONEL BEALE; Dr. HUGHLINGS JACKSON; Dr. HARLEY; Mr. J. CHATTO; Dr. BALLARD; Dr. OGLE; Dr. H. BENCE JONES.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 16, 1865.

BIRTHS.

Births of Boys, 1096; Girls, 1002; Total, 2098.
Average of 10 corresponding weeks, 1855-64, 1842·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	753	690	1440
Average of the ten years 1855-64	673·7	644·7	1318·4
Average corrected to increased population..	..	..	1450
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	..	14	..	3	4	10	6
North ..	618,210	4	19	19	3	9	25	2
Central ..	378,058	1	3	6	1	5	11	3
East ..	571,158	8	3	12	3	16	21	8
South ..	773,175	2	10	11	3	18	27	8
Total ..	2,803,989	15	49	48	13	52	94	27

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·444 in.
Mean temperature	39·7
Highest point of thermometer	46·9
Lowest point of thermometer	29·9
Mean dew-point temperature	35·4
General direction of wind	N.E. & N.
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK

December 23. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m., Royal Free Hospital, 1½ p.m.

25. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

26. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Sound" (Juvenile Lectures).

27. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

28. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Sound" (Juvenile Lectures).

29. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

ON GENERAL AND LOCAL CHEMICAL DISORDERS ARISING FROM PEROXIDATION,

AND ON THE MECHANICAL DERANGEMENTS THEY PRODUCE.

By H. BENCE JONES, M.D., F.R.S.

PART III.—LECTURE VIII.

ON GENERAL AND LOCAL INFLAMMATION.

(Continued from page 676.)

The first theory of uræmia came from Dr. Wilson, at St. George's Hospital (*Med. Gaz.*, 1833, on "Fits and Sudden Death in Connection with Diseased Kidney"). He attributed the symptoms to diminished albumen and excess of urea in the blood,—the discovery of Bostock and Christison. In 1851, from very careful experiments, Frerichs came to the conclusion that urea was not the poison, but that it gave rise to carbonate of ammonia, and that the symptoms depended on ammoniæmia.

Schotten found in uræmia the proportion of extractive matter to albumen in the blood increased from 5 : 100 to 40 : 100, and Hoppe found the kreatin five times more than in healthy blood.

Traube thinks uræmia does not proceed from any definite poison or poisons, but from œdema and anæmia of the brain. If the anterior lobes are affected, this causes coma; if the middle lobes, coma and convulsions. Variations of arterial pressure give rise to the œdema, and this to the anæmia.

Multitudes of experiments have been made on animals in support or opposition to these different views. I shall only have time here to bring before you the last and best experiments, premising that Oppler, in *Virchow's Archiv.*, vol. 21, p. 260, was the first to observe that after tying the ureters the urea in the blood was much more than after extirpation of the kidneys, and hence he concluded that part of the urea in the urine was formed from some other substance in the kidney. He also determined the amount of kreatin in healthy muscles, and found that one kilogramme of muscle gave one-third of a gramme of kreatin. After nephrotomy (forty to fifty hours) he obtained from the same weight of flesh 2·2 grammes of kreatin.

Dr. Zalesky, in Hoppe's laboratory, has carried on a long investigation on this subject, more especially on animals that do not in health produce urea, but stop at urate of ammonia. He found that when one kidney was left, or when one ureter was pervious, symptoms of wrong chemistry hardly occur, but when both kidneys in snakes were removed, or both ureters were tied, death was caused twice as quickly by the former injury, and the chemical results were entirely different in the two operations.

When the ureters in birds were tied they continue to produce urates, and these are re-absorbed and deposited first in the lymphatics, and secondly in the joints coating them, as thoroughly as the most gouty joint is coated. The urates, moreover, covered as with white paint the liver, the pericardium over the heart, the peritoneum in places; even in the substance of the heart, and under the endocardium of the valves, and on the sides of the papillary muscles urates were seen; out of the ducts of the stomach-tubes little casts of urates could be squeezed by gentle pressure, and even in the aqueous humour of the eye urates were found.

When the ureters of snakes were tied, death occurred twenty-nine days after the operation. The œsophagus, stomach, and bowels contained urates. The surface of the liver was mottled with urates. In the structure of the spleen, the outer surface of the kidney, and the surrounding parts, urates were found, and all over the surface of the different organs and the bowels the deep white colour of the urates were seen, and uric acid was detected in the aqueous humour of the eye. When the kidneys were entirely removed, the animals died fourteen or fifteen days after the operation. No uric acid was found in the muscles, liver, or lungs, and a mere trace in the bowels.

Dr. Zalesky made a series of experiments on the amount of urea in the blood, muscles, and other parts of dogs in health, and in the same parts when the kidneys had been removed, and when the ureters had been tied. Taking the average of his experiments—

	In health.	When kidneys were removed.	When ureters were tied.
In blood per cent. of urea	·00396	·0016	·0523
In muscle ,, ,,	·00171	·0020	·0418

Neither in birds nor in mammalia could any marked increase of ammonia in the blood be found after the ureters were tied, or after the kidneys were removed. Thus

Carbonate of ammonia.	In health.	When kidneys were removed.	When ureters were tied.
In 100 grammes of blood of birds . .	·0058 gr.	—	·0069
,, of dogs	·0029	·0096	·0070

Dr. Zalesky concludes that Frerich's theory must be given up, and that as uræmia occurs in animals that never form urea, and as there is more urea in the blood when the ureters are tied than when the kidneys are removed, though the uræmic symptoms occur at least quite as quickly after the last operation, so the urea theory cannot be maintained. He considers Traube's theory of the excess of water and pressure unproved, and he thinks Oppler's experiments point to the want of separation of other substances besides urea and uric acid as the cause of uræmia.

	Grammes per cent.
In mammalia he found that the average amount of kreatin in healthy muscles was	·060
,, ,, when the ureters were tied. .	·280
,, ,, when the kidneys were removed	·351

It is in the highest degree probable that as in different plants under variations of structure, growth, deoxidation, and climate various combinations of elements are synthetically built up into different alkaloids, so in different parts of animals variations of structure, growth, oxidation, and temperature may analytically form out of albuminous substances, even the same or more highly carbonaceous alkaloids, or neutral or acid substances which ultimately pass down through kreatin and kreatinine to uric acid, urea, and carbonate of ammonia. Among these higher compounds one or more substances may be formed or retained in excess which by direct chemical contact with the nerves and muscles may give rise to symptoms resembling those produced by morphia or strychnia.

The experiments of Dr. Zaleski prove that urates are deposited on the non-vascular cartlages and in the aqueous humour of the eye when the ureters of birds are tied, and this confirms the results I have published in the *Proceedings of the Royal Society*, vol. xiv., p. 400, that soluble substances as quickly as they go into the blood pass out of it into every organ and structure of the body. When urea, urates, or any other substance exists in excess in the blood, it must at the same time exist in excess in every vascular and non-vascular structure of the body.

The second result of obstruction of the arteries is shown in the altered chemistry of nutrition of the kidney.

I have already brought the result of this before you in this lecture when speaking of the fatty deposit which in a few hours results from ligature of the renal artery. What happens in a few hours in the experiment happens more slowly, but not less surely, in this disease of the kidney. The structure not only wastes from insufficient supply of blood, but long previously, from insufficient supply of oxygen, there is an accumulation, if not a production, of fat everywhere.

As the disease continues the cortical structure becomes less and less nourished, and the deposit of fat increases. The fatty deposit is not the cause of the wasting, but the obstruction causes the wasting and the fatty deposit and fatty production; although when these are in excess they react on the circulation through the vessels, and by increased pressure tend to make secretion and nutrition more difficult.

But you must not suppose that an acute or chronic alteration of the chemical, mechanical, and nutritive actions in the coats of an artery can occur without the action extending to neighbouring or even distant textures.

The nearest texture in locality is the interstitial cellular texture of the kidney; this takes on the same increased chemical action and the same altered nutrition, and even the neighbouring tubes may participate in the increased action and modify the symptoms and accelerate the progress of the complaint. These diseases must form the subject of my next lecture. Here, however, I must point out to you a fact arising from the equality of the pressure of the blood in the arteries. In the whole arterial system—from the heart to the capillaries, omitting the gradually increasing friction—the pressure at any one moment is always the same throughout every part. A rapid or gradual increase of pressure in any part implies an increase of pressure in every other part; so that much pressure in the small arteries in one point produces pressure everywhere, and

this increased pressure gives rise to altered chemical action in other small arteries. Hence the increased resistance in the kidney causes increased pressure in other arteries and increased action in the left ventricle; and then other small arteries, as in the spleen and the liver, take on the same action and show the same deposit when treated with a solution of iodine in glycerine. Moreover, this uniformity of pressure leads to more or less of this thickening of the small arteries in other states of obstruction of the kidney and in many other diseases; so that disease of the interstitial texture or of the tubes, of the lungs, of the liver, of the spleen, of the heart, occur where this fibrinoid disease exists. Vogel states that, taking extreme, partial, and slight cases, amyloid disease is present in the kidneys of half the fatal cases of Bright's disease which he examined. In any chronic disease in which there is obstruction to the arterial circulation, and consequent increase of pressure in the small arteries of the kidney, this increased action and thickening tends to occur.

Dr. Dickinson, in his paper in the 44th vol. of Medico-Chirurgical *Transactions*, has included diseases of the artery and interstitial texture under one head of granular kidney. The records of 2350 post-mortems in St. George's Hospital in ten years gave 250 with granular kidney; of these, in 43 per cent. there was disease of the valves of the heart; and in 52 per cent. there was atheroma of the arteries, and no less than 17 out of 250 died of sanguinous apoplexy.

In this as in other forms of Bright's disease no special actions of medicines, no specific, can be of benefit. Filling every texture, in addition to the altered texture of the kidney, with more alkalies, or with less alkali, or with oil, or with salt of any kind, will not remove the thickening. Mercury probably combines with every particle of fibrin in the body, and alters its properties, making it less coagulable and hastening the changes it passes through in its downward progress towards water, carbonic acid, and urea; but when the secreting power of the kidney is lessened, instead of escaping in large part by the kidney from the moment it enters the circulation, it escapes only to a very small degree, and thus it is left in greater quantity to diffuse into the textures, or to attach itself to some texture where it may lie dormant until that texture is redissolved. So that even in this form of Bright's disease mercury may set up an intense oxidation in other parts to which it passes; and therefore here it must be used in very small as well as in rare doses. One exception I have found to this rule, and that was in a case of amyloid disease, where, in consequence of the treatment necessary for dropsy, strong hydragogue cathartics, colocynth, elaterium, croton oil, were taken, and borne for many weeks with great advantage. In this case calomel in grain, or even two-grain, doses was taken each night for weeks, and yet no affection of the gums was seen. By far the largest portion of the mercury probably helped the action of the elaterium that was used; and even of that portion of the mercury that was absorbed probably a part was removed in the watery exudation from the bowels which took place daily.

It might be thought that the action of iodine and alkalies would affect the thickened arteries; but no manifest gain has come from the use of these remedies, and the treatment always ends in giving up medicines that act on the causes and alterations of the disease, and in endeavouring to meet the symptoms and complications as they arise. As these are common to other forms of Bright's disease, I shall postpone what I have to say on the treatment of dropsy and urænia—the two most important complications—to my next lecture.

Prognosis.—Of all the forms of Bright's disease this seems the one in which, without perfect cure, the longest pauses or stoppages in the progress of the disease are occasionally met with. It differs much from the affection of the tubes, in which constant recovery takes place, and in which no trace of albumen is met with in the urine when the disease has passed away. In amyloid disease, probably with cirrhosis of the kidney, I have witnessed for years the albumen present in the urine, although all the other functions of the body, including the procreation of healthy children, have been well performed. Still, as the disease of the kidneys arises from, or is followed by, affections of so many other organs, the prognosis is generally most unfavourable; and when cirrhosis and tubular affection of the kidney also are present the rate at which the cortical structure disappears may vary extremely in different cases, but usually it goes on surely, until the kidney almost ceases to have any cortical structure at all, and finally the same results follow as if the kidneys had been removed.

COURSE OF

LECTURES

ON THE URINE AND DISEASES OF THE URINARY ORGANS.(a)

By GEORGE HARLEY, M.D., F.R.S.,

Fellow of the Royal College of Physicians, Professor in University College, and of University College Hospital.

LECTURE XI.

ALBUMINURIA WITH AND WITHOUT DROPSY;—IN CONNEXION WITH BRIGHT'S DISEASE, HEART AND LIVER DISEASE, PREGNANCY, FEVERS, ETC.—ITS CHEMISTRY, PHYSIOLOGY, PATHOLOGY, AND TREATMENT.

(Continued from page 678.)

TREATMENT.

At no very distant date the treatment of kidney diseases was regarded as an almost hopeless task. As our knowledge of their pathology and our powers of diagnosis have, however, advanced, we have gradually gained confidence in the value of remedies in such affections, and we might almost say that it is in the power of the enlightened Practitioner not only to check the milder forms, but even to control and mitigate the symptoms arising from the severer renal affections. To be successful in treatment we must be correct in diagnosis, and taking for granted that the nature of the case has been thoroughly made out, the general principles upon which we are to found our treatment are as follows:—The first and great principle of all is to give rest to the diseased organ, for just as the function of the diseased eye is to be kept in abeyance while nature is removing the lesion, so must the diseased kidneys have rest from their function in order that their healthy condition may be restored. We cannot, unfortunately, lay up the kidneys as we can a fractured limb, or entirely arrest their function, as we can that of a diseased eye. Nevertheless, we can *reduce their labour to a* minimum by making other organs for a time perform an essential part of their office.

There are three channels by which we can draw off from the system the excrementitious materials which normally fall to the lot of the kidneys to eliminate—namely, the bowels, skin, and lungs. By keeping up an excessive action in these, we can not only remove for a time a portion of the burden from the over-taxed kidneys, but in those cases where dropsy has already become a distressing symptom give great relief to the patient.

The value, indeed, of pressing into our service the vicarious action of the bowels, skin, and lungs in the treatment of renal disease it is scarcely possible to over-rate, for we can not only by such means give rest to the kidneys and diminish dropsy, but even mitigate the more distressing symptoms which are ordinarily included under the term uræmic intoxication,(b) but which, more properly speaking, are the direct result of the combined effects of the retention in the circulation of all the excrementitious products, organic as well as inorganic, which normally fall to the lot of the kidneys to excrete. The skin and lungs are more powerful auxiliaries in the elimination of urinary products than is generally supposed, for, as shown in our first lecture, the cutaneous perspiration does not only carry off water, but many of the organic as well as inorganic urinary salts. Thus it has been found that the sweat even in health contains urea, uric acid, phosphates, and chlorides, while in disease, in addition to these, it contains many abnormal compounds, such even as the insoluble oxalate of lime. Pulmonary exhalation, too, as was then shown, may be almost of equal service, for in the expired air of even healthy man have been detected urea, uric acid, urate of soda, and urate of ammonia.

The vicarious action of the bowels is to be induced by the internal administration of mild or drastic purgatives, according to the constitution and condition of the patient. When there is much dropsy, elaterium is a favourite form of purgative, but in cases of kidney disease it is usually advisable to administer it along with hyoscyamus, as it not unfrequently brings on an exhausting diarrhœa, especially if given after the symptoms of uræmic poisoning have already set in.

(a) This Course of Lectures which we are now publishing has been, with certain modifications, annually delivered to Medical Practitioners during the last eight years.—ED. *Med. Times and Gaz.*

(b) The symptoms of uræmia have already been given under the head of urea.

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The vicarious action of the skin may be induced either by the internal administration of diaphoretics or the external use of the warm bath, vapour-bath, or hot air-bath. The two latter not only increase the cutaneous, but also augment the pulmonary elimination of urinary products. This is especially the case with the hot air-bath.

I may here remark that the usual practice of trying to diminish rather than to increase the urinous odour of the sweat and breath in cases of advanced kidney disease is greatly to be reprehended; for instead of trying to check, we ought, on the contrary, to assist Nature in her laudable efforts to rid the circulation of the deleterious agents that are gradually extinguishing the life of the patient.

In the next place, the employment of antiphlogistics is in many of the inflammatory forms of kidney disease of essential service. The most powerful of these is, of course, the local abstraction of blood, either by leeches or the cupping-glasses. But just as in many cases of inflamed lung the general condition of the patient prevents the employment of such active means, so also in the case of the kidney we must occasionally abandon this line of treatment, and content ourselves by merely diverting for a time the course of the circulation, either by the application of dry cupping-glasses, counter-irritation, or of hot fomentations to the loins.

I ought not to omit to mention that the unloading of the portal circulation by a smart calomel purge will often prove an important adjunct to other antiphlogistic measures.

As regards the employment of diuretics in the treatment of kidney disease, a few words are here necessary. In the first place, it ought never to be forgotten that in acute Bright's disease, as well as in the first stage of all inflammatory and congestive attacks occurring in the course of chronic kidney affections, diuretics are inadmissible. In the second place, it must be borne in mind that great care should always be observed in their selection; for a diuretic which will prove beneficial in one form and at one particular stage of renal disease will often not only do no good, but actual harm, when administered in another form or at another stage of the same attack. Thus, whenever the albuminuria is the result of active congestion, the antiphlogistic variety of diuretic—such, for example, as a combination of bitartrate of potash and digitalis—is to be selected; whereas in the absence of active congestion, and more especially when the vital powers of the patient are low, the stimulating variety of diuretic may not only be used with impunity, but with actual advantage. The reason why the employment of diuretics often does harm in acute kidney affections, is readily understood when we recollect that they have always the tendency rather to increase than diminish the flow of blood to the already engorged organ.

A word or two may also be added regarding the action of diaphoretics, which, as is well known, are exceedingly usefnl in chronic kidney disease. The most common form is Dover's powder, and from this containing opium, some have even ventured to administer that drug in combination with other substances than that of ipecacuanha. I must here, however, call attention to the fact that, although Dover's powder may be given with impunity, opium can seldom be employed in kidney affections in any other form without a certain amount of risk. More than one example of its deleterious effects in such cases has come under my notice, and not long ago(c) a fatal case actually occurred in one of our London Hospitals, where a man, aged 45, labouring under kidney disease, died after having taken only one grain of the acetate of morphia. The object of giving diaphoretics in chronic kidney disease is, of course, to keep up cutaneous perspiration. For a similar reason, patients ought always to wear warm clothing; and this rule ought never to be departed from, even in cases where the patient is comparatively well, so well that complete recovery may be said to have taken place. In the latter class of cases, indeed, every precaution against the effects of cold ought to be had recourse to, for a patient who has once had an attack of kidney disease is ever afterwards much more liable to another attack than one who has never been so affected.

In chronic albuminuria, astringent salts, as well as acid tonics, are often of great service, especially in getting rid of the last traces of albumen after an attack of acute disease. Just as gonorrhœa often ends in a gleet, so it happens that the kidneys, after having for a long time been the seat of Bright's disease, continue to pour out small quantities of albumen long after all constitutional symptoms have disappeared. In such cases, sulphate of zinc, sesquichloride of iron, gallic acid, tannic acid, and the mineral acids have frequently a very salutary effect in checking the remnants of the albuminuria.

This action of the acids, at least, seems already to have found a physiological explanation, for Heynsius, while studying the diffusibility of albumen,(d) discovered that the exosmose of an albuminous to a saline solution is retarded by acidity, and accelerated by alkalinity; and, if such be the case out of the body, there can be little doubt, I think, that a similar, though, perhaps, a modified, effect follows the exudation of albumen from alkaline blood into acid urine.

In a recent communication, Dr. Hassall(e) has thrown some doubts upon the value of sesquichloride of iron in the treatment of renal disease, to which he had been led by finding that he obtained no ferruginous reaction from urine of patients to whom he had administered that remedy. This being entirely opposed to my own experience, I was led to inquire into the cause of the difference in our results, and I soon found, in perusing his paper, that the error had arisen from his testing the urine directly, instead of first evaporating and incinerating the residue before applying the tests for iron; iron, like most other metals, being quite undetectable in organic fluids, unless present in immense excess. Even normal urine contains iron.(f)

As diet invariably plays an important part in all treatment, I must here call attention to the influence of foods on albuminuria, as previously pointed out in the physiological part of our subject. From what was then said, it will be readily understood why patients labouring under kidney disease should receive the lightest and most digestible kinds of diet. Moreover, their meals should be frequent and small rather than seldom and abundant.

The valuable researches of Professor Parkes(g) on the influence of food on the quantity of albumen eliminated by the kidneys, form the grounds for this latter recommendation. Dr. Parkes found that more albumen is eliminated after than before a meal, and that fasting not only invariably diminishes the quantity of albumen excreted, but even in some cases may cause it entirely to disappear from the urine—a fact which should make us avoid giving the patient more food than the wants of the system actually demand. The kind of food ought also to be regulated, in some measure, according to the form of kidney affection. Thus, while in cases of fatty renal degeneration, oleaginous diets are to be avoided, in the amyloid variety of the disease these same foods may be given, if not with advantage, at least with impunity. The general constitution and condition of the patient must, however, always be taken into consideration, and the diet selected according to the special requirements of the case.

Before leaving the question of treatment, as a sequel to the general principles just enunciated, I may add a few words regarding the especial treatment of certain of the more common forms of albuminuria.

In acute Bright's disease cupping, dry cupping, leeching, or fomenting the loins ought immediately to be had recourse to, according to the urgency of the symptoms and the constitution of the patient. In the beginning, diuretics must be scrupulously avoided, and even in the second stage only those of the antiphlogistic variety are admissible. The bowels are to be made to act freely; the action of the skin and lungs increased. The quickest, and in many cases the safest, way of doing this is by using the hot air bath; and it is astonishing how rapidly beneficial its employment may sometimes be. On one occasion I was very forcibly struck with this, in the case of a little child, who speedily recovered, after being almost moribund from the united effects of dropsical effusion and uræmic intoxication. The case was one that I saw along with Mr. Brown, of Finsbury-circus, and, if I remember rightly, the age of the child was not more than fifteen or eighteen months.

In fatty kidney, in addition to the means already indicated, great attention must be paid to the improvement of the general health, for in the majority of these cases the affection is more frequently due to constitutional peculiarity than to an accidental cause. Fresh air and regular exercise within the margin of fatigue, together with light, non-oleaginous foods, are to be prescribed. Change of air and hot salt-water baths ought, in the early stages of the affection, alike to be had recourse to. When tonics are given they should be of the

(c) *Lancet*, June 8, 1861, p. 575.

(d) Donders' "Archiv," vol. iv., part 3.

(e) *Lancet*, vol. ii., p. 740, 1864.

(f) The Author, *Pharmaceutical Journal*, Nov., 1852.

(g) *Med. Times and Gaz.*, 1854, p. 395.

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astringent and acid kind, except when counter-indicated by any constitutional peculiarity.

In the amyloid variety of renal degeneration, which, as already shown, is frequently the result of a syphilitic taint, the judicious employment of the bichloride of mercury is often of much use; but care must be taken to stop as soon as the mercurial fœtor of the breath becomes distinct, for such patients do not readily tolerate the reducing action of mercury. It will be often necessary to combine with this treatment the administration of port wine and light nutritious foods.

Atrophied kidney must be treated upon the general principles already enunciated, and, of course, it is one of the most suitable of all renal affections for increasing the action of the skin and lungs.

In it, as well as in all cases of confirmed albuminuria, we may occasionally be able to prolong the life of our patient from the free action of the skin being periodically induced by the Turkish bath, and when that cannot be obtained the hot vapour bath may often be substituted with advantage, care being always taken to employ the bath periodically and at short intervals; for then alone can we expect advantangeously to make the skin vicariously perform the function of the renal organs.

In the latter stages of atrophied kidney, as well as in the fatty and waxy forms of kidney disease, the symptoms of uræmic poisoning may sometimes be diminished by administering small doses of tartar emetic. Indeed, Dr. Lang, of Königsberg, recommends the use of tartarised antimony in the uræmia that follows acute exanthematous diseases.(h)

Regarding puerperal albuminuria, sufficient has already been said to serve as a guide to its treatment. All that need here be repeated is, that premature labour ought only to be had recourse to in those forms where the pregnancy is associated with true kidney disease, or where there is reason to anticipate the occurrence of convulsions either at or before the time of delivery. Premature labour may also successfully be had recourse to in the earlier months of pregnancy, when the health of the mother is rendered precarious by the constitutional disturbance arising from the albuminuria.

Thus, Dr. Lee related a case to the Medical-Chirurgical Society in 1863, in which he had induced the expulsion of a fourth month's fœtus in a pregnancy complicated with albuminous urine, dropsy, and amaurosis, after which the albumen gradually disappeared, and the vision of the patient improved.

When in the course of puerperal albuminuria convulsions have once manifested themselves, the readiest and safest means of subduing them appears to be by the free administration of an anæsthetic. Chloroform has been most commonly employed for this purpose, but as insensibility has usually to be kept up for a considerable time, it is much safer to employ the mixture which I proposed some years ago, and which received the approval of the Chloroform Committee of the Royal Medical-Chirurgical Society. The mixture consists of one part by measure of pure alcohol, two parts of chloroform, and three parts of sulphuric ether. The advantages of this mixture need not be here alluded to, as they were fully dwelt upon in the report of the above-mentioned committee.

As regards albuminuria associated with organic disease of the heart, liver, or pancreas, as well as in that variety the concomitant of general affections, the principles already indicated must serve as the landmarks to the treatment of the renal disturbance; whereas the other disease or diseases forming the complication are to be treated according to their special requirements. Always remembering that the removal of the cause, rather than the mitigation of its effects, ought to be the first consideration.

A great deal more might be written regarding albuminuria, but I think enough has been said for my present purpose, which has been merely to point out the general principles which ought to guide our diagnosis and treatment. Every one must feel convinced that the employment of the microscope is equally indispensable to treatment as to diagnosis, for as Aitken says:—

"Without the microscopic examination of the urine from day to day it is impossible to distinguish between a case likely to improve under treatment, and one which may be viewed as hopeless, and without the daily use of the microscope the treatment becomes at the best but merely guess work." (i)

It must be borne in mind, too, that as one swallow does not make a summer, neither does one tube-cast in kidney disease at any time suffice to establish an exact diagnosis. This can be easily understood when it is recollected that the deposits in the urine are but the representatives and results of the morbid change occurring in the renal tissue at the moment of their detachment; and as disease is never stationary, it is only by comparing the character of the renal *débris* of one period with that of another that we are enabled to establish the exact character of the affection, and discover whether it is marching on to a fatal termination or gradually retrograding to within the boundaries of healthy action.

(h) *Brit. Med. Jour.*, Jan. 21, 1859.
(i) Aitken's "Science and Practice of Medicine." 2nd ed., vol. ii., p. 324.

ORIGINAL COMMUNICATIONS.

REMINISCENCES OF THE CHOLERA AT ST. GEORGE'S HOSPITAL IN THE YEARS 1849 AND 1854.

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(Continued from page 680.)

I WILL now consider the several points which may be learnt from a study of the synoptical arrangement of the cases which I have given.

Firstly as regards the "AGES" of the various patients. It will be seen that they vary extremely and in the following manner:—Exclusive of two cases in which the age could not be ascertained, we have, out of the 37 which remain, 17 of an age between 20 and 40; 7 between the ages of 40 and 60; 6 between those of 10 and 20; 3 at and above 60 years, and 2 below 10 years, one being of the tender age of 2½ years, and the other of the age of 7. Thus, what is called "middle age" furnishes by far the greater proportion of cases.

As regards "SEX" the cases were almost equally divided between males and females, there being 18 of the former, and 19 of the latter.

As regards the length of time that the cases were in the Hospital before death, I find that 11 died on the day of admission, 10 on the day following admission, 7 on the second day, 4 on the third day, 2 on the fifth, 1 on the seventh, 1 on the ninth, and 1 on the tenth day after admission. It will be remembered that four of the cases were not admitted in the first instance with cholera, but with other forms of disease, and that it was only subsequently that they became the subjects of this malady. This was so in Case viii., admitted with knee-joint disease, in Case x., admitted with disease of the liver, ascites, and anasarca, in Case xviii., admitted with congestion of the lungs following pleurisy, and in Case xix., admitted with cancer of the uterus.

With respect to "*Symptoms*," as I before said that I should not give them in detail in relating the cases, so I do not propose to consider them now, excepting so far as to point out the period of time during which diarrhœa existed prior to symptoms either of collapse or of an unmistakeably choleraic character; and to notice a few special phenomena which the cases presented.

There are five cases (Nos. vii., xxiv., xxix., xxxiv., and xxxv.) in which it proved impossible to ascertain any account of the early symptoms, but exclusive of these cases, it will be found that in no less than 17 cases the symptoms of collapse showed themselves on the same day as the diarrhœa; in 4 diarrhœa had existed two or three days, in 4 also for three or four days; in 3 it had existed four or five weeks; and in 1 (Case xvi.) the bowels had been "generally relaxed." In 2 cases (Nos. v. and xvii.) there had been more or less diarrhœa for a month. In case No. xxxii. sickness and cramps had existed two nights previous to more positive symptoms, but there had been *no* diarrhœa; and in Case xiv. there had been vomiting and pains in all the limbs before collape, but *no* diarrhœa; *neither did diarrhœa come on at all during the course of the disease at any time, clearly showing that the collapse of this affection is not merely owing to excessive discharge of fluids.* In many cases it is expressly stated that want of general health, and actual diseases of a lowering character, as fistula, ague, and other diseases had existed before the attack of cholera; most likely it was the same in the many cases in which no mention of the circumstance is made.

In reference to some of the actual phenomena of the cases whilst in the Hospital, it will be found that in some cases consciousness remained almost until the point of death, as in

Case i.; whereas, in other instances, the patients were admitted in a state of unconsciousness or became insensible very shortly afterwards, as in Cases ii., iv., vii., and xvii.; in Cases ii. and iv. the pupils being *contracted*, and in Case iv. strabismus existing. In Case xxvii. the pupils were *dilated*. In some instances, as in No. xx., but little diarrhœa existed throughout, and in Case xiv., as before mentioned, there was actually *none;* in some instances, again, little or no cramp was experienced, as in Cases iii., and vii. In two cases, xviii. and xxiv., actual syncope supervened. Perhaps the symptom the most constantly noticed, apart from those of collapse common to all cases, was the scantiness of the secretion of urine; but in one case, at any rate (No. xxxiii.), it is expressly stated that the urine was passed in abundance. In numbers of cases the catheter had to be passed, as a positive difficulty was experienced by the patients in attempts to void the urine which *existed in the bladder*. In one case which we had not included in the above, but mentioned later on, purging had existed for two or three days before other symptoms came on, and when the secretion was obtained and examined it was found to be albuminous; in one case, at any rate, containing "casts" of the uriniferous tubes of the kidney. In Case xxx. the calomel which had been administered by the mouth was found to have passed with the fæces, and in Case xii. a peculiar "black sediment" was noticed in the evacuations which probably was due to calomel which had been taken; in Case xxi. BLOOD was noticed in the stools, nothing being found in the stomach or bowels after death to account for this symptom.

It is somewhat interesting to observe that in one case, No. x., whilst the patient was in the stage of collapse with a livid, cold state of surface the sensations experienced and complained of by the patient were those of "heat." This peculiarity I witnessed in many other cases. It is also worthy of note that in Case xxvi. the menstrual flux came on during the attack of cholera, and in Case xxx. the patient, who was suckling a child, did not lose her milk. I must also not forget to notice the eruptions which came out on the surface of the body in two of the cases—viz., xxxii. and xxxvi.; in the former case being papular and passing on to one of erysipelatous character and in the latter being of a livid colour and resembling some form of urticaria.

Of the whole number of cases, two (Nos. xxxiv. and xxxvi.) died of "fever" consecutive to recovery from collapse; the one with stupor and the other with mania, and one (No. xxxv.) of pneumonia, which came on in a like manner. Possibly Cases ii. and vii. (referred to above as being attended by unconsciousness) may also have died from consecutive fever.

I will pass on now to the "*Treatment*" which in these thirty-six cases was adopted; and this will be seen to have been sufficiently varied. Foremost of all, the use of calomel as well in large as in small doses, this drug having been given in twenty-two cases, must be mentioned. Then come emetics, given in nineteen cases, almost always of mustard; following them in point of frequency of exhibition rank salines, which were given in eleven cases. Next we have the vapour bath, which was used in six cases; and opium, given also, with or without other remedies, in seven cases. Acetate of lead was given, with opium, in five cases; and hot water baths, with or without mustard, or with salt, in four more cases; whilst sulphur, dilute sulphuric acid (in one case in 3-dram doses every twenty minutes), and capsicum, were given each in two cases. Hydrocyanic acid and turpentine were given internally each in one case; in one case oxygen was inhaled on two occasions, but without apparent benefit; in another the wet sheet was adopted; and in two or three the application of electro-galvanism was resorted to; whilst in numbers of cases sinapisms and hot bottles were applied and friction adopted. In one case beef-tea and brandy was pumped into the stomach; in others enemata of beef-tea, milk, brandy, and eggs were administered; and in a large number abundant stimulants, as brandy, ammonia, chloroform, camphor, etc., were prescribed along with strong beef-tea. In Case xvii. the tourniquet was applied to the legs for the purpose of preventing cramp, which for a time it appeared to do. Fragments of Wenham Lake ice were given to be swallowed in four cases.

And now I turn to the results of post-mortem examination; and first as respects the contents of the "CRANIUM." It will hardly be a matter of surprise that this cavity should not have been examined so frequently as other parts of the body were, particularly the abdomen, in fatal cases of a disease in which the functions of its contents are for the most part but slightly interfered with, especially in the cases more lately examined, after experience had taught that so few changes were to be met with in the brain and its appendages. Accordingly, it will be found that out of the thirty-seven cases the head was left unexamined in eighteen cases. Out of the remaining nineteen cases in which it was examined the cerebral or meningeal vessels and sinuses, etc., were in a turgid or congested state in nine cases, the lateral ventricles being dilated by serous fluid in five cases. This condition was evidently not restricted to, or had absolute relationship to such cases as had shown obscurity, perversion, or suppression of the mental functions during life, for although in Case xxxvi., one in which delirium and even maniacal excitement were manifested during consecutive fever, there was found after death an increased amount of fluid in the ventricles and in the subarachnoïd tissues; and again in Case xii., where coma had existed, the cerebral sinuses were turgid and the membranes congested; yet, on the other hand, in Case iv., wherein coma, contracted pupils, and strabismus existed during life, the brain after death was only said to have presented numerous "puncta" on section, the ventricles being EMPTY. Again, in Case xvii., whereas coma came on during life, nothing was observed after death about the brain, excepting that the meningeal vessels were "slightly congested." In three cases the brain was found in a softened condition; in a fourth the fornix alone was softened. Of these cases, in one (viz., No. ii.) the softening was associated with distension of the intra-cranial sinuses, and congestion of the scalp veins, the patient having been admitted in a state of unconsciousness, with contracted pupils; and another (No. x.) was the case previously alluded to, in which subjective sensation of "heat" was experienced in the cold or collapsed stage of the disease.

Passing on to the organs of the "THORAX," I find that the contents of this cavity remained unexamined in two cases only. In sixteen instances the lungs were described as being "congested," and in three they were found to present the results of "inflammation," viz., in Nos. xxxi., xxxiv., and xxxvi.; in the two latter collapse had been recovered from and secondary fever set up. It may be assumed that in all the other cases the lungs were natural, excepting those cases in which scrofulous deposit or vomicæ were found, of which there is no occasion to make any special mention. Neither do I, for obvious reasons, dwell on those cases in which pleural or pericardial adhesions were met with. As regards the heart, omitting mention of the condition of the valves, etc., out of the thirty-seven cases in which this organ was examined, in eight it is stated that its muscular substance was flabby and friable. In Case xviii., one of those in which syncope occurred, the heart was described as being "very weak." In thirteen cases the right ventricle, and in six the left ventricle, contained fibrinous coagulum; in six cases no clot was found in the heart's cavities; and in seven the left ventricle was empty and contracted. In two cases only was the lining membrane of the cardiac cavities described as being blood-stained; whilst in four it was said *not* to have been so stained. In one case (No. xiv.) blood was found effused beneath the visceral layer of pericardium.

Coming now to the abdominal cavity, whose viscera presented most constant changes, presumably connected with, or referable to, the effects of the cholera poison, whatever that may be, it will be found that out of the thirty-seven cases the mucous membrane of the stomach was in a morbidly vascular or congestive condition in fifteen, in one case being even more so than in the other instances. In four cases ecchymosis of blood was met with into or beneath the mucous membrane. In two cases the inner surface of the stomach was observable as being pale and bloodless. In one case (No. xviii.) the lining membrane was thickened, and hardened, and ulcerated. As regards the intestines, their inner surface was morbidly vascular in fifteen cases, that of the colon being in this condition in one instance; in one case only was it commented on as being pale and bloodless. In five cases the coats of the bowels were the seat of submucous extravasion of blood; in one case the mucous membrane was said to be soft and pulpy, and in one to be ulcerated. In twenty cases the "solitary" glands of the small intestines were obviously and markedly enlarged; and in ten Peyer's patches, or the agminate glands, were similarly affected. I have not enumerated those cases in which, without being actually enlarged, the intestinal glands were simply unusually distinct and visible. In a few cases the solitary glands of the colon were also enlarged. The mesenteric glands were enlarged in ten cases. In several cases the contents of the stomach and intestines, varying in colour and

consistency as they did, were found microscopically to contain a very unusual amount of epithelial cells.

As regards other abdominal organs, the liver was remarked upon as having been congested in five cases, the gall bladder being loaded with or full of bile in seventeen cases, only containing a slight amount in two cases, and containing no bile, but only thick mucus, in one case. In thirteen cases the kidneys were congested; in fifteen the urinary bladder was quite empty, and more or less contracted; in five containing but a very slight amount of urine; and in two only contained much urine. I here exclude mention of those cases in which the kidneys presented positive marks of disease, as the granular state, adhesion of the capsules, &c., &c. In two cases only was the spleen said to have been large and full.

Finally, as regards the state of the blood, I find that in only three was it described as being dark and thick; in another it was said to have been very fluid, and in another very fluid and of a reddish-brown colour.

Such is the analysis of the chief particulars which our records afford of the thirty-seven fatal cases of cholera in which post-mortem examination was made, and of which we have a history of life symptoms and notes of treatment. Of the remaining forty-eight fatal cases of which we have no record of post-mortem inspection I find that in one—viz., No. ccxxxvi., in 1854, one in which as before alluded to, purging had existed three or four days prior to the setting in of graver symptoms—the mustard emetic was given and mustard poultice applied, and the dilute sulphuric acid was given in dram doses diluted every twenty minutes; and also laudanum administered in beef-tea enemata. In another case (No. cccxiii., 1854) the attack of cholera came on whilst the patient was suffering from acute rheumatism.

In no instances have we any knowledge of post-mortem spasm of the muscles, which in some cases has been observed after death in cholera cases, and in only one instance have we the fact mentioned that the contents of the abdomen were found of a preternaturally high temperature after death, although I clearly remember that this was observed in several individuals.

In bringing to a close this communication, I will not seek to make any comments upon the facts afforded therein. I offer it simply as a contribution to the statistics of the subject, merely remarking that the treatment as recorded in the above cases was much the same as that resorted to in the many other cases admitted into our Hospital of which it is not in my power to give the results of post-mortem investigation. The data will, I trust, form an addition not altogether useless to such as already exist or may be hereafter furnished by others.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

LARGE CYST CONTAINING BLOOD IN THE INGUINAL REGION, WITH UNDESCENDED TESTICLE—OPERATION—REMARKS.

(Under the care of Sir WILLIAM FERGUSSON.)

Cysts containing blood, fluid or clotted, arising apparently spontaneously and existing for a lengthened period, are comparatively rare in any region of the body, and their exact nature and diagnosis difficult. In the case we are about to record, the diagnosis was especially doubtful; in the first place from its position, and in the next, from its analogy in several respects to tumours existing in that locality—namely, the inguinal region. The previous history of the case, in this instance, seems to throw but little light on its true nature, for a perfectly distinct cyst wall could be made out. The tunica vaginalis was behind the tumour and in front of the undescended testis.

The patient, a healthy-looking man, stated that the present tumour had been coming for about two years. Neither testicle had descended into the scrotum. He was a married man, and had never had children. On admission a large swelling, considerably larger than a cocoa nut, fluctuating and very tense, occupied the whole of the left inguinal region, extending up as far as the umbilicus, causing little or no pain, and seemingly arising spontaneously, as he had never, so far as he can remember, had any blow or injury from which he could date the present appearance. He also stated that it had been tapped three times, and that a light coloured fluid had come away on each occasion.

Shortly after his admission, the tumour was tapped, and a large quantity of bloody fluid came away. It was only partially emptied, as it was determined to postpone our further proceeding until the following Saturday. On Saturday, Dec. 16, Sir William Fergusson made an incision through the abdominal parietes into the tumour. At first a considerable amount of bloody fluid came away, and afterwards large clots of blood with masses of fibrine and degenerated blood to the amount of about three pints. Whilst the cyst was being evacuated, a small jet of clear fluid came from the outer side of the incision through the abdominal walls. On passing the finger into the opening from which this jet came, the testicle was found lying at the bottom of a cavity, which was formed by the peritoneum, in front of the testicle, being the undeveloped tunica vaginalis, the sac in no way communicating with the cyst containing the blood which had just been laid open. After all the clot and fluid had been evacuated, a pad and strapping were placed on the wound, and the patient removed to bed.

In some after remarks, Sir William Fergusson commented on the difficulty of diagnosis of the tumour, and stated the possibility of the co-existence of a hernia. For the last eighteen months it had been treated as a hydrocele occurring in the tunica vaginalis. Had it been merely a hydrocele, the fluctuation would have been more distinct, and the mass have exhibited some amount of transparency. With regard to the several times that the tumour had been punctured, the fluid being clear at first and at the last operation bloody, Sir William called attention to the fact that it was frequently the case when a hydrocele was tapped several times, it ultimately had all the appearance of a hæmotocele; moreover, on each occasion of tapping, the whole mass of the swelling did not disappear, leaving one to suppose the existence of a hernia in addition. Again, when once evacuated, the swelling speedily returned,—a point common both in the history of hydrocele and hæmatocele. In the present instance, the treatment for the case, whatever it might be, was urgent, and he had therefore adopted the method of free incision. The cyst extended down considerably into the true pelvis. Sir William did not consider that the prognosis of the case was very favourable, as an unhealthy form of suppuration might set in, which in such a locality would be of a very serious nature.

Up to the present time (December 23) the patient has been doing well, complaining only of occasional sickness.

[We shall give an account of the progress of this case.]

REMOVAL OF THE WHOLE UPPER EXTREMITY.

This case is progressing most favourably; the patient is in capital health, up, and able to walk about the ward; the wound has nearly healed, and at present there are no symptoms of any return of the disease.

BIRMINGHAM GENERAL HOSPITAL.

ILLUSTRATIONS OF THE CAUSES OF DEATH IN BRIGHT'S DISEASE OF THE KIDNEYS.

(By JAMES RUSSELL, M.D.)

(Continued from page 683.)

III.—DEATH THROUGH AFFECTION OF THE ORGANS WITHIN THE THORAX.

The organs of respiration and of circulation are very liable to suffer serious disturbance in the course of Bright's disease, but the mode in which the disturbance is effected may be as various as the tissues capable of being affected. The disordered action may exist primarily in the muscles of respiration or in the muscular fibres of the heart; it may be produced through the agency of the nervous system, through the fibria of the blood, through the serous membrane, or through the parenchymatous tissue of the lungs themselves; it may be the result of actual organic change or of mere functional disturbance.

Dyspnœa is often a very prominent symptom both in the acute and in the chronic forms of the disease. Marked embarrassment of breathing, and, consequent upon it, of the heart's action, is described as being an early effect of the

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extirpation of one kidney in experiments on animals (Dr. Richardson, *loc. cit.*, p. 166). In this instance the dyspnœa results mainly from the direct action of the urea upon the respiratory muscles, and also upon the muscular tissue of the heart, though doubtless a portion of the effect must likewise be ascribed to the influence exerted by the poison upon the respiratory nervous centre. A similar explanation will apply to the dyspnœa of the acute forms of Bright's disease, but in this case many other circumstances have often to be added to the account—*e. g.*, dropsical effusion within the pleural cavity or in the parenchyma of the lungs, inflammation of the serous membranes of the chest or of the substance of the lungs. fibrinous deposit in the heart.

A still wider range of disturbing causes is in operation in the chronic forms of the malady. True pulmonary dyspnœa may be induced by disordered action of the lungs themselves. Thus, I have more than once met with a form of breathing in chronic Bright's disease, in all respects analogous to that which occurs in spasmodic asthma; and among the organic changes in advanced Bright's disease, chronic consolidation of the lower lobe of each lung, and increased density of the general pulmonary tissue are common. More frequently, however, cardiac dyspnœa predominates over the strictly pulmonary disorder, the dyspnœa being characterised by marked intolerance of movement, and not infrequently assuming the form of most severe and protracted orthopnœa, the patient passing days, even weeks, without being able to lie down. Such patients die precisely in the manner of those suffering from true disease of the heart, and from a precisely similar cause; the chronic obstruction created in the capillary circulation by the habitually impure condition of the blood, imposes increased labour upon the heart, precisely as in a case of valvular disease. As in valvular disease, the left ventricle of the heart is often hypertrophied (Dr. G. Johnson, "Diseases of the Kidneys," p. 246) and the circulation goes on with varying efficiency, according to the amount of vigour retained by the central organ. But in the advanced period of the disease the energy of the heart sinks with that of the muscular system generally, and, moreover, as I have already mentioned in an early part of this paper, the muscular fascicles of the heart are liable to fall into a state of degeneration.

Failure of the heart is often induced prematurely, through the operation of unfavourable circumstances, or of vicious habits, and when this happens, we may effect surprising improvement by purifying the blood, by removing dropsical effusion either through the bowels or by acupuncture,(a) and by the employment of steel; but when these measures cease to be effectual the patient is reduced precisely to the condition of one, the orifices of whose heart are narrowed by rheumatic or other disease. Moreover, this very disease of the heart may be actually present as a complication of the renal malady, sometimes preceding its development, sometimes constituting one of its results.

Coagulation of Fibrin within the Heart.—This accident may occur in any stage of Bright's disease; in the acute stage the coagulation takes place rapidly, and speedily terminates the case; in the later periods it may suddenly close a case which had previously appeared stationary, or may abruptly hasten a decline already proceeding rapidly. In the instance of the acute disease, we can feel no hesitation in attributing the separation of the fibrin to the renal affection solely; but in a large proportion of chronic cases a question will fairly arise whether the deposit is not due in larger proportion to diseases complicating the renal malady than to that malady itself. I find that of twenty-five of my own post-mortems of chronic forms of Bright's disease, in which the subject is reported on, there were eleven in which notable separation of fibrin had taken place, in seven to a very serious extent; but only four of these were uncomplicated cases.

It appears questionable whether there is anything in the condition of the blood in Bright's disease which, of itself, would favour the premature deposit of fibrine in the vascular cavities, excepting, perhaps, the state commonly spoken of as anæmia; indeed, in the advanced periods by impaired nutrition of the blood cells, in the earlier by retained water in consequence of the urine being either entirely suppressed or greatly diminished in quantity. It is the opinion of Lehmann, J. F. Simon, and Christison, that in the acute periods of the disease the proportion of fibrin in the blood is absolutely increased, though it does not appear very clearly whether such increase is of constant occurrence, or whether, when present, it is not due to intercurrent inflammation. Such, however, is by no means the case in the advanced stage of the disease; the proportion of fibrin does not there rise above the normal standard. Nor does the result of experiments of various kinds described by Dr. Richardson *(op. cit.)* favour the supposition that the presence of urea in the blood favours in any way the separation of fibrin.

One condition, however, there is proper to Bright's disease, which unquestionably tends to produce coagulation of fibrin during life—viz., the depressing influence exerted by the urea, present in the blood, upon the fibres of the heart, which interferes with its rapid and perfect contraction, and retards the current of blood through its cavities; the degeneration of the fibres of the heart, which is ultimately induced in many cases, must operate powerfully in the same direction. I need not refer more pointedly to the important bearing which this circumstance has upon the question of treatment.

In the following case, though a post-mortem was not obtained, the symptoms left no doubt that the cause of death was deposit of fibrin in the right side of the heart:—

Case 13.—*Acute Dropsy.*

Master M., aged 9, had scarlatina without sore throat; was not confined to bed. Went out on the tenth or eleventh day. Two days afterwards renewed sore throat with swelling under the jaw. In another two days anasarca. On the fourth day of anasarca three or four convulsive fits, followed by vomiting, probably induced by imprudence in eating; urine became exceedingly scanty, and on the next day sudden extreme dyspnœa. Found very pallid; lips livid; jugulars not distended; jactitation and great agitation; clasping of the hands over the head; incessant call for water, but scarce drinking; speech is quick, brief sentences; contracted pupils; intellect confused; respiration 100; expired air chilly; pulse hardly perceptible; chilly lower extremities; a little œdema. Half an ounce of urine passed, not albuminous; chest clear, free entrance of air; pure, but very dull, cardiac sound.

Great relief from small doses of morphia, with temporary revival. Next day pulse 140; respiration 44; leaden lips; pallid face; warm surface; neither urine nor fæces; auscultation and percussion as before. Death in the evening.

The following is one of the mixed cases referred to above, wherein other disease is concerned in the deposit:—

Case 14.—*Wasting, Large Kidney.*

T. B., aged 25, known to have had rheumatic disease of the heart four years. Impaired health for three years since he had typhoid, followed by variola, with increase of chest symptoms. Three attacks of hæmatemesis in last two months; some anasarca.

Emaciation, pallor, feebleness, physical and general symptoms of cardiac disease; slight anasarca; pulse 104—120. Last eight days of life repeated paroxysms of extreme cardiac dyspnœa, often every quarter of an hour; starting forward; groaning loudly in great distress; staring eyes; face exceedingly white; pulse much reduced in frequency, but very irregular; rapid breathing, free entrance of air; pupils rather small; cervical veins not distended. Intervals of relief; but persistent orthopnœa; much œdema of ankle; face became ghastly and sunken; mind wandered; orthopnœa to the last; urine densely loaded with pink urates, scarcely albuminous, contained granular casts.

Sectio Cadaveris.—Fluid in cavities of chest. Heart weight 1 lb. 13 oz. (avoir.). Posterior coronary vein distended. General hypertrophy with dilatation. Loose blood clot in right auricle. Pulmonary artery quite filled with a plug of firm yellow fibrin arising by broad roots in the ventricle, extending to the bifurcation; perfectly unadherent; branches free. Fibrinous vegetations from aortic and mitral valves. Fascicles of left ventricle mottled; the right healthy. Lungs œdematous; not anæmic. Kidneys 16 oz.; excellent specimen of the large anæmic kidney undergoing chronic desquamative disease (Johnson in Med. Chir. *Trans.*, vol. 42) with hypertrophy of small arteries and abundance of small oil globules. The kidneys contained yellow masses, in which the outline of tubes and tufts were distinct, with tubes surrounded by dark lines as by obliterated intertubular capil-

(a) The following measurement was made by my friend, Mr. Goodall, whilst he was House-Surgeon, of the quantity of fluid obtained from a patient suffering under renal dropsy, by six or eight punctures with a needle—viz.:—

January 28 in 29 hours	. . .	19 pints
,, 29 in 19 ,,	. . .	16 ,,
,, 30 in 48 ,,	. . .	10 ,,
96 hours		45 pints.

laries. Scanty hæmorrhagic erosion of stomach. Pus in gastro-splenic omentum.

The symptoms of the deposit of fibrin in the following case were somewhat different, leading to temporary insensibility through accumulation of venous blood in the brain.

Case 15.—*Acute Dropsy.*

G. W., aged 48, intemperate. Ill four days with acute dropsy. By treatment great relief, and urine averaged 32 oz., sp. gr. 1018, albumen ¼—⅓. Cardiac dyspnœa, however, continued prominent, with some orthopnœa.

In the evening of ninth day, after slight effort, sudden and extreme dyspnœa, livid, distended jugulars, violent action of the heart, throbbing pulse; patient rapidly became nearly insensible; pulse 114, full; respiration 40, very shallow; pupils medium; recovered in an hour and a-half. A slight attack next morning, and subsequently renewed attacks, but less severe, respiration remaining shallow between, and singularly intolerant of movement; finally increased rapidity (42) with permanent livid. Gradual sinking, delirious last two days, and death on sixteenth day. Urine during late symptoms 41 oz., sp. gr. 1017, besides what passed with stools; albumen ⅓—½.

Sectio Cadaveris.—Pink convolutions of brain; fluid in chest; œdematous and anæmic lungs; heart 17½ oz., hypertrophy and dilatation of left ventricle; a considerable loose fibrinous mass in right auricle and on wall of ventricle, extending loosely up the pulmonary artery and half filling it, with a plug dense and white in the centre, looser and pinker at the circumference; it ended at the bifurcation. Advanced degeneration of the arch of the aorta; fascicles of the heart nearly healthy; kidneys 17 oz., livid; opaque tubes; loaded intertubular capillaries, empty tufts.

I add the following case: though without a post-mortem, its character is sufficiently evident for comparison with those which precede, and it indicates in a very striking manner the peculiar uncertainty which attends the course of the chronic desquamative disease, renal symptoms being almost or entirely absent, until some accident, such as deposit of fibrin, brings the case to an abrupt termination.

Case 16.—*Chronic Desquamative Disease.*

Mr. B., aged about 50, a publican, but of temperate habits, had been attended repeatedly for renal calculus for the last two years. My friend, with whom I saw the patient, had been aware of the presence of some albumen in his urine, but with this exception no symptom of importance had interfered with a general course of good health. At no time was there any œdema. During the fortnight preceding the date of my visit, after the passage of a calculus, the patient had become feeble, and continued pallid and depressed, with loss of appetite and some hurried breathing in walking. No other indication of importance was present.

I found the patient very pallid, rather thin, obviously in a debilitated condition; his pulse irritable, but the physical signs both of heart and of lungs perfectly satisfactory. Urine examined the previous night was found nearly colourless, like whey, of very low specific gravity, and without casts or albumen, and containing numerous exudation cells. The patient was improving under a course of tonics, and we both believed that this condition, though unsatisfactory, yet did not threaten a speedy termination of life.

Three days afterwards he was taken at noon with severe dyspnœa; the breathing became speedily much hurried, and during the night the distress was extreme, but became less towards the middle of the following day when I saw him. He was then moribund; face leaden; jugulars full. Pulse 108 steady; respiration 33, abrupt but regular; pupils small; surface warm. Sounds of the heart clear; percussion indicated that the lungs were preternaturally distended. His intellect was entire, though he was rather heavy; feet free from œdema. He had passed a large amount of urine resembling the last mentioned in physical characters, but decidedly albuminous; it only contained numerous "mucus cells."

It should be added that during three days prior to the fatal attack paroxysms of comparatively slight dyspnœa had presented themselves.

(To be continued.)

HER Majesty has been pleased to advance Sir Roderick Murchison to the dignity of a Baronet, "in recognition of distinguished merit and attainments."

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Medical Times and Gazette.

SATURDAY, DECEMBER 30.

PITY FOR POOR STUDENTS.

WE print in another column a circular letter from the Registrar of the University of London to the various Medical schools in reference to a matter which we lately noticed—viz., the large number of candidates rejected at the preliminary scientific examination for the degree of M.B.

We agree so heartily with the spirit of the regulations of the University of London, we entertain so high a sense of the impulse which they have given to Medical education in England—nay, we feel so strongly their value as a *silent protest* against the College of Surgeons' system, that *if we criticise* them, we hope our criticism is as fair and respectful as it is friendly. But, to tell the truth, we think that they over do things, and that there is a students' and Practitioners' side of the question, which is not quite sufficiently taken into consideration.

As for the general line of education laid down by the Senate of the University of London, it is that which we have repeatedly advocated in this journal, in opposition to our contemporaries. We say, first a liberal education, to be tested by a matriculation examination; secondly, a scientific preparation—a discipline in the arts of counting, weighing, measuring, observing, reasoning upon, and recording facts, objects, and processes in nature. This, we need scarcely say, has always been one great *hiatus* in Medical education. We urge, and have always urged, attention to this point, in opposition to our contemporaries, who would condemn a lad in his first year as an "apprentice," or who would incite him at once to enter the Hospital wards, and get the habit of staring vaguely at cases which he cannot comprehend.

It is just at this point that the hitch exists. At the examination in July last at Burlington House, forty-three out of seventy-five candidates were rejected. By whose fault? The candidates at these examinations are the best men in the schools. Were they insufficiently taught, or was the test unreasonably difficult?

A little of both, perhaps. We have already shown the necessity for efficient tutorship, to obviate the first difficulty. We think that some concession on the other part is equally requisite.

We would especially call attention to paragraphs 4, 6, and 7 in the Registrar's Circular, and would ask whether it be necessary, possible, or expedient to require that every candidate should be equally well versed in all the subjects named? whether one or two might not serve the purpose of mental discipline? Whether it is fair to require a boy to be a good chemist, and a good botanist, and a good zoologist? Is it possible for the *ordinary run of students* to obtain knowledge of the kind specified in the *time* and under such conditions as will make it last them their lives—not mere cram?

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Out of forty-three rejected candidates, thirty-nine were plucked in botany, and thirty-two in zoology. The rejected in botany are told that they failed in their description of the plants before them; and that this exercise "can only be effectually prepared for by the acquirement of those habits of correct and discriminating observation, of systematic arrangement and accurate record of the facts observed, which they regard as constituting a most valuable preparation," &c., &c.

Nothing is more true; but then how is this knowledge to be got? Certainly, to be good for anything—to be real knowledge and not cram—it requires a year, at the least, of residence in the country or near a botanical garden; of botanical excursions; of examination of plants, naked-eyed and microscopically, at all the stages of their growth; and a strong natural taste for the pursuit into the bargain; and is all this to be exacted from every student? and at the same time is he to be a good chemist and a good zoologist?

The functions of an University are to give the best education possible to what we lay emphasis on as the *ordinary run* of students;—young men of decent family, of sufficient means for a liberal, but not extravagant, education, of ordinary capacity and good character, who are to practise amongst, and earn such emoluments as can be got from, the middle classes of society. It is of such men that the bulk of English Practitioners are constituted. The special function of the University of London—so far as Medicine is concerned—is to give to English Medical men, after sufficient tests, that academic degree or title which they were heretofore debarred from, whilst the M.D. was to be obtained on far easier terms in Scotland than the L.A.C. in London. Both the quantity and quality of knowledge (including time and cost) requisite for a common degree ought to be within the reach of men of average "natural aptitude and steady application." We doubt if this be the case at present. As for honours, that is a different question.

We are sure that a concession in the direction indicated would be a great boon on the part of the University Senate, and would materially add to and enlarge the number of men who would seek for their degree and work for it. Common men—men of ordinary power, of ordinary honest "aptitude" and "application" ought not to set down the task as hopeless. Let a man be a good chemist, *and* botanist, *or* zoologist. Meanwhile, as the subject of "shock to the nervous system" is in vogue, we wish some one would collect statistics of Medical prize students—of the men we used to hear of as reading all night, and working seven days a-week, and returning to their friends, gazetted as Prizemen. Do they live long? Do they flourish? Do they get on? Are they the bright, jolly, self-confident, helpful, ready-witted, open-faced, unabashed, genial, about-in-the-world creatures which successful Practitioners always are? or are they a little inclined to be recluse, pale, solitary, dyspeptic, headachy, irritable, complaining of not being "appreciated," complaining that some jolly dog of a neighbour, who was plucked at the Hall, and does not "understand his Profession," is carrying off their best patients?

THE NORFOLK MEDICAL COMMITTEE ON THE CATTLE PLAGUE.

"The Report of the Medical Committee to the Norfolk Cattle Plague Association" sets before us the results of an investigation by a committee composed of six members and a secretary—two Physicians, two Surgeons, and two Veterinary Surgeons. The names are those of men eminently qualified by their scientific attainments and position for the work. We turned to their Report with some curiosity, and we have not been disappointed. The Committee has gone about its work in the right way. The observations have been carefully devised and conducted, and the results arrived at have been tersely and perspicuously narrated.

Where the labourers have been so many, it is not surprising that most of their results have been already reached. The Committee has exhausted the subject, *so far as it has gone.* It has shown that—1, Cattle plague depends upon a something specific; 2, that it is inoculable, contagious, and communicable in an eminent degree; 3, that it is a blood disease, allied in its nature to the exanthemata, having a period of incubation, and running a course parallel to that of other exanthematous diseases, such as scarlatina; 4, that the symptoms, as a whole, are quite characteristic; 5, that the post-mortem marks are peculiar in their degree and kind, as well as in the multiple centres of the diseased manifestations; 6, that the principal effects of the virus are mainly upon the mucous membranes; 7, that the morbid appearances may vary within certain limits, or be almost entirely wanting, and that the local lesions are, in themselves, insufficient to account for death, irrespective of an altered condition of the blood, which alteration they have noticed as appreciable to the senses; 8, and lastly, they seem to have established the presence of an exanthem, by an examination of the udders and shaven hides.

The disease is communicable from ox to ox, from sheep to sheep, and between these two classes of animals by mere association; and it is inoculable from bullocks to sheep, from sheep to bullocks, and to each other respectively. A goat, herded with diseased oxen, took the disease and died Two dogs inoculated with Rinderpest did not take the disease, however. The incubation varied from seven to twenty-one days when produced by causes of *infection;* when produced by *inoculation*, it varied from four to eight days.

The disease in sheep was identical in nature with that of bullocks, but was milder in type, and somewhat modified as to its post-mortem appearances.

The morbid anatomy has been carefully worked out.

We rather infer from the Report that the Committee appears to entertain an opinion that the Rinderpest has more points of alliance with a malignant scarlatina than with any other disease. In this we concur. It would be interesting to trace the microscopic changes in the gastro-enteric mucous membrane and its glands, in order to see whether the morbid changes, described by Dr. Fenwick as taking place in scarlatina, occur here. Also, it would be well to examine very carefully the urinary excretion. We perceive that the Committee speak of it as highly albuminous, unusually alkaline, deficient in salts, and showing under the microscope blood discs, mucous particles, and a few granular kidney casts. The variations and range of temperature ought also to be determined by the thermometer. So far good; but the difficult part still remains—therapeutics!

As the Committee properly remarks, a scientific study of this part of the subject presupposes an accurate acquaintance with the *natural history* of the disease,—the course, tendency, and termination of the disorder when left alone, and the proportion of deaths to recoveries. Having established this basis, we may commence a *rational* medication—not a system of drugging with this or that remedy vaunted in the *Times* or sounded by the injured homœopathist. These have grievously failed already. In the present state of Medical science it may be fairly asked whether we have any drugs which *do* really neutralise, counteract, or greatly modify the evolution of the phenomena set up by blood poisons in the system. When you name quinine for ague, which, after all, is not an allied disease, you have, perhaps, named all. We would particularly direct attention to the doctrines lately broached by Dr. Richardson as to the *modus operandi* of these poisons by *catalysis;* because if true, we ought to have a plausible ground for the trial of the sulphites of soda and magnesia, as recommended by Professor Polli, of Milan, and advocated by our correspondent in the *Medical Times and Gazette* of the 11th October last.

With the view of testing the comparative value of different treatments, we would recommend some such measure as the following:—Divide the animals into two groups—viz., into those already infected and exhibiting symptoms of the disease, and into those animals which have been exposed to contagion, but have not yet exhibited any symptoms—*i.e.*, during the period of incubation. For the purpose of experimental observation, it would be well to use inoculated animals. To begin with the last group. Let us take an animal and inject into the rectum, vagina, or under the skin some discharges from an affected animal. In one, we might mix the sulphite of soda with the fluid discharge before injecting it; in another animal, we might inject the sulphites afterwards in the same or another part. In another set of animals two or three ounces of the sulphites should be administered daily in the drinks. Other antiseptic or anticatalytic agents might be employed in the same way, and we should then learn whether any of these substances possessed the power of precipitating, neutralising, or destroying the poison; or whether we could impart to the fluids of a healthy animal such anticatalytic and protective properties as to cause them to resist the action of the poison, or to modify the course and severity of its effects.

We read a paragraph in some paper that medication with the sulphites had been used as a prophylactic, and that half of the same herd to which nothing had been given suffered terribly, while the "sulphited" animals escaped. This is too good to be true, we fear; for it is in the very nature of stray paragraphs on the treatment of cattle plague to be mendacious. Be this as it may, the subject is worth investigating With the first class of animals—those labouring under symptoms—we should divide them into classes for the purpose of comparison. To one set we might administer *subcutaneous injections*, drinks, and lotions of sulphites; to another, the perchloride of iron; to another, the mineral acids; and so on. Therapeutics is a subject beset with difficulties; but if we are ever to learn anything it must be through the patient and honest observation of men accustomed to conduct scientific investigations.

THE "MEDICAL TIMES AND GAZETTE" FOR 1866.

Whilst we wish our readers all the good things appropriate to the season, we may say that we hope to be their library companion during the new year as heretofore, and to carry on the warfare against quackery, pretence, and nonsense as vigorously as ever. Our principles are, to defend our Profession from unjust attacks from without, to repress unworthy conduct within its ranks, and to do our best to put before our readers all that is best worth knowing of the rapidly-increasing Professional lore of our time. We belong to no clique, party, or association short of the whole Medical Profession; we have no "idols" or "favourites" to puff; we have no hostility against any man; we desire to advance our Profession by speaking the truth, and when we think there is error in conduct or doctrine do not hesitate to say so.

We would especially call attention to the valuable series of papers already published under the title of "Modern Syphilography," "Modern Dermatology," "Modern Chemistry," and the like. They are attempts made to gather up, condense, and simplify the present state of knowledge, so that the busiest Practitioner, whose earliest ideas on such matters are now a little antiquated, may be able to get at the cream of modern notions at the cost of an easy half-hour's reading. These papers will be continued, and the next series will relate to the "Doctrine of Tumour."

As a kind of "Leading Article" in the *Medical Times and Gazette* for 1866, and one likely to be of great interest to Surgeons in active practice, we shall have the advantage of a series of Lectures on Unusual Varieties of Fractures and Dislocations, with abundant illustrations. At the same time, our Hospital Reporters will exhibit, by a carefully-collected series of cases, the actual diversities in the details of treatment of fractures in all the great Hospitals in England.

We are promised further Papers on Articles of Food, Drink, and Medicine by the author of the Report on Cheap Wines which appeared in our journal last year. We understand that the writer's object is not only to present to the notice of his Professional brethren such articles as are likely to be of use materially, but also to examine the various hypotheses on which they have from time to time been recommended, so that the soundness of Medical argumentation may be tested as well as the progress in therapeutics.

Our great regret is that we have found it scarcely possible to insert the great number of valuable communications and to notice all the books that we have received. For the future we can promise that the latter department shall have more space assigned to it regularly; and in this, as in other respects, we hope that our journal will maintain the honourable character for spirit and impartiality which we are glad to say it inherits from the past.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We are glad to find that some remarks made in our leading article of December 9 have drawn forth a letter from one who has the reputation of uniting the qualifications not always found in one man of being a laborious worker at original research, a lucid professor of physiology, and a conscientious clinical tutor at the bedside. We find that Dr. Beale adopts many of the views which have been put forward in these columns, and especially that pupils, instead of lounging about a Hospital and staring at heroic operations and exceptional cases, should spend their earlier months in mastering the groundwork of the sciences of exactitude—chemistry, anatomy, and the like. This should be done under the guidance of tutors, who shall take care that the slow, or the puzzled, or the half-educated beginner shall have work proportioned to his powers; that they shall be tempted onwards to the higher Professional qualifications, and not be let sink into the mere "M.R.C.S. Eng., etc."

Dr. Beale rightly points to what we all know to be the incubus and blight of the Profession: the existence of that examination for Membership of the Royal College of Surgeons, which allows a man to get the colour of a qualification without the reality; which sends forth men who have the audacity to treat every case that offers, although they have never been examined in aught save the elements of anatomy and Surgery. But we will refer to Dr. Beale's letter for a simple and truthful account of this matter, and ask, Where is the hope of a remedy? Only in a change of the constitution of the Council; only by infusion of new blood, and more energetic vitality; more active circulation, assimilation, and change of its members. This depends on the votes of the Fellows at the annual election; and we must again point out a mistake into which some of our contemporaries seem likely to fall, and which might be fatal to the life of the College for years. Shall the power of voting by proxy be given, or no? We say no, on the ground that such of the Fellows as take active, warm, personal interest in the affairs of their College might be swamped by the number of those who would send their mere signature to a canvasser.

The Council of the College have decided this matter rightly, at any rate. The apparent popularity and liberalism of the new measure were both shams; "cold abstentious apathy" lurked under it, hardly disguised.

The documents which we printed last week may serve to confirm and enlarge the views given by our article of December 9.

In every contest, as in the case of attempted reforms at Oxford, or in a railway company, it is the non-resident body, the mass of *paper*, which defeats whatever attempts are made for "moving on."

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THE WEEK.

DEATH OF DR. RITCHIE.

It is a painful task for us this week to record the death of one of the most rising young Physicians in London. Last week he was quite well; now he is in his grave. On Thursday night he was well, cheerful, and busy; on Friday afternoon he was dead. He had been in the habit of working late at night and taking strong tea; then, being wakeful, he took occasionally a little morphia. It had on two or three occasions been difficult to rouse him in the morning; but last Friday morning he could not be roused at all. He had evidently taken an overdose. He was alive, but all attempts to support life were unavailing. An inquest was held, and these facts were brought out, as well as the proofs that he was in very prosperous money circumstances, and was about to start on Friday for a week's holiday in Scotland with his relations. The verdict was "Death from morphia taken medicinally." We cannot say more this week; but next week we hope to give some account of the career and labours of one who, though only just twenty-three years old, had already earned for himself a name which will endure in the history of Medical science.

COUNTY COURT JUSTICE.

We print in the "Notes and Queries" a letter from a respectable Practitioner, who has given us his name in private, which, we may say, is a well and respectably known one. He makes a complaint against a judge of one of the Surrey County Courts. He complains, first of all, that justice was not done him—that he was defeated in an application for moderate payment which was justly due to him. This may have been owing to want of evidence, or to other technical reasons, and as we do not know these it would be unfair to condemn the judge prematurely. It may have been an error of judgment merely. The second charge is more serious; it is, that the judge presumed to express an opinion on the patient's practice, and reprimanded him for not taking or using various remedies, which, of course, were matters quite within the plaintiff's own discretion. Further than this, the judge is accused of having used indecent language, such as accusing the plaintiff of impudence in seeking justice.

A County Court judge may be a very exalted personage, still, if the plaintiff's case as reported to us is substantially true, we can but think that the Medical men in the neighbourhood of Dulwich might represent the matter to the Home Secretary, or the Lord Chancellor, or to the House of Commons, in a way which will insure better behaviour on the part of his Honour for the future.

HOMŒOPATHY AND THE CATTLE PLAGUE.

Our readers will not be surprised to hear that homœopathy has been weighed in the balance of the Rinderpest, and has been found wanting. Out of thirty-six bullocks treated since the 1st of the month six were alive on the 22nd. Mr. James Caird, the Vice-President of the Association, writing to the *Times* newspaper, is obliged to confess that, notwithstanding all the "advantages" "of a skilful and experienced homœopathic veterinary," "two competent assistants," and "the local and personal influence" of Lord Bury—the latter, we suppose, being exerted occultly in favour of the globules—the numbers are as we have stated. Mr. Caird, however, is not cast down. English cows are not so alive to the influence of globules *plus* that of Lord Bury as are Dutch cows to the influence of the globules alone. Besides, the air of Norfolk, which is a feeding country, although tempered by the influences of Lord Bury, may not favour the action of the globules. So the Association are determined to make a trial in the dairy country of Cheshire. They consider, nevertheless, that their present experiment has not been useless, for they have discovered that abstinence from solid food and a diet of water gruel is useful in most cases. What a wonderful discovery of modern homœopathy! Query, was Lord Bury's influence exerted in infinitesimal doses?

CRIME AND INSANITY.

During the past week three trials for murder have taken place in which pleas of insanity have been advanced on the part of the accused. The first was that of the notorious Forward, or Southey, for the murder of his wife and child at Ramsgate; the second, that of Jonathan Waite, an inmate of the West Riding Pauper Lunatic Asylum, for the murder of William Burran, an inmate of the same asylum; the third, the trial at Stafford of Charles Christopher Robinson, a young man, aged 18, who killed his sweetheart, Harriet Seager, and immediately after attempted suicide. In the first and third, the jury returned a verdict of guilty, and sentence of death has in each case been recorded. Waite was pronounced by the Court of unsound mind, and unable to take his trial, and has been confined during Her Majesty's pleasure. In the case of Forward, we have no doubt that the jury has returned a verdict in accordance with the evidence, and that their decision has been just and right. The only proof of insanity that the law, with a due regard to the interests of society, can admit is ignorance of the nature and quality of the act committed, and of its consequences. In Forward's case, besides the evidence in favour of his sanity of the Medical men who had had charge of his health since the crime, there was in the mode of its commission and in his own averments afterwards damning proof that he was thoroughly well acquainted with the nature of his act, and with the punishment that must follow it. Waite is undoubtedly a confirmed maniac. Robinson, on the other hand, was the subject of hereditary taint, and had exhibited considerable eccentricity and waywardness before the crime, although after its commission he stated that he had done it through drink. In his case there was certainly more room for doubt than in the others, and yet on the whole evidence it was difficult to believe that he had done it unwittingly. The increasing frequency of the plea of insanity is a fact which, we think, should be met with a corresponding increase in the machinery of justice. As we have on many occasions pointed out, the appointment by Government of Medical assessors in our law courts, whose duty it should be to examine and report on the validity of these pleas, as well as on other matters of Medical jurisprudence, would, without infringing on the functions of the judge and jury, divide with them a particular responsibility which is foreign to their training and education. If a man knows he is committing a crime when he murders another, he is sane enough to be hanged for doing it; but if a man, as in the case of Robinson, has been proved to have been suffering from fits of severe mental depression, followed by excitement, previous to the act in question,—if evidence of such conditions is given by respectable Surgeons and Physicians who have attended the prisoner in consequence—and above all, if the man's sister and other near relatives are at the time confined in lunatic asylums—justice at least demands that the question of his mental condition shall be submitted to some skilled tribunal in addition to that of twelve ordinary jurymen.

We are very glad to hear that efforts are already being made to obtain a commutation of the sentence pronounced on Robinson, as his case is certainly one in which grave doubts must be entertained. We also welcome the Report of the Commissioners on Capital Punishment as affording an authoritative recommendation for considerable changes in our criminal law. We shall probably return to a consideration of their Report at some future period, but in the mean time we may say that the division of murders into two classes of unequal atrocity, the first only to be punished with death, and the second with penal servitude for life, or for any period of not less than seven years, and the alteration of the law in the case of in-

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fanticide, abolishing the necessity for proving the entire and live birth of the child, are recommendations which will receive the warmest approval from our Profession.

FROM ABROAD.—THE ÉMEUTE OF THE PARIS STUDENTS—THE ARMY MEDICAL SERVICE IN ITALY—CENSUS OF MEDICAL PRACTITIONERS IN THE DEPARTMENT OF THE SEINE—ANIMAL VACCINATION AT BRUSSELS.

THE *émeute* of the Paris Medical and law students seems to have become rather a serious affair, causing a prolonged interruption of the courses of lectures, and probably leading to several of the young men being prohibited from following the Professions they were preparing themselves for. The supreme silliness of the authorities, in investing the rampant nonsense spouted by seven beardless lads at the Liège Congress of Students with the importance implied by the edicts and expulsions that have ensued cannot be sufficiently reprehended, and the sympathy on the part of their fellow students which such needless severity has elicited is not to be wondered at. Such a supervision of conduct beyond the precincts of University jurisdiction is naturally felt as an intolerable tyranny, although the power to resist it will of course prove unavailing. One of the most distressing parts of the whole case is the compulsory silence of the Paris Medical press on the matter, showing in this, as on so many other occasions, its powerlessness when the acts of those in authority are in question. With the simple reproduction of one of the threatening edicts, and an exhortation to the students to immediate obedience, and an intimation to those of them who had devoted themselves to the treatment of the cholera that a remission of their future fees and a donation of crosses would be accorded, all notice of the matter ends. Not a word in censure or justification of the proceedings on either side. The affair has led to the resignation of M. Tardieu, Dean of the Faculty.

The Army Medical Service in Italy seems as discontented with its position as our own, or even more so, judging by the number of resignations. From the 1st of January, 1864, to the 30th June, 1865, 127 subaltern Medical officers quitted the service, and 66 only have entered during this period to supply their places.

The *Almanach Général de Médecine* gives the following return of the number of Practitioners in the Department of the Seine:—Doctors of Medicine, 1848; *officiers de santé*, 375; and midwives, 740. Among these 2223 Medical Practitioners there are 340 chevaliers of the Legion of Honour, 94 officers, 26 commanders, 1 grand officer, and 1 grand cross—so that nearly every fourth Medical man is thus decorated! There are also in the department 687 *pharmaciens*, with 15 chevaliers, and 2 officers of the legion. Of the 1848 doctors, 1613 fulfil some public employment, either salaried or honorary,—as Medical teaching, public assistance, the various administrations, the theatres, national guard, etc., or they belong to some of the learned societies of the capital. The *officiers de santé* who inhabit Paris only for the most part practise dentistry; but admitting that the population of the Seine amounts to 1,800,000 inhabitants, the whole 2223 Practitioners would supply one Practitioner for every 800 inhabitants.

M. Warlomont, of Brussels, states that the results of his experiments in animal vaccination having been somewhat misunderstood, he wishes to explain exactly how the matter stands. For several months he tried the Neapolitan method of vaccinating from the cow, observing the rules laid down with rigorous exactitude—viz., the hypodermic insertion by means of small incisions of a thick lymph obtained by scraping the base of the pustules which had been cut open by means of a bistoury. Vaccinating thus a new animal every Friday from pustules which had arrived at the beginning of the eighth day, and without regard to their degree of development, which was sometimes too advanced, he met with frequent failures. He has since vaccinated only with pustules which had just reached their maturity, whether this happened on the fifth, sixth, or seventh day, choosing those which most resembled those observed in the human subject. The more recent they were, provided they contained lymph, the more active they were. He therefore left off scraping the base of the pustule, and did not insert by means of incisions, as practised in Naples, but introduced by pricks, the lymph taken from the surface of pustules whence the crusts had been detached. With the procedure thus modified, M. Warlomant speaks highly of this mode of keeping a constant supply of lymph by vaccinating from animal to animal, an abundance being thus always kept ready at Brussels for the use of Medical Practitioners.

THE "VISITING LIST."

WHILST noticing Mr. F. Seymour Haden's marvellous etchings last week (which, by the bye, were to be seen at Colnaghi's, and not Gambart's) we accidentally omitted to point him out as the author of that most useful of modern inventions, the "Visiting List," published by the Messrs. Smith. We have long used these Lists, and can as confidently recommend them as ever.

THE Profession will receive with much satisfaction the announcement that the Queen has been pleased to confer a baronetcy on Mr. Fergusson, whose high reputation as a Surgeon has naturally secured this distinction, while his genial and courteous bearing to his brethren at all times will command the congratulations of all who have the pleasure of his acquaintance. May Sir William Fergusson live *long* to *enjoy* his honours, and may his beautiful estate—Spittlehaugh, Peeblesshire—become identified with the title through many generations!

GENERAL CORRESPONDENCE.

MEDICAL TRAINING AND MEDICAL EXAMINATIONS.

LETTER FROM PROFESSOR LIONEL BEALE, F.R.S.

[To the Editor of the Medical Times and Gazette.]

SIR,—I beg permission to make a few observations upon the subject referred to in a leading article headed "The University of London," p. 633 of the *Medical Times and Gazette*, for December 9th, 1865.

In attributing the greater success of the candidates for the degree of M.B. and M.D. to the greater amount of tutorial teaching in the latter part of the student's career, I think you give too much credit to the teaching, and far too little to the individual himself. In the case of the King's College men, I know that their success was mainly owing to their own thorough work in the wards, to their own thoughtful study—in short, to the manner in which they had taught themselves and habituated themselves to the careful and steady observation of actual disease by active work—but it is quite possible that the early training in the elementary subjects studied during the first and second years may have had an influence. It must also be borne in mind that only the best men reach the final examinations, and it is therefore not to be expected that many of those presenting themselves would fail.

With reference to the question of general clinical teaching, I would observe that if we want to train up a man to be a thoughtful, independent, reliable Practitioner, I think our main object should be to teach him to teach himself. If the teaching be too dogmatic, it will not have this result, and it is probable that if we can but excite men to use their own understandings, we shall help them far more in the real work of their life than if we force upon them our own particular views of cases. I think, therefore, it would be very easy to overdo the tutorial plan as applied to teaching men practice, while for the elementary teaching we ought to depend very much upon that method. In fact, I think that the great aim

of a clinical teacher should be to teach men to think, and observe, and investigate for themselves rather than to "coach" them. I doubt if the tutorial method is the thing to make men good, sound, thoughtful Practitioners.

With regard to teaching the ground-work, however, I cordially agree with you that the tutorial plan is most necessary, and I shall take this opportunity of drawing attention to one or two points connected with examinations and teaching which seem to me of some importance. I think you will agree with me that it is practically impossible at the present time to introduce the tutorial system as carried out at the Universities into our Medical Schools. Some high authorities who have expressed themselves strongly in favour of this system for every branch of Medical education, have, perhaps, scarcely considered the extreme difference between branches of learning which do not change from year to year and those which are constantly progressing and are entirely changed within a very brief period of time. It by no means follows that the same plan should be equally efficient in teaching the natural sciences, general literature, classics, and mathematics; but I feel quite sure that it would be a great gain if Medical tutors were appointed whose duty it would be to drill the younger men and any that were backward in their studies. My friend, Mr. W. Fairlie Clarke, has already made some excellent remarks upon the subject of tutorial Medical teaching (*Medical Times and Gazette*, December 23, 1865, page 699), and I am sure that all wishing to advance Medical teaching will desire that some such plan as he has suggested should be carried out in all our schools. I am quite certain that our existing system may in very many ways be vastly improved. Many lectures might, perhaps, be made far more instructive than they now are by introducing more illustrations and increasing the time devoted to *vivâ voce* and written examinations. It seems to me that every student should pass an examination in the elements of anatomy, chemistry, and physiology before he is admitted into the wards at all. I would not introduce more examinations, but modify those which the student has to pass. It would be very easy to have one at the end of the first winter session in anatomy, chemistry, and physiology, which the student must pass before he could enter to the Hospital practice or to Medical or Surgical lectures. Surely it is very hard that a Physician should have to discuss at the bedside the structure and action of the healthy heart, to describe the structure of the kidney, liver, or stomach in health, or drill men in the methods of detecting whether the urine is acid or alkaline, or show them how to test for albumen. Yet all this, and much more, elementary work, which ought to have been taught long before, will he have to teach to many students before he can usefully enter upon the consideration of the particular case.

Practically, I find it most difficult to ground students generally in those preliminary matters, without which no one can study disease to advantage; and, although I have long, to some extent, combined the tutorial plan with lecturing, and have employed illustration in every way I can, I still find that my efforts are not of that use to the class generally that they ought to be, and I believe that this arises from the circumstance that, perhaps, nine-tenths of the pupils, knowing that little of what I have to say will be required by the examining board at which they intend to present themselves, regard it as a "grind" which won't pay them for attending to.

No reform in Medical education has afforded so great encouragement to teachers as the examinations of the University of London. The candidates fully appreciate and take the utmost advantage of every effort made by the teacher. The greatest interest is displayed in the examination of microscopical specimens, and the teacher naturally tries from time to time to improve his method, increase his means of illustration, and take more and more pains to interest the men heartily in their work; for he knows that, as knowledge advances, the examination will advance too. But how many members of his class aim at passing our University? The majority not being ambitious, scarcely attend to what you have to say, and in their hearts vote your efforts a bore. They feel that very, very little of what you tell them will be required at the examinations they are going to pass, and they won't be bothered with knowledge not wanted by their examiners. Consequently a dozen good men are gaining something by your work, while, perhaps, four or five times as many are listless and inattentive. And is it not perfectly natural that a man who is not fond of work should endeavour to ascertain the exact minimum which will enable him to obtain his licence, and not trouble himself to get up more? It need scarcely be said that we teachers can do very little to improve Medical education, so long as it is possible for the great majority of men to pass into the Profession without being able to diagnose an ordinary Medical case, or, indeed, being acquainted with the principles upon which the investigation of a case of disease is conducted. It may be said this has nothing to do with a Surgical qualification; but, practically, the College of Surgeons does qualify a man to practise his Profession generally, and if the diploma of that body qualifies for general or Dispensary practice, for example, the examiners ought surely to inquire if the candidate knows anything of the nature of the cases generally which he will be called upon to treat. Moreover, the College of Physicians and the University of London examine those who are going to practise Medicine in Surgery, and why should not the College of Surgeons examine candidates for a Surgical diploma in Medicine? It may be possible to practise Medicine with a very slight knowledge of Surgery, but it is certainly quite impossible to treat Surgical cases without a knowledge of Medicine. The importance of a knowledge of chemistry, too, is now far greater than it was years ago. The College of Surgeons is, I think, almost the only examining board which does not now examine in this subject.

It is quite certain that the schools will teach well up to any standard the examining boards will fix. If I mistake not, the spirit of progress is much more active in our schools than in some of our examining boards, and it would be an immense gain to all conscientious teachers if they could feel that their efforts to make men thorough Practitioners were cordially supported by all those who admitted them to practice. There is no reason why nine-tenths of the students should not be as well educated as the one-tenth which goes to the University of London, but for a fear that seems to have taken possession of the minds of some influential persons lest the majority of men entering the Profession should be *too highly* educated. Many senior examiners, when they condemn the amount of matter that has to be learnt and remembered by the candidate for any good pass examination in these days, as contrasted with what was required forty years ago, do not take into account the far greater facilities for learning now at the command of the student. Those who look upon very much of the modern work practically as useless, should at least listen to the opinions of those who having entered the Profession, find that they are unable to understand fully the nature of many points now under discussion, and to them of great interest, simply because they were not taught the more modern methods of investigation when they were students. Some of us may over-estimate the importance of much modern scientific work to Medicine, but I am quite certain that, be it useful or useless, a very large number of men in the Profession desire to know what has been done and what is now being done for Medical science all over the Continent and in this country, so that they may be in a position to judge for themselves. Very little advance in Medical education can, however, be made until the most popular examining board alters the style of its examination, and adapts it to the requirements of Practitioners of the present age. Other boards may raise their standard and make the examinations as perfect and searching as possible; but it is obvious that as long as men can obtain a licence to practise by passing an easy examination, the majority will choose this in preference to those more difficult, and the easiest examination will necessarily be the one which is most popular. Surely examinations ought to be modified as science advances and the methods of instruction are improved, and examining boards ought to consider from time to time how Medical teaching can be improved and the means of investigating disease advanced, how the information acquired by the majority of those entering the Profession can be advantageously increased, and thorough work most widely encouraged.

I daresay my observations may not be very popular among first year's students, but I am much mistaken if my opinion will not be supported by third and fourth year's men and by many of those who have passed. At any rate, knowing as I do the activity now prevailing in the Medical sciences abroad, and the anxiety on the part of many zealous workers here to prosecute progressive Medical work, I desire as a teacher to express the opinion that the interests of the Profession would be greatly advanced if the examination at the College of Surgeons were more comprehensive, or if it were necessary for candidates for that diploma to pass some other examination as well before they could commence practice.

I am, &c.

King's College, December 23. LIONEL S. BEALE.

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THE EMPLOYMENT OF PARAFFINE IN THE CONSTRUCTION OF AN APPARATUS IMMOBILE.

LETTER FROM MR. R. LAWSON TAIT.

[To the Editor of the Medical Times and Gazette.]

SIR,—Would you kindly allow me space to make public a modification of Suetin's apparatus immobile, which I think may be of some practical advantage in cases suitable for its adaptation? It is a paraffine bandage.

In some cases, especially compound fractures and others involving discharges from wounds, I have noticed that both plaster of Paris and dextrine or starch bandages have the disadvantage of becoming offensive by absorbing the discharges. To obviate this, I propose to use the ordinary paraffine of commerce applied with a flannel bandage of loose texture. The method which I have found most convenient is to have as much paraffine as is thought necessary melted and placed in a china bowl, which is to be immersed in hot water, to keep the paraffine in a liquid state. The bandage is to be passed through the melted substance as it is being applied; and, as the paraffine melts at from 105° to 120° F., according to its quality, no fear need be entertained as to scalding the patient. After allowing five or ten minutes for the setting of the bandage, two or three coats of the liquid paraffine should be brushed over it so as to get a thickness of a fourth or three-eighths of an inch, and if necessary another saturated bandage placed over all.

The advantages of this method are its cheapness—as paraffine sells at from fourteenpence to eighteenpence per pound,—its extreme lightness, its cleanliness, a decided advantage over plaster of Paris, at least in the application, its neat appearance, and that it perfectly resists moisture. It is very firm and, if cracked, can be mended with a hot wire.

I have tried it on sound limbs, and found its rigidity remarkable; but this property can be increased, if necessary, by the addition of various easily fusible substances which mix with paraffine. I have had it on a case of fracture of the humerus in a boy, and then it did remarkably well.

I am, &c.,

R. LAWSON TAIT.

ON THE TREATMENT OF DIPHTHERIA WITH HYPOSULPHITE OF SODA.

LETTER FROM MR. J. CLARKSON MAYNARD.

[To the Editor of the Medical Times and Gazette.]

SIR,—Being convinced of the great curative powers of the hyposulphite of soda in all cases of diphtheria, and as it is a remedy that I have no reason to believe has as yet been tried in such cases, a few remarks on the subject may be interesting, and I hope of value, to the Profession.

The idea of using this salt first suggested itself to Dr. Tubbs, of Upwell. He says, "My grape vines were diseased, and upon my gardener applying sulphur to them it proved effectual in destroying it. This, therefore, gave me a hint if sulphur would act so effectually upon vegetable, why should it not have the same effect upon animal life? We know it will cure the itch. I therefore determined to try the hyposulphite of soda, and in doing so was much struck with its effects upon the throat in diphtheria. The hyposulphite is preferable, owing to the sulphurous acid not being deposited on the mucous surface, but set free and more easily absorbed."

Shortly afterwards, Dr. Tubbs recommended this treatment to me, and by our joint application we have succeeded during the present epidemic in this neighbourhood in curing, with the exception of one, every case that has come under our care, in number about fifty. We therefore think ourselves justified in making known to the Profession the result of our experience.

The plan of treatment we pursue is as follows:—On first visiting a case, if not very far advanced, and in which only a few spots are visible, the throat is dressed twice a-day with a strong solution of the hyposulphite of soda—viz., ʒiij. of the hyposulphite, glycerine ʒij., with ʒvj. of water. This generally removes the incipient exudation in forty-eight hours, sometimes in less. But if the case is an advanced one and the parasitic plant is making rapid strides, we wash the throat well out with warm water by means of one of Maw's flexible syringes. This is alike agreeable and most beneficial to the patient. The affected parts are then dressed with the strong solution, and a gargle of ʒss. of the hyposulphite to half a pint of water, with ʒss. of glycerine, is given to be used every hour.

The effect of the solution upon the exudation is most marked. It appears to solidify and dry up the false membrane, and when the syringe is again used, which is to be frequently done, the force of water will, if not completely, nearly entirely wash it away. The exudation in this way seldom or ever re-forms, and the patient makes comparatively a rapid recovery. In cases of a graver character, and where there is a larger collection than usual of inspissated mucus, we clear out the posterior nares by means of a powerful curved leaden syringe which is introduced into the nostril. In the putrid stage, and when the unpleasant odour from the throat is very offensive, a small quantity of Condy's disinfecting fluid added to the water with which we syringe the parts has proved of great advantage. I may add that from half a gallon to a gallon of warm water ought, certainly in bad cases, to be thrown into the throat three or four times a-day. The ext. belladonnæ applied externally has proved very useful where there has been much swelling.

In cases of very young children where it is difficult to dress and get at the throat, we give the hyposulphite internally, from gr.j. to gr.iij. every four hours, and allow them to swallow the gargle, which, by the way, they very frequently do without permission. Dr. Tubbs informs me he is now giving to adults gr.viij. every four hours. Port wine, beef-tea, brandy, and bark are, of course, given in suitable quantities, and in cases where there was much prostration we have occasionally thrown up, with very satisfactory results, an enema of port wine, beef-tea, and isinglass.

Should any member of the Profession be induced to try this plan of treatment, I should feel much obliged by his giving us the results of his experience. I am, &c.

J. CLARKSON MAYNARD, M.R.C.S.

Wisbech, December 11.

UNIVERSITY OF LONDON AND THE PRELIMINARY SCIENTIFIC M.B. EXAMINATION.

DR. CARPENTER presents his compliments to the Editor of the *Medical Times and Gazette*, and is desired by the Senate to request the insertion of the accompanying letter, which has been transmitted to the several Medical Schools in connection with the University.

University of London, Burlington House, W., December 26, 1865.

University of London, Burlington House, W., December 19, 1865.

Sir,—(1) The Senate of the University of London having had their attention drawn to the large number of failures which have annually taken place among the candidates presenting themselves at the Preliminary Scientific M.B. Examination, and especially to the results of the Examination in July last (when 43 out of 75 candidates were rejected), have thought it expedient to place before you the following statement of their purpose in instituting this Examination, and of the mode in which they desire that this purpose should be carried out.

(2) It is the opinion of the Senate that no system of Medical education can be regarded as sound and complete which does not ensure on the part of the student who is entering upon a course of Professional study such an aptitude of mind as shall enable him fully to profit by it, as well as the possession of such an amount of general knowledge as shall supply a basis for his future acquirements. With this view they have from the first insisted upon the Matriculation Examination as the fundamental condition of Medical graduation in this University. And it has been more fully to secure the same object that they instituted five years ago the Preliminary Scientific Examination, detaching from the First M.B. Examination the subjects of inorganic chemistry and botany which were previously included in it, and combining with these the additional subjects of mechanical and natural philosophy and zoology.

(3) A knowledge of the general doctrines and leading facts of physics and chemistry, and of the principal types of organisation presented by the animal and vegetable kingdoms, is regarded by the Senate as essential to any one who would prosecute the study of the human organism in health and disease, and of the influence of external agencies upon it, in an enlarged philosophical spirit.

(4) But they attach no less importance to the mental discipline by which the mind of the student is prepared, through that training in habits of correct observation and precise reasoning which the careful study of the physical and natural sciences involves, for dealing with the complex problems presented to him in the study and practice of Medicine. And with these views they have so framed the scheme of examinations that it shall embrace in each of these subjects those *details* which are most important to the student of Medicine, whilst it shall test the mastery of *general principles* which the candidate has acquired, and his power of applying them.

(5) Whilst limiting, by the detailed programmes contained in the regulations, the range of Examination in each subject, the Senate feel it right to expect that the candidate's knowledge within that range should be full and precise; since either deficiency or inaccuracy, presenting itself to any considerable degree, shows that the objects with which this test is imposed have not been fulfilled. And the Senate attach special importance to the *practical* parts of this Examination as affording the most satisfactory evidence how far the candidate has really profited by the course of study he has gone through.

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(6) The results of the last Preliminary Scientific Examination show that it is in the subjects of botany and zoology that the candidates have shown the least proficiency; for whilst, of the 43 candidates who failed, 16 were rejected in chemistry, 8 in mechanical philosophy, and 16 in natural philosophy, no fewer than 39 were rejected in botany and 32 in zoology, 4 of these rejections being in botany alone and 3 in zoology alone.

(7.) The candidates who were rejected in botany, whilst showing an insufficient knowledge of vegetable physiology, especially failed in their descriptions of the plants placed before them. This exercise is regarded by the examiners in botany as the best evidence of the candidate's knowledge of the fundamental facts of vegetable organisation; whilst it is looked upon by the Senate as one which can only be effectually prepared for by the acquirement of those habits of correct and discriminating observation, of systematic arrangement and accurate record of the facts observed, which they regard as constituting a most valuable preparation for his whole subsequent career as a student and Practitioner of Medicine.

(8) I am directed, therefore, to express the hope that candidates who may hereafter present themselves from your school may show themselves thoroughly trained in this elementary part of the subject, on which the Senate deem it right to insist far more than they do on a knowledge of the distinguishing characters of the natural orders, which will only be required where these orders represent great fundamental types of organisation.

(9) The case is different, however, with regard to the animal kingdom, since the knowledge on which the Senate feel it requisite to insist is that of the "distinctive characters and chief peculiarities" of each of the great groups under which the members of that kingdom are now classified. It will scarcely be disputed that the student who has mastered these will enter upon the study of human anatomy and physiology at a great advantage, as regards both the value of the knowledge he has attained, and that of the mental training he has gone through in its acquirement. The Senate do not consider that this knowledge can be *real*, unless the candidate has gained it from *specimens* at least as much as from *books*; and with this view they regard it as essential that it should be tested by a practical examination. The experience of this examination has shown so lamentable a deficiency of such knowledge on the part of a large proportion of candidates, that I am directed respectfully to urge it upon you as essential to the success of candidates at this examination, that they should have access to a museum containing *typical specimens* of the several groups enumerated in the Regulations, and of the principal sub-divisions of these; and that they should so thoroughly familiarise themselves with them as to be able to correctly refer any similar specimens to their proper places in the zoological series.

(10) It is with great satisfaction that the Senate have observed, in the recent Second M.B. Examinations, the efficacy of the new regulations which they introduced five years ago, in raising the standard of Professional acquirement on the part of the candidates who have been trained under them. At the Second M.B. Examination of November, 1864, twenty-seven candidates presented themselves, of whom only one failed and twenty passed in the first division. And at the Second M.B. Examination which has recently taken place, twenty-four candidates presented themselves, of whom one withdrew and nineteen passed in the first division—the examiners expressing themselves strongly as to the high standard of merit which was shown by the majority of these. No fewer than fifteen subsequently presented themselves at the Examination for Honours in Medicine, and fourteen were placed in the first class, six of these being reported by the Examiners as having shown a degree of proficiency which rendered them deserving of the scholarship.

(11) It thus appears not only that the candidates who are deficient either in natural aptitude or in steady application are eliminated by the Preliminary Scientific and First M.B. Examinations; but that those who have succeeded in passing these examinations have received a culture and undergone a discipline of the greatest advantage to them in the prosecution of those purely practical studies which occupy the latter portion of the University Curriculum.

I have the honour to be, sir, your most obedient servant,

W. B. CARPENTER, Registrar.

To the Secretary of the Medical School of .

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At a general meeting of the Fellows, held on Friday, December 22, 1865, the following Member of the College was duly admitted a Fellow of the same:—

George Kennion, M.D. Edin., Harrogate.

At the same meeting, the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

Charles Theodore Williams, M.B. Oxon, 49, Upper Brook-street, W.; Heywood Smith, M.B. Oxon, 25, Park-street, Grosvenor-square, W.; Philip Henry Pye-Smith, M.D. Lond., 8, Anchor-terrace, Southwark, S.E.; John Wale Hicks, M.D. Lond., St. Thomas's Hospital, S.; Dyce Duckworth, M.D. Edin., 70, Wimpole-street, W.; Henry Charlton Bastian, M.B. Lond., Broadmoor, Wokingham; Edmond Archer, Queenstown, Cape of Good Hope; John Alfred Lush, M.D. St. Andrew's, Fisherton House, Salisbury.

The following gentlemen having undergone the necessary examination, and satisfied the College of their proficiency in the science and practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

William Henry Barber, Crickhowell; Robert Wooding Sutton Barraclough, Streatham-hill; William Turberville Buckle, 9, New Ormond-street; Henry William Freeman, United Hospital, Bath; Joseph German, Friar-gate, Derby; Henry John Hall, 4, Maud-road, Carter-street, Walworth; Nathaniel Thomas John Haydon, St. Mary's Hospital, Paddington; John Kempthorne, Callington, Cornwall; William James Mullan, Rye, Sussex; James William Smith, Whitby; James Stedman, 43, Rotherfield-street, Islington; Richard Thorne Thorne, Sussex House Asylum, Hammersmith

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, December 21, 1865:—

Frederic Edward Manby, East Reedham, Norfolk; John William Hembrough, Waltham, Grimsby; Samuel Hignett Smith, Weavenham, Cheshire: Robert David Broughton, Ruyton XI. Towns; James Folliott, Egerton-villas, Douglas-road, N.; George Weller, Fairfield-villas, Bow-road; George Owthwaite Spencer, Horbury-terrace, Notting-hill; Robert Wooding Sutton Barraclough, Streatham-hill, Brixton.

The following gentlemen, also on the same day, passed their First Examination:—

Harry Burrill Glaister, Royal Infirmary, Liverpool; Charles John Walford Meadows, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BONNEY, Mr. WILLIAM, has been appointed Resident Obstetric Assistant at the Middlesex Hospital.

BOTTOMLEY, THOMAS A., M.R.C.S. Eng., has been elected Surgeon to the Huddersfield and Upper Agbrigg Infirmary.

BROWN, G. A., M.R.C.S. Eng., has been appointed House-Surgeon to the General Infirmary, Sheffield.

BUET, GEORGE, F.R.C.S. Eng., has been appointed Surgeon to the Hospital for Diseases of the Skin, New Bridge-street, Blackfriars.

CHAMBERS, Mr. H., has been appointed Dispenser at the Southampton Workhouse.

DUDFIELD, THOMAS O., M.D. St. And., has been elected Surgeon to the Kensington Dispensary.

EVANS, C., M.D., has been elected Pathological Registrar to King's College Hospital and Curator of the Anatomical Museum at King's College.

HARPER, HENRY LEWIS, M.D. St. And., Assistant Medical Officer of the Cheshire Lunatic Asylum, has been appointed Medical Superintendent.

KNIGHT, TREVES W., M.R.C.S. Eng., has been appointed Resident Surgeon to the Royal National Hospital for Scrofula, Margate.

MARSHALL, ALEXANDER, M.D., has been appointed Medical Inspector of Army Recruits for Kilmarnock.

PYLE, THOMAS T., M.D., has been elected Physician to the Sunderland Infirmary and to the Seaham Harbour Infirmary.

SMITH, Mr. E. NOBLE, has been appointed Honorary Apothecary to the Lock Hospital at Westbourn.

STOKES, HORATIO, M.R.C.S. Eng., has been appointed Officer of Health at Gibraltar by his Excellency the Governor.

YOUNG, JAMES, M.D. Glasg., has been appointed Consulting Physician to the Ayr, Newton, and Wallacetown Dispensary and Fever Hospital.

DEATHS.

CORBETT, RICHARD, M.D., at 84, South Mall, Cork, on December 22.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Basford Union.—The Wilford District is vacant; area, 10,900; population, 4228; salary, £35 per annum.

West Derby Union.—Dr. Nevins has resigned the Workhouse; salary, £120 per annum.

APPOINTMENTS.

Amersham Union.—William Prowse, M.R.C.S.E., L.S.A., to the Chalfont District.

Bridlington Union.—Charles W. Dawson, L.S.A., to the Third District.

Isle of Wight Union.—Charles Meeres, M.R.C.S.E., L.S.A., to the Brading District. Edward E. Meeres, M.D. Lond., M.R.C.S.E., L.S.A., to the Yarmouth District. Daniel Beaton, L.R.C.S. Edin., M.D. Aberd., to the Ryde District. William F. Foster, M.R.C.S.E., L.S.A., to the Arreton District. Harry B. Tuttiett, M.R.C.S.E., L.S.A., to the Godshill District. John E. Beckingsale, F.R.C.S.E., L.S.A., to the Workhouse.

Lexden and Winstree Union.—William S. Ling, M.R.C.S.E., L.S.A., to the First District. Thomas H. Fenn, M.R.C.S.E., L.S.A., to the Eighth District.

Ross Union.—Cambridge C. Cocks, M.D., M.R.C.S.E., L.S.A., to the Sollershope District.

Shaftesbury Union.—Isaac H. Swain, M.D. St. And., M.R.C.S.E., L.S.A., to the Shaftesbury District and the Workhouse.

Wycombe Union.—Rowland M. Bowstead, M.D. St. And., M.R.C.S.E., L.S.A., to the Saunderton Workhouse.

UNIVERSITY OF EDINBURGH.—CHRISTMAS HOLIDAYS.—The Senatus Academicus, at a meeting held December 20, adopted the following resolution, granting the application of the Medical students for Christmas holidays:—"The Senatus having heard the decision of the University Court, resolve, in all the circumstances of the case, that it is expedient to grant the prayer of the petition of the Medical students—the more especially as a motion has been laid before the Senatus to begin hereafter the winter session at an earlier day, so as to allow sufficient time for the Christmas holiday, and also to allow the session to terminate in the end of March."

THE HUNTERIAN ORATION.—As this discourse is now only delivered biennially, there will not be another until February, 1867, when it is generally understood that Professor Hilton, the Vice-President of the College, will be the selected orator.

THE Obstetrical Society of London intend to hold a *conversazione* in March, 1866, at which they propose to exhibit instruments and appliances used in obstetrical practice, to be arranged under the following groups:—A, For midwifery; B, for the investigation and treatment of the diseases of women; C, for the management of infants; D, miscellaneous for collateral subjects. The Council are especially anxious to obtain specimens illustrating the original forms of obstetric instruments, and the modifications adopted at different times and in various countries.

"M. BOULEY, Member of the Imperial Academy of Medicine, has just been named officer of the Legion of Henour. This distinction, so well justified by the intelligent zeal and rare devotion which the learned Alfort Professor has given proof in the preservation of France from an invasion of the typhus of horned cattle, has called forth general approbation.—*Gaz. Médicale.*" It would certainly be of interest at the present moment to have a little more precise information concerning these measures said to have been adopted by M. Bouley.

SURGICAL BARONETS.—From an analysis of the "Calendar" of the College of Surgeons which has just been published it appears that only five gentlemen have had this honour conferred on them since the establishment of the College in 1800—viz., Sir Everard Home, who filled the office of president in the years 1813 and 1821; Sir David Dundas, who filled the same office in 1819; Sir Astley Paston Cooper, in 1827 and 1836; Sir Benjamin Collins Brodie, in 1844; and the recently appointed Sir William Fergusson. There have only been four knights:—viz., Sir Charles Blicke, Sir James Earle, Sir William Blizard, and Sir Anthony Carlisle. There have been other baronets on the list of Fellows and Members, as Sir S. L. Hammick, who still survives, and other knights, as Sir Ludford Harvey, Sir Patrick Macgrigor, Sir John Webb, Sir Charles Bell, Sir James Eyre. Amongst the survivors are Sir Rutherford Alcock and Sir Henry Cooper. There also appears in the list of Fellows of the College the name of F. Thomas McDougal, Sarawak, the Lord Bishop of Borneo, and those of a great number of clergymen amongst the Members of the College. Only two members of Parliament appear in the list—viz., Mr. W. J. Climent, a Fellow, and Dr. Brady, a Member, the latter of whom has so long represented Leitrim in the House of Commons.

COLLEGIATE PUNISHMENT.—The Fellows and Members of the Royal College of Surgeons will be glad to learn that the Council, through its legal advisers, are taking active proceedings against those members of the College who infringe the bye-laws by acting in an unprofessional manner. A few months ago Jordan, of the Anatomical Museum, in George-street, Hanover-square, was removed from the list of members, and his name at once struck off the Register by the Medical Council of Education and Registration. At the last meeting of the Council of the College of Surgeons the equally notorious Robert Abercrombie, of the Strand Museum, now practising in Regent-square and in Arundel-street, Strand, had his name struck off the College List; and a representation to that effect has been made to the Medical Council, by whom, no doubt, action will be taken to make him an unregistered Practitioner. It is gratifying to add that the Council of the College of Surgeons are about to proceed against other notorieties of the same stamp. It would, perhaps, defeat the ends of justice to mention any names, excepting that of John Potter Sargeant, now undergoing hard labour, on his conviction as a forger of trade marks. This individual had his name struck off the Register some time ago, and in a few weeks he will cease to be a member of the College of Surgeons.

IN England the roads are only half made, or at least unfinished, and it is left to the feet of horses or the wheels of vehicles to crush together and compound the loose stones into a smooth mass as best they may. The result may be guessed; this uncouth and rude treatment, although in the course of time it effects its object, leaves the road uneven, with depressions that hold the water, and loose stones that obstinately refuse to mate with their fellows. In France, the roads, when prepared with the last surface-dressing of hard broken stones, are treated so as to finish them fit for traffic. Fine gravel is thrown on the broken metal, and slightly watered; a smooth, wide, and heavy roller is then drawn over it till the surface is compact and smooth enough for ordinary traffic, saving horses much unnecessary toil and suffering, besides avoiding the strain and injury to carriages and carriage wheels. . . . . As regards omnibuses, the chief defect is the wretched ventilation for the inside passengers, and the difficult and dangerous means of access for the outsiders. The interiors of omnibuses are, in fact, "hot air baths," in which heat and foul air are generated to a most injurious extent; thousands of business men of London pass daily an hour of their lives in this pernicious atmosphere, and the Medical men of London could probably account for much of the low state of health of many of their patients from this cause. The means of ventilation are most simple, and police regulations should enforce their adoption in all this class of public carriages. The mere passing of the carriage through the air creates a current, and were openings made, front and back, allowing a stream of fresh air to pass along the inside of the roof, taking care that the current is led upwards, and not to the faces and necks of passengers, the arrangement would be a great public benefit; fresh air might also be easily admitted under the seats. The outside passengers deserve more consideration than they get, as regards their safety; many a sprained joint and injured limb is due to the defective arrangement of steps to mount and descend; and seeing that such passengers afford a large profit to the owners, they should receive that which is so essential to their comfort and safety.—*Reports of the Juries, Dublin International Exhibition.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A review of Mr. Isaac Baker Brown, junior's, work on Australia is in the printer's hands, and shall appear shortly.

Dr. Cotton's case of aneurism of a branch of the pulmonary artery shall be published immediately.

Mr. Campbell De Morgan's case of injury of the head shall be published speedily.

A Parent and *Dr. J. G.*—The result of the Preliminary Examination in Arts cannot be known for a week or two. The Calendar contains the examination papers referred to.

A Competitor, Liverpool.—The time has expired for sending in essays for either the Collegial or Jacksonian prizes for the present year. The subjects may be known on application to Mr. Trimmer, the Secretary.

J. T. J.—Our correspondent will find an account of the residence at Mulhouse in the *Social Science Review* for June 30, 1863. He will also peruse with advantage a paper, in the same *Review*, for October, 1865, on the "Familistery at Guise," by Tito Pagliardini, Esq.

Watery Extract of Cod-liver Oil.—Messrs. Barr, of 83, Fleet-street, tell us that they have an extract procured by the evaporation *in vacuo* of the waters of cod livers,—consequently, a true watery extract. It is at present on its trial in the various Hospitals, and they leave the determination of the value of the results in the hands of those who are most competent to decide. They court for this new preparation the serious examination of the Profession, and will be happy to furnish gratuitous supplies to any Medical gentleman for that purpose.

THE GRIFFIN TESTIMONIAL FUND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscriptions have been further received on behalf of the above fund:—E. B. Adams, Esq., Bungay, 10s.; Squire Sprigge, Esq., Watton, 10s.; Messrs. Roberts and Williams, Festiniog, £1 1s. Amount already announced, £130 3s. 3d.; received at the *Lancet* office, £9 9s.

I am, &c.

ROBT. FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate-street Without, December 27.

DR. WATERS ON PNEUMONIA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I regret that I was unable to be present at the meeting of the Medical and Chirurgical Society on the 12th inst. when my paper on "The Morbid Anatomy and Early Physical Signs of Pneumonia" was read.

There is a mistake with reference to facts which one of the speakers on the occasion—Dr. Fuller—seems to have made, and which I think should be corrected. Dr. Fuller took exception to my view of the cause of the harsh respiration which I have observed as a sign of incipient pneumonia. He remarked, according to your report, that "in the cases cited by Dr. Waters dulness on percussion is stated to have existed coincidently with the abnormal loudness and harshness of the respiration, and before the accession of crepitation."

In the abstract published in your journal, drawn up from the paper itself, it is distinctly stated that in neither of the cases referred to was there any dulness on percussion until crepitation was established.

It would be out of place here to reply to the observations made in the discussion which followed the reading of the paper. My simple object is to correct an error of fact, the importance of which I am sure Dr. Fuller will be the first to perceive.

I am, &c.

Liverpool, December 27, 1865. A. T. H. WATERS, M.D.

Poor-law Medical Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly find space in your journal for the following remarks, which are addressed to the Poor Law Medical Officers by one of themselves? I would simply ask them if they are disposed to allow matters to remain as they are, resting satisfied with the small modicum of justice already gained, or do they will that their claims for redress should be perseveringly and unflinchingly preferred, as Mr. Griffin proposes? For my own part, I fully agree with our chairman, and will gladly and hopefully join him in his endeavours to gain for us a just and complete recognition of our services. I believe gentlemen generally are inclined to take the same view, and would, I feel sure, not object to subscribe towards the reform fund, if they were, personally or by letter, applied to for their contributions.

I would beg all those gentlemen who are of our opinion, and think that the movement should be persisted in, to notify their willingness and determination, by sending a few postage stamps enclosed to Mr. Griffin at Weymouth with as little delay as possible. I am, &c.,

Amersham, Dec. 19. WM. PROWSE.

Atropine Points.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The use of solutions of atropine in ophthalmic practice is attended with certain practical inconveniences. Mr. Streatfeild proposed to substitute thin paper, or gelatine, steeped in solutions of atropine. A disk of the atropined medium is placed on the eye; the tears then dissolve out a sufficient quantity of the atropine to dilate the pupil. These dry preparations recommend themselves by their simplicity and portability. I have lately had made for me by Mr. Curtis, of Baker-street, pencils, or sticks, impregnated with atropine. These atropine sticks or points are, like nitrate of silver ones, adaptable into wooden holders, and may be carried about in the waistcoat pocket. If the atropine point is lightly passed once or twice over the conjunctiva of the lower eyelid, a sufficient quantity of atropine is washed off to dilate the pupil for ophthalmoscopic or other purposes. I am, &c.

30, Devonshire-street, W., December 23. J. Z. LAURENCE.

The Action of Ergot of Rye in Small Doses.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I owe my thanks to "Obstetricus" for his kind and courteous letter in your paper of December 16. I suppose it is needless to say that I did not know of the passages from Scanzoni, Braun, and Dewes which he quotes. Although the views I put forth in my paper were new, so far as I was concerned, being based entirely on my own observations, and as I supposed new to the Profession, I am happy to find that, although I am mistaken in this, they are fully borne out by such eminent authorities, and by "Obstetricus" himself. I am persuaded that the efficacy of the small doses of the ergot is not generally known; and perhaps Practitioners may be more willing to give them a trial, seeing the high authority which "Obstetricus" has shown them to have. I am, &c.

Aberdeen, December 26, 1865. D. DYCE BROWN.

"Railway Accidents."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have read with much pleasure your excellent article in the *Medical Times and Gazette* of December 23 under the above title. The need of such a record as you describe of the after-history of persons who have sustained "shock to the nervous system" must have been felt by every Medical man who has been called upon to give an opinion in such cases. Since the publication of my letter in the *Lancet* of October 14, 1865, to which you do me the honour to refer, I have been engaged in collecting materials for a series of papers upon the subject, which I hope ere long to publish. In order, however, that the report may be complete, I stand in need of the assistance of my brother-Practitioners, whom, scattered as they are throughout the country, I can only reach through the medium of the Medical journals. You would greatly oblige me, therefore, by permission to state in your columns that I shall feel much indebted to any gentleman who will forward to me notes of such cases as have fallen under his observation. Such report should include a brief account of symptoms of nerve shock arising from railway accident or other violence, and the condition of the patient as observed several months or years afterwards; or, in fatal cases, the symptoms resulting in death.

That the record may be uniform in character, and in order also to save valuable time, I have had printed a form, copies of which I shall be happy to forward to any one who is obliging enough to apply to me for them. Brief notes only are necessary for my purpose.

I may add that an account of cases in which recovery very rapidly followed upon the patient's receiving compensation would be especially interesting and valuable. I suppose there is little doubt that, although grave lesions of the nervous system frequently result from shock, there are not wanting cases of apparent injury in which the imagination of the sufferer, and sometimes even a less honest influence, plays a very important part in the production of symptoms.

I am, &c., THOMAS BUZZARD, M.D. Lond.

12, Green-street, Grosvenor-square, W., December 23, 1865.

Carotid Aneurism and the Wire-Compress.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—"When an obscure Practitioner cuts off a leg or an arm in the ordinary way, he has no pretext for sounding his little trumpet; while, if he deviate from established usage and run counter to sound Surgical principle, he may send the result to a learned society, or even have the happiness of seeing his name fairly printed in the newspapers." Thus writes, on November 29, Professor Syme, of Edinburgh, in a counterblast against acupressure and other "nonsensical contrivances for the suppression of hæmorrhage."

On the very next day, I, "an obscure Practitioner," happily ignorant of this impending fulmination, did rashly "deviate from established usage and run counter to (Syme's) sound Surgical principle" in an important Surgical operation.

Having to deal with a case of aneurism of the carotid, the artery was secured, not by a ligature "in the ordinary way," and according to "established usage," but by the "wire-compress"—a modification of Simpson's acupressure—devised and described by me some three years ago.

A ligature applied in such a case cuts off the supply of blood to the brain suddenly and at once; often with disastrous consequences. It remains dangling in the wound for two or three weeks, exciting and keeping up suppuration. It ulcerates through the artery, and opens its blood-channel, at great risk of secondary hæmorrhage.

By the wire, obstruction to the circulation was gradually effected; the flow of blood was not completely cut off till the third day. On the sixth day the wire was removed. Meanwhile, it had not interfered with the wound, nor damaged the coats of the artery.

To-day, the tenth from the performance of the operation, the man is convalescent, and might leave his bed. The wound is all but healed; the aneurism is cured, and rapidly disappearing; the artery is obliterated, but not severed; and bleeding is impossible.

This I consider a very satisfactory case; and shall forthwith make it a pretext for "sounding my little trumpet." I shall probably "send the result to a learned society;" but I shall not advertise my name in the local newspapers. I am, &c., JOHN DIX.

Hull, December 9, 1865.

Justice at County Courts.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Knowing that you are ready to listen to Professional grievances, I submit to you a case which I consider a great hardship and injustice to myself, decided yesterday in a county court. Although I have been in practice more than thirteen years, I have never before had a disputed account. The case is as follows:—At ten minutes before twelve o'clock on the night of May 20, 1864, my night bell was rung and I was requested to visit a person who had been thrown out of a chaise at Red Post-hill, Dulwich. The distance was great, involving a journey of more than two miles, in the midst of a tremendous thunderstorm. I inquired why I had been sent for, as I knew nothing of the party. The reply was, somebody on the road had directed to me. At first I declined attending, saying there was a Medical man within a few yards of the spot where the accident had occurred, and that the friend of the injured person had passed the doors of five other Medical men in coming so far. The party, however, who was partially intoxicated, continued to ring my bell violently, saying that he would make me attend; a policeman came up, and also called upon me to go, in consequence of which I made haste, taking my lancet with me. The flashes of lightning were incessant, and the rain soon poured down in torrents; in fact, I was never out in such a storm. I found the patient lying at the side of the road at Red Post-hill, having been thrown out of the chaise in consequence of its having come in contact with a post in turning the corner. He was completely covered with mud, and perfectly insensible. The night was pitchy dark, except almost constant blinding flashes of lightning, which only served to increase the intervening darkness; the rain poured down in torrents; we were wet through. Fortunately, a cab came by. As nothing could be done for the patient there, except loosening his neckcloth, etc., I advised his immediate removal to St. Thomas's Hospital, a distance of two miles and a-half, which was accordingly done. I took a most severe cold that night, and had an attack of rheumatism; nevertheless, I find on reference to my books, that I attended labours on five successive nights that week, and never went to bed in the daytime, having a large practice to attend to. I have never been quite well since. I sent in my charge—only one guinea, the person being well able to pay,—a publican residing close to Crystal Palace at Norwood. As it was not paid, I put it into the hands of my agent to collect; he wrote for the money, but receiving no reply took out a summons at the county court, which was heard yesterday.

The defendant's only answer was he knew nothing of me, but admitted meeting with the accident, stating that he had been thrown out of the chaise "by the force of the expansion of the electric fluid," after which he knew nothing until he found himself in bed in St. Thomas's Hospital.

The judge then animadverted very severely upon my conduct in declining at first to attend, although two minutes did not elapse from the time I was first called until I got up. He then inquired what drugs I took with me, and whether I took my lancet. I replied that I took my lancet, but no drugs. He then again abused me, said I ought to have taken stimulants with me, expressed his surprise at my "impudence" in coming to the court, and gave judgment for the defendant.

Now, sir, such conduct on the part of a county-court judge is, in my opinion, simply disgraceful; and it is no excuse to say, as was said to me as I left the court, that the judge was tired, irritable, and exhausted at six o'clock, having sat out a long day. I ask, sir, is a county-court judge a fit person to express an opinion on the Medical treatment of a case of concussion of the brain? or is it law or justice for a judge, unqualified to form an opinion, to stick up an idea of his own, contrary to a qualified Medical opinion, on the subject of stimulants, and to use such an idea as a ground for nonsuiting a legitimate claim? I venture to assert, and believe I have the concurrence of the whole Medical Profession, that the early administration of stimulants where there is complete concussion of the brain would be extremely dangerous, improper, and likely to choke the patient, and that, had I done so, it is very probable he would not have recovered to object to pay a very moderate and reasonable charge simply because he was unconscious of my presence.

Lastly, are Medical men to be insulted by a judge, and their conduct called impudence, because they take the proper course to obtain payment of a just debt? I am told there is no appeal against the decision of a county-court judge, or I would certainly endeavour to obtain justice at other hands; my only appeal, therefore, is, through you, to the opinion of the Medical Profession. I am, &c.

December 23. M.D., M.R.C.S., etc.

P.S.—I enclose my name and address.

The Premonitory Stage of Cholera.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It is not easy for any one who has been familiar with the cholera epidemics in Great Britain to understand the letters of Dr. Macloughlin, in Nos. 805 and 807 of your paper, claiming, as that gentleman does in these letters, that he was the first to "demonstrate the fact" that diarrhœa was a premonitory symptom of cholera, and charging upon the College of Physicians the having sanctioned the publishing of a report in 1854, which was "a mere copy of Messrs. James', Jamieson's, and William Scot's reports," and finally averring that "it was a received dogma by all the Medical authorities in this empire in 1854," that cholera is a disease of sudden invasion, attacking persons in perfect health suddenly with vomiting, severe purging, spasms, etc., to the effect that a premonitory stage of diarrhœa was unknown by "Medical authorities" in this empire, until discovered and demonstrated by Dr. Macloughlin. Now, Sir, without desiring to enter into a controversy with Dr. Macloughlin, I venture to take exception to these statements, and to hope that the following facts may satisfy Dr. Maclonghlin and your readers that the above statements are inconsistent with published facts, and ought to be excepted to.

1st. In 1832, Waugh and Innes published in Edinburgh, "Observations on the History and Treatment of Cholera Asphyxia, as it has appeared at

Haddington, N.B. By Drs. Lorriner and Burton." At page 20 of this pamphlet it is written "The premonitory symptom of all others most commonly observed as the forerunner of cholera in this district was diarrhœa," varying in its duration from "a few hours to several days or even weeks before the more violent onset of the diarrhœa," etc., etc. "Simple diarrhœa without pain and with so little inconvenience to the individuals effected, that many have continued their usual avocations up to the commencement of the more decided forms of the disease."

2nd. The reports on epidemic cholera issued by the College of Physicians, published by John Churchill, London, in 1854, were commenced in 1849 and completed for publication in December, 1853, and embraced the history and treatment of cholera in England and Wales and some part of Scotland in 1848-9 and 50; and are not "a mere copy of the reports of Jamieson and Scot," but a laborious and painstaking work of Drs. Baly and Gull, collating and compiling from the reports of Mr. Grainger, Dr. Sutherland, Mr. Farr, etc., and more than 400 Medical observers in all the affected parts of England, Wales, and Scotland—whose facts were observed in 1848-49 and 50. Evidence embodied in the report of the College of Physicians as a whole history of cholera in Great Britain up to 1850.

3rd. In Dr. Gull's report, at page 135, is written "It is well ascertained that in the largest proportion of cases, at least in European countries, the poison of cholera produces its first effects on the system gradually, as indicated by diarrhœa, varying in duration from a few hours to several days, before intense symptoms supervene. The period may be called the period of invasion." Again: "the popular theory that the discharges are an effort of nature to throw off a 'materies morbi' is not only unsupported by any known facts of the disease; but when applied to practice is found to increase the violence of the symptoms."

4th. I was familiar with cholera in 1831 and in 1849, and I was under the impression, until I saw Dr. Macloughlin's letter, that all knew and acknowledged that the premonitory stage of cholera was diarrhœa of longer or shorter duration in all the cases observed in this island. Leaving your readers to reconcile the letters of Dr. Macloughlin and the report read by Dr. Guerin in the Academie des Sciences on September 25 last, with the above facts, I am, &c.,

Walsall, December 19. JNO. BURTON, M.D. Edin.

THREE CASES OF CONSTIPATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In May, 1863, I was called to see Master ——, aged about 4 years. He was complaining of intense pain in his bowels, and had a constant disposition to go to stool, but could get nothing passed with the exception of a little slimy, watery-looking matter, slightly tinged with blood. The child was supposed to be labouring under diarrhœa; but the symptoms did not satisfy my mind on that point, and therefore I passed my finger into the rectum. I found the rectum greatly distended and completely blocked up by an egg-shaped, hardened mass of fæces. The mass was so hard and so large that the child could not possibly have expelled it by the natural efforts. I had no instruments with me, and as the case was urgent, I did not like delay, and therefore I had recourse to the use of a couple of narrow-handled silver egg-spoons. I oiled the shank of one of the spoons and passed it gently over the mass, in the same way as the blade of the forceps would be applied to the head of a child; I then brought the mass down to the orifice of the bowel, and held it in that position till I scooped it away in small pieces with the shank of the other spoon. The child was put to bed for twenty-four hours; a dose of castor oil was administered to clear out the whole intestinal canal, and there was no further trouble.

I was asked, in October, 1863, to visit a lady, aged 25 years. She was said to be in a dangerous, if not hopeless condition, from an intractable diarrhœa. A great variety of astringents had been used, but all to no purpose, as the diarrhœa was still going on, and the constitution was nearly exhausted. Fortunately the stools were kept for my inspection. The discharge did not correspond with anything I had ever seen in diarrhœa. It consisted of slimy mucus, mixed with broken-down-looking fæcal matter, in an almost liquid state, and having the tinge and appearance of very dark slate-coloured clay. I gave it as my opinion that, in place of being a diarrhœa, it was a case of old standing obstruction in the bowels, and that the liquid discharges were coming past the obstructing mass, and thus washing away its sides. This opinion was not well received, and it was plainly hinted that I was under a great mistake, as it was a decided case of diarrhœa, which must soon prove fatal if not put a stop to. I then asked and obtained permission to examine the rectum with my finger. This revealed the secret. The rectum was distended to an extent which could hardly be credited, and the pelvis was literally filled with a mass of fæces, which felt as sticky as putty, and so hard that I could make no impression on it with the point of my finger. I had extreme difficulty in getting it broken up without injury to the pelvic viscera. I protected the bowel with my finger whilst I bored and scooped away the mass. The operation required nearly three hours for its completion; and the fæcal matter which was removed half-filled a large chamber pot. A dose of castor oil was given at bed-time; and on my visit next day, I found the pelvis again filled with fæces, which had come down from the colon in lumps about the size of a hen's egg. The patient was not able to discharge them through the anus, and I was obliged to remove them. When the rectum was emptied, the bowels acted freely from the oil; but the quantity of lumps which came away could not be credited by any person who did not see it. Aperients were regularly administered, the lady was kept to bed for ten days, and the recovery was complete.

I was called to Mrs. ——, at 9 o'clock on Saturday night, January 30, 1864. She was suffering extreme pain in the region of the transverse colon. She also complained of a band round her body at that part. On examination of the spinal nerves, I found great tenderness on pressure over the roots of two of them. There was very little, if any pain on pressure over the abdomen, and the pulse was in no way indicative of inflammation. The lady was far advanced in pregnancy. There was a very small, hard motion from the bowels in the morning, but none for four or five days previously. I diagnosed obstruction in the transverse colon, and irritation in two of the spinal nerves. A mustard plaister was applied over the roots of the nerves; an opiate and aperients were administered by the mouth, and copious turpentine enemas by the rectum. On Sunday morning I had a consultation with a brother Practitioner in Coleraine, and on Monday with two others from the city of Derry. Suffice it to say, we were all in regular attendance till the following Thursday evening; but although we did everything we could invent, we were not able to procure a motion from the bowels. We could easily feel the obstruction in the colon through the integuments. Our treatment was exhausted, and we saw nothing but death before us. We had tried purgatives, opiates, powerful enemas by O'Beirne's tube, mercury, galvanism, and everything our combined ingenuity could devise; but all to no purpose. As we could go no further, we agreed to persevere with O'Beirne's tube and the opiates, and to give support and stimulants. Our only hope lay in the fact that still we had no active inflammation to deal with. It so happened that on Friday, February 5, the O'Beirne's tube which I was about to use was accidentally broken, and in the emergency, I attached the tube of a stomach-pump. Having marked twelve inches on it, I passed it that length. It just then occurred to me, however, that I would pass it on through the obstruction in the colon if I possibly could, as I thought it was the last chance for saving life. When inserted twenty-two inches, it reached the obstruction. I then pushed it steadily, but firmly and cautiously, on for two inches more, when the resistance ceased. A large quantity of warm water was thrown up without difficulty. After the tube was withdrawn, it was found to be flattened and bent about two inches from the point. I felt certain I had passed through the obstructing mass, and my opinion was speedily confirmed. In a short time the water came away; the pain in the transverse colon was gone; there was no longer any tumour to be felt; and the patient said she felt that all was now removed to the lower part of her left side. There was a complete appearance of relief in the countenance. Purgatives were again administered, and the obstructing mass was gradually removed in the form of hardened lumps and broken-down fæculent matter. The recovery was perfect and uninterrupted. The child lost its life, probably from the galvanism, and was expelled by premature labour in about a fortnight. The lady has been in excellent health ever since. I am, &c.,

Coleraine, Ireland, December. JAMES C. L. CARSON, M.D.

COMMUNICATIONS have been received from—

Dr. COTTON; Mr. C. DE MORGAN; Dr. DYCE BROWN; Dr. R. FOWLER; Dr. F. E. JENCKEN; ROYAL INSTITUTION; Dr. THOMAS BUZZARD; Mr. JOHN DIX; Mr. E. N. SMITH; ROYAL COLLEGE OF PHYSICIANS, LONDON; Mr. J. GRIERSON; Mr. T. BOTTOMLEY; Mr. J. Z. LAURENCE; Mr. J. CHAMPLEY; Messrs. BARR and Co.; Mr. GEORGE HARVEY; OBSTETRICAL SOCIETY OF LONDON; APOTHECARIES' HALL; M.D., M.R.C.S.; Dr. W. B. CARPENTER; Professor LIONEL BEALE; Dr. OGLE; Mr. J. CHATTO; Mr. E. BRADFORD; Mr. R. BELLAMY; Dr. HUGHLINGS JACKSON; Mr. SPENCER WELLS.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 23, 1865.

BIRTHS.

Births of Boys, 1037; Girls, 1072; Total, 2109.
Average of 10 corresponding weeks, 1855-64, 1727·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	816	774	1590
Average of the ten years 1855-64	648·3	638·5	1286·8
Average corrected to increased population..	..	..	1415
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	..	21	3	1	18	3	6
North ..	618,210	3	11	14	4	12	25	4
Central ..	378,058	1	8	7	..	8	10	..
East ..	571,158	5	5	9	2	16	14	5
South ..	773,175	1	15	10	5	29	22	2
Total ..	2,803,989	10	60	43	12	83	79	17

APPOINTMENTS FOR THE WEEK.

December 30. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.
ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Sound" (Juvenile Lectures).

January 1. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.
ODONTOLOGICAL SOCIETY, 8 p.m. Anniversary.

2. Tuesday.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.
ANTHROPOLOGICAL SOCIETY OF LONDON, 4 p.m. Anniversary.
PATHOLOGICAL SOCIETY, 8 p.m. General Meeting for Election of Officers.
ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Sound" (Juvenile Lectures).

3. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.
OBSTETRICAL SOCIETY OF LONDON, 8 p.m. Annual Meeting for Election of Officers. President's Address. Papers by Drs. Eastlake, Snow Beck, and Hall Davis, &c.

4. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.
HARVEIAN SOCIETY OF LONDON, 8 p.m. Anniversary. President's Address and Election of Officers.
ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On Sound" (Juvenile Lectures).

5. Friday.

Operations. Westminster Ophthalmic, 1½ p.m.

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LIST OF ERRATA.

Page 84, col. 1, errata in Dr. Bence Jones' lecture on gout
Page 353, "In Memoriam," by Dr. Buchnan, 11th line of 6th stanza, *for* "rest," *read* "set"
Page 373, col. 1, line 35, *for* "38," *read* "48"
Page 433, col. 1, errata in Mr. Paget's address at Leeds
Page 486, col. 1, Mr. Marsh on errata regarding the position of cases
Page 512. Erratum in address of the President of the Pathological Society
Page 522, col. 1, line 2, *for* "1060," *read* "1020"

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